

INVESTING IN CALIFORNIA'S INFRASTRUCTURE

How to Ensure Value for Money and Protect California's
Competitive Position in the National and Global Economy

Bay Area Economic Forum

*A Partnership of the Bay Area Council and
the Association of Bay Area Governments*

June 2006



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Acknowledgements

This report was prepared for the Bay Area Economic Forum by Peter Luchetti, a member of the Bay Area Economic Forum's board of directors and CEO of GFP Advisors, an investment bank and asset management firm specializing in project and structured financings, public private partnerships, capital raising and mergers & acquisitions. Before founding GFP in 2002, Peter Luchetti served from 1994 to 2000 as Managing Director of Project and Structured Finance for Bank of America Securities LLC. Sean Randolph, President of the Bay Area Economic Forum, managed and contributed to the report. Gerrie Porciuncula assisted with design and formatting and Bertina Johnson edited the report.

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The Bay Area Economic Forum

The Bay Area Economic Forum is a public-private partnership of business, government, university, labor and community leaders that develops and implements projects that support the vitality and competitiveness of the regional economy, and enhance the quality of life of its residents. Sponsored by the Bay Area Council, a business organization of more than 250 CEOs and major employers, and the Association of Bay Area Governments, representing the region's nine counties and 101 cities, the Bay Area Economic Forum produces economic policy analyses and provides a shared platform for leaders to act on key issues affecting the future of the region.

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Executive Summary

This report has been developed with two objectives: to identify the basic building blocks of infrastructure investment in California, and to develop a framework for evaluating effective public policy related to infrastructure investment.

When planning for infrastructure investment, California must address a number of crosscutting goals and objectives; this process should take into account each of the “building blocks” of effective infrastructure investment and management (Figure S.1).

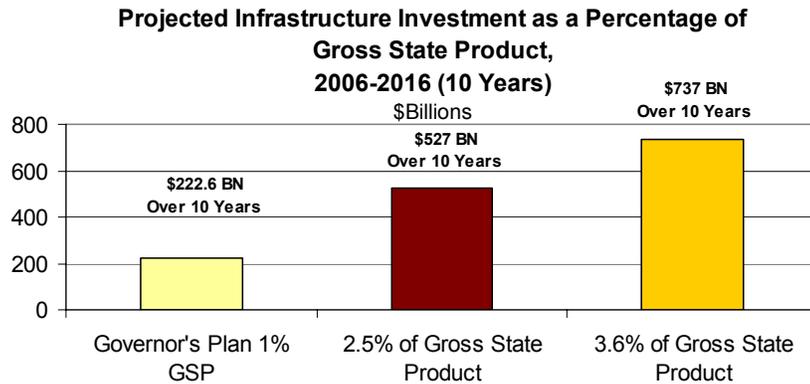
Figure S.1 Basic Building Blocks of Effective Infrastructure Investment & Management in the California Economy

Value for Money/Productivity In Capital Goods & Infrastructure Investment		
Fiscal Policy	Level of Investment	Economy, Environment, Smart Growth
Life Cycle Costing, Planning & Budgeting	Impact of Population Growth	Crosscutting Policies Goals & Objectives
Employee Protection Standards, Incentives	Project Management: Best Practices	Traditional Procurement Methods
Public Private Sector Partnerships Design, Build, Finance, Operate (DBFO)	DBFO Output vs. Input Specifications	

A comparison of today’s public policy environment to 50 years ago reveals a much-improved balance between the economy and the crosscutting goals of smart growth and environmental protection. While progress has been made in developing public policy in these areas, the state has severely lagged in updating its fiscal policy framework to encourage productivity in infrastructure investment. During the last 45 years the state has invested an average of 2.5 percent of gross state product per year in infrastructure. It would have to commit 2.4 times the amount called for in the Governor’s recently announced \$222.6 BN Strategic Growth Plan over 10 years (a total of \$527 BN) in order to sustain the 45-year 2.5 percent historical rate of infrastructure investment.

In May 2006 state lawmakers approved a plan to let voters decide whether to spend a record \$37 billion (54 percent of the \$68 billion of general obligation bonds outlined in the Governor’s Strategic Growth Plan) on roads, schools and flood control. Voters in November will be asked to consider four propositions: \$19.9 billion for roads and transit projects; \$10.4 billion for school and university buildings; \$4.1 billion for flood control; and \$2.85 billion for affordable housing projects. Together, they make up the largest bond package in California history.

Figure S.2



Taking into consideration the magnitude of the gap between the Governor’s plan, the \$37 billion General Obligation Bond package approved by the legislature, and California’s historical rate of investment, state leaders should ask:

- What is California’s global position in comparison to similar economies, and will it invest to maintain a competitive edge as a global economic player?
- How will the state allocate investment resources across competing and crosscutting public policy goals and objectives?

The potential increase in debt burden ratios brought on by increases in indebtedness across a wide range of state debt-funding requirements could “crowd out” the state’s ability to issue bonds for long-term infrastructure and other types of projects. Demographic trends point to population growth of 15 million, excluding immigration, over the next 20 years and the need for related infrastructure. The tension between debt “crowding out” and population growth presents a significant public policy and fiscal challenge.¹ The urgency of the need and California’s fiscal limitations call for new methods of infrastructure development and funding.

Two fiscal rules that are used to judge fiscal policy in the United Kingdom, where similar long-term infrastructure investment issues emerged in the early 1990s, are relevant when evaluating the current situation in California.

The golden rule: *over the economic cycle, the Government will borrow only to invest and not to fund current spending.*

The sustainable investment rule: *public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level.*

¹ California State Treasurer’s Office, *California at the Fiscal Crossroads: Cutting Our Debt and Building Our Future, The State of California Debt Affordability Report*, November 2003.

The economic rationale for these rules is that they promote economic stability by ensuring sound public finance, while allowing flexibility. California's version of the fiscal golden rule is reflected in the proposed 6 percent debt cap (SCA 21), which should be expanded to incorporate additional flexibility. Enhancements to the proposed 6 percent debt cap might include:

- A constitutional amendment that limits debt investment to long-term infrastructure investment.
- A debt cap range from 0 to 10 percent, averaging 6 percent over a predetermined time frame or economic cycle.

Current efforts will lay the foundation for the state's public policy on infrastructure for the next decade and beyond. This is a particularly important process as short-term budgeting and public policy initiatives are synchronized with medium- and long-term investment strategies. It is important, therefore, that in addition to developing more robust fiscal policy tools, the state develop a well-thought-out, multi-year infrastructure investment plan capable of convincing investors that the plan makes financial sense, provides value for money in infrastructure investment and eventually pays dividends that benefit the California economy.

As part of this process, the state should adopt global best practices for life cycle planning in infrastructure investment. The main body of this paper outlines a proposed framework.

Based on the process outlined in Figure S.3, it is proposed that the life cycle planning and budgeting process for infrastructure investment run in a triennial cycle. It is also proposed that the legislature change its budgeting and spending cycle to a triennial cycle, which would better facilitate the measurement and evaluation of public policy goals, objectives, and outcomes. Annual budget reviews would focus on adjustments that result in the accurate alignment of resources to planned public policy goals, objectives, and outcomes. This change will facilitate the more efficient allocation and management of resources, and can help to alleviate the budget gridlock that has characterized the state's budget process in recent years. It would also allow the state treasurer to manage the state's indebtedness in a manner that is consistent with the state's short, medium and long-term fiscal policies, consistent with the golden rule and the sustainable investment rule.

Figure S.3

Summary of Proposed Framework for Life Cycle Planning & Infrastructure Investment in California

I. Triennial Life Cycle Needs Assessment

- Identify state and local needs by sector
- Size infrastructure requirements
- Set preferred time line for implementation
- Draft Infrastructure Expenditure Plan (IEP)

II. Strategy, Finance, and Budgeting

- Implement the California Infrastructure Planning and Budgeting Model
- Complete fiscal review viz. debt cap and general indebtedness
- Optimize sources and uses
- Formalize Infrastructure Expenditure Plan

III. Continuous Infrastructure Investment Process

- Implement management and value for money best practices
- Implement Standard Form of California PFI Contract
- Use Input vs. Output Specifications
- Implement CEQA & EGPR
- Establish department head training and implementation
- Establish Reliable Contractor guidelines

IV. Formalize Feedback Loop to I, II, and III

- Continuous measurement and critique of the performance of the investment process as it relates to the delivery of clearly defined public policy goals, objectives, and outcomes as expressed in the output specifications set for individual projects. Ensure rigorous accountability under pay-for-performance standards in infrastructure delivery.

The historical experience with Public Private Partnerships (PPP) and Private Finance Initiative (PFI) in the U.K. across a range of projects and sectors indicates that net savings, even after taking into consideration public and private financing cost differences, have been in the range of 15 percent to 30 percent of a project's life cycle cost. This model is particularly relevant because the U.K. economy's size and level of development is comparable to California's and incorporates similar social values, including environmental protection and labor rights. With the benefit of more than fourteen years of experience with public-private partnerships, supported across both Labor and Conservative governments, the UK has been able to document what works and what doesn't. One of the more useful tools developed there has been the Public-Private Comparator, which provides a decision tree to help public officials determine which projects are most suitable for public investment and which would potentially benefit from private sector participation.

Similar results are being obtained in many countries around the world. California should look to global best practices, and obtain the savings potential that PPP offers to ensure value for money in infrastructure investment and a competitive position in the national and global economy.

There are three types of public and private sector partnerships (Figure S.4).

Figure S.4

Three Types of Public Private Sector Partnerships (PPP)

- Privatization
- **Private Finance Initiative (PFI) – Concession-Based PPP**
- Service Contracts

In California today the most likely application of the PPP is in the context of the **PFI**.

Under the most common form of PFI the private sector **Designs, Builds, Finances, and Operates (DBFO)** facilities based on output specifications decided by public sector managers and department heads.

The method that is most promising for implementation in California is likely to be the Private Finance Initiative (PFI). PFI, or CPFI in California, is a form of Public Private Partnership that marries a public investment program, where the public sector purchases infrastructure from the private sector, to an extension of contracting out, where public services are contracted from the private sector. Under the most common form of PFI, the private sector Designs, Builds, Finances, and Operates (DBFO) facilities. This is done under output specifications decided by public sector managers and their departments. To be effective such projects need to transfer the risk from the public to the private sector and achieve significant improvements in timing, productivity, and financing.

The benefits CPFI can offer, in terms of on-time and on-budget delivery, as well as in terms of life cycle costing, flow from ensuring that the many different risks inherent in a major investment program—for example, construction risk or the risk associated with the design of a building—are borne by the party who is best placed to manage them. Because of its direct equity investment in the infrastructure, the private sector has an incentive to make sure that it performs well and produces value for money.

The state is engaged in an important debate about its future and its competitive position in the national and global economy. By addressing short, medium and long term budgeting and fiscal management issues when planning for long-term investment, the State has a unique opportunity to secure its future. Resources dedicated to rebuilding California’s infrastructure will help to ensure world-class public services.

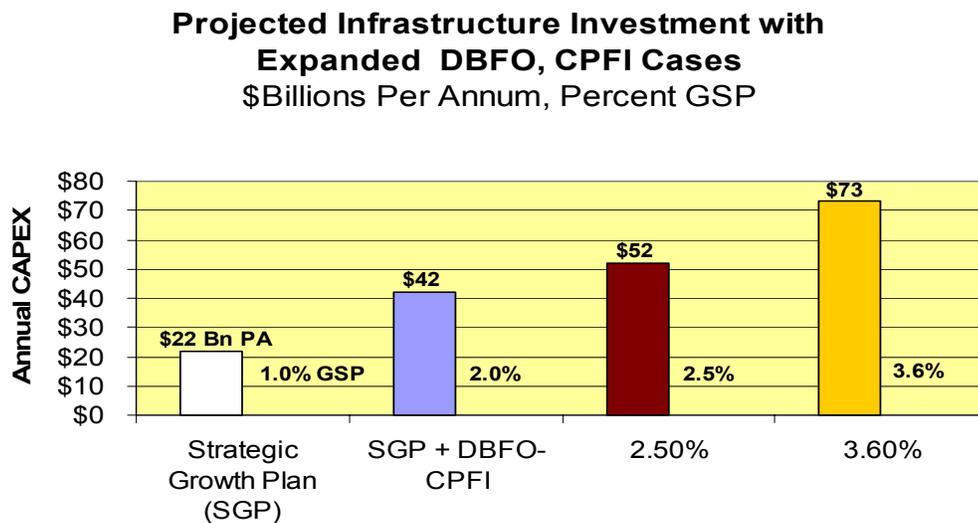
To attain these goals the state should consider the following:

- Synchronize the state’s fiscal situation with its short, medium-, and long-term infrastructure investment strategy;
- Adopt a fiscal policy that eliminates deficit spending for current expenditures and provides a more flexible version of the proposed debt cap;
- Implement a statewide strategic planning and infrastructure investment process (Figure 11) that embodies the principles of effective long-term Life Cycle (10-, 20-, 30-year) strategic planning and is consistent with public policy goals, objectives, and outputs across sectors and departments;
- Recognize that the level of infrastructure investment currently being debated is in the range of 1 percent or less of GSP. This level of expenditure is substantially below the 45-year average, and may be inadequate to ensure the state’s national and global competitive stance;
- Strive to be globally competitive by meeting or exceeding the global standard for infrastructure investment, which is closer to 2 percent to 2.5 percent of GSP;
- Recognize that the tension between debt “crowding out” and population growth promises to create a significant public policy and fiscal challenge calling for new methods of infrastructure development and funding;
- Adopt a life cycle planning and infrastructure budgeting process that runs in a triennial cycle with the state’s general budgeting process;
- Integrate the policy implications of EGPR, CEQA, and a more flexible debt cap into the infrastructure investment process;
- Adopt the fiscal Golden Rule and the Sustainable Investment rule;
- Apply DBFO best practices, to achieve a genuine improvement in timing, developmental and/or operating productivity, financing , and risk transfer in infrastructure investment;
- Adopt management best practices to ensure that all participants in the infrastructure investment process have the tools they need to maximize the value of the state’s investment:
 - Gateway Process (Figure 12)
 - Public Private Sector Comparator (Figure 13)
 - Project Review Group (Figure 14)
- Invest the necessary resources to master DBFO and CPFI investment methods, in order to achieve a 30 percent life cycle cost savings in infrastructure investment over the next 10 years;
- Seek value from the following high value added elements of DBFO and CPFI:
 - Risk transfer
 - Life cycle costing
 - Output- versus input-based project specifications

- A bidding environment that fosters competition
- Performance measurement and incentives
- Private sector management skills
- Adopt employee protection standards (Reliable Contractor guidelines) that ensure that public and private labor interests are aligned around value for money and productivity in public infrastructure investment;
- Implement a formal CPFI Project Development Process as depicted in Figure 22;
- Adopt a Standard Form of Concession Agreement (Figure 23) for DBFO and CPFI, to reduce risk and project development costs for all participants.

Notwithstanding the benefits of the Legislature’s decision to send \$37 billion in infrastructure general obligation bonds to the voters in November 2006, CPFI has the potential to double the governor’s originally proposed \$222.6 billion Strategic Growth Plan over the next 10 years. On this basis, California can invest \$42 billion per year, or a total of \$420 billion, which is closer to the 2.5 percent 45-year historical average (Figure S.5). This level of investment is closer to the global rate of investment for economies of similar size.

Figure S.5



The ideas in this report present a basis for attaining value for money and improved productivity in public infrastructure investment.

I. Foundation for Public Policy in Infrastructure Investment

This paper has been developed around two objectives: first to identify the basic building blocks of effective infrastructure investment in California and second to develop a dialogue and framework for public policy in infrastructure investment. The current debate surrounding infrastructure investment provides the opportunity for a more comprehensive review of how the state can maximize value for money (Figure 1) in infrastructure investment.

Figure 1

Value for money in Infrastructure Investment

Value for money in infrastructure investment is defined as maximizing the delivery of infrastructure within the limitations of the state’s budget (current revenue) and indebtedness capacity over the short, medium, and long term.

- Ensuring that resources dedicated to rebuilding California’s infrastructure meet public expectations , resulting in world-class public services that support California’s competitive position in the national and global economy.
- Promoting opportunity, security and equity.

A comparison of today’s public policy environment to 50 years ago reveals a much-improved balance between the economy and the crosscutting goals and objectives of smart growth and environmental protection. While great strides have been made in developing public policy in these areas, the state is severely lagging in updating its fiscal policy framework to encourage productivity in infrastructure investment. In improving its investment in infrastructure, California must address a broad range of competing goals and objectives, while maintaining the state’s competitive position in the national and global economy. This process must take into account each of the “building blocks” of effective infrastructure investment and management (Figure 2).

Figure 2 Basic Building Blocks of Effective Infrastructure Investment & Management in the California Economy

Value for Money/Productivity In Capital Goods & Infrastructure Investment		
Fiscal Policy	Level of Investment	Economy, Environment, Smart Growth
Life Cycle Costing, Planning & Budgeting	Impact of Population Growth	Crosscutting Policies Goals & Objectives
Employee Protection Standards, Incentives	Project Management: Best Practices	Traditional Procurement Methods
Public Private Sector Partnerships Design, Build, Finance, Operate (DBFO)		DBFO Output vs. Input Specifications

This report explores how the state can ensure value for money and productivity in its infrastructure investment. Over the last 20 years there have been a number of success stories outside of the United States where Design, Build, Finance, and Operate (DBFO) and Public Private Sector Partnership (PPP) arrangements have provided the public sector with significant value for money and productivity in infrastructure improvements. This report examines the principal functional elements of how PPP has been implemented in the United Kingdom (U.K.) which may be broadly applicable in California. The ultimate objective for California is to examine and embrace global best practices, to ensure that the resources dedicated to rebuilding California’s infrastructure result in world-class public services that improve California’s competitive position in the national and global economy.

a) Laying a Foundation for Public Policy in Infrastructure Investment

In early 2006 an active debate began between the Governor and the Legislature that will lay the foundation for public policy in infrastructure investment for the next decade. The current legislative agenda was initiated by the governor’s recently announced 2006-07 balanced budget, debt cap, and Strategic Growth Plan initiatives (see Appendix A). The Strategic Growth Plan is a ten-year \$222.6 billion funding plan (\$68 billion or 31 percent from general obligation bonds) aimed at rebuilding and improving the state’s infrastructure. The state legislature responded with a number of bills, resulting in an active debate around alternative forms of legislation.

In May 2006 state lawmakers approved a plan to let voters decide whether to spend a record \$37 billion (54 percent of the \$68 billion originally outlined in the Governor’s Strategic Growth Plan) on roads, schools and flood control. The Governor has called it “a landmark accomplishment that will yield benefits for generations to come.” Voters in November will be asked to consider four propositions: \$19.9 billion for roads and transit projects; \$10.4 billion for school and university buildings; \$4.1 billion for flood control; and \$2.85 billion for affordable housing projects. Together, they make up the largest bond package in California history.

Table 1

GO Bond Comparison: Strategic Growth Plan, \$37 billion approved by legislature

	Strategic Growth Plan GO Bonds	\$37 billion GO bonds November ballot	Change
Affordable Housing	0	2.85	2.85
Courts & Other Public Infrastructure	2.2	0	(2.20)
Higher Education	11.7	-	-
K-12 Education	26.3	-	-
Education (Higher, K12)	-	10.4	(27.60)
Flood Control & Water Supply	9	4.1	(4.90)
Public Safety	6.8	0	(6.80)
Transportation and Air Quality	12	19.9	7.90
	68.0	37.25	(30.75)

Overall, these efforts will frame the state's infrastructure policy for the next decade and beyond. They also provide an important opportunity to synchronize the state's short-term budgeting and public policy initiatives with its medium- and long-term investment strategies.

An effective infrastructure public policy must ensure the growth of the California economy and deliver world-class public services, while addressing the crosscutting goals and objectives of smart growth and environmentalism. In today's political environment users of public services want more services without raising taxes. To achieve this, sustained increases in investment and matching reforms that make the most of infrastructure investment. Strong and dependable public services and infrastructure lay the foundation for a flexible, productive economy.

b) California's Infrastructure Investment

California's infrastructure investment history is outlined in Appendix B. The current state of California's infrastructure shows an urgent need for both immediate repairs and long-term investment. The American Society of Civil Engineers' *Infrastructure Report Card 2005*, provides useful examples of areas where California's infrastructure needs immediate attention.

Roads

- 60% of California's major urban roads are congested.
- 71% of California's major roads are in poor or mediocre condition.
- Vehicle travel on California's highways increased 25% from 1990 to 2003. California's population grew 19% between 1990 and 2003.
- The state has transferred \$3.1 billion from the transportation trust fund to the general fund.
- Driving on roads in need of repair costs California motorists \$12.6 billion a year in extra vehicle repairs and operating costs—\$554 per motorist.

Bridges

- 28 % of California's bridges are structurally deficient or functionally obsolete.

Dams

- There are 44 state-determined deficient dams in California.
- California has 336 high hazard dams. A high hazard dam is defined as a dam whose failure would cause a loss of life and significant property damage.

Water

- California's drinking water infrastructure needs \$17.5 billion over the next 20 years.
- California loses 222 million gallons of drinking water a day due to leaking pipes.

Waste Water

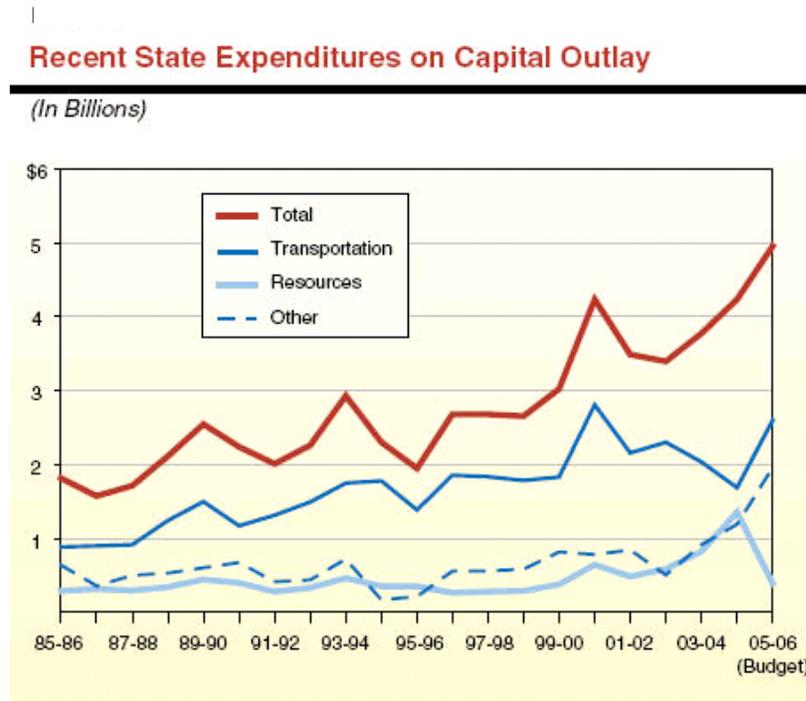
- California has \$14.4 billion in wastewater infrastructure needs.

Schools

- 71% of California's schools have at least one inadequate building feature.
- 87% of California's schools have at least one unsatisfactory environmental condition.²

The cost of just maintaining California's infrastructure is enormous. Figure 3 shows that while the state is increasing spending, the current level of investment is not maintaining or expanding existing infrastructure.

Figure 3



3

² American Society of Civil Engineers, California Infrastructure Report Card 2005.

³ Legislative Analyst's Office, *A Primer: The State's Infrastructure and the Use of Bonds*, January 2006.

c) Sizing California’s Infrastructure Needs, 2006-2016

Current infrastructure proposals should be evaluated in light of the state’s fiscal outlook and its infrastructure budgeting requirements. Given the life span of a typical infrastructure asset, any fiscal review needs to reflect long-term general revenue and indebtedness assumptions, while taking into consideration the variability of the state’s economy.

This fiscal analysis should logically span 10-, 20-, and 30-year time horizons, reflecting the typical life cycle of infrastructure assets, which exceeds the norm for election cycles and the state’s annual budget. California’s historical pattern of infrastructure investment is outlined in Table 1.

Table 2

Historical Infrastructure Investment in the California Economy

Average Annual Expenditures \$ MM's

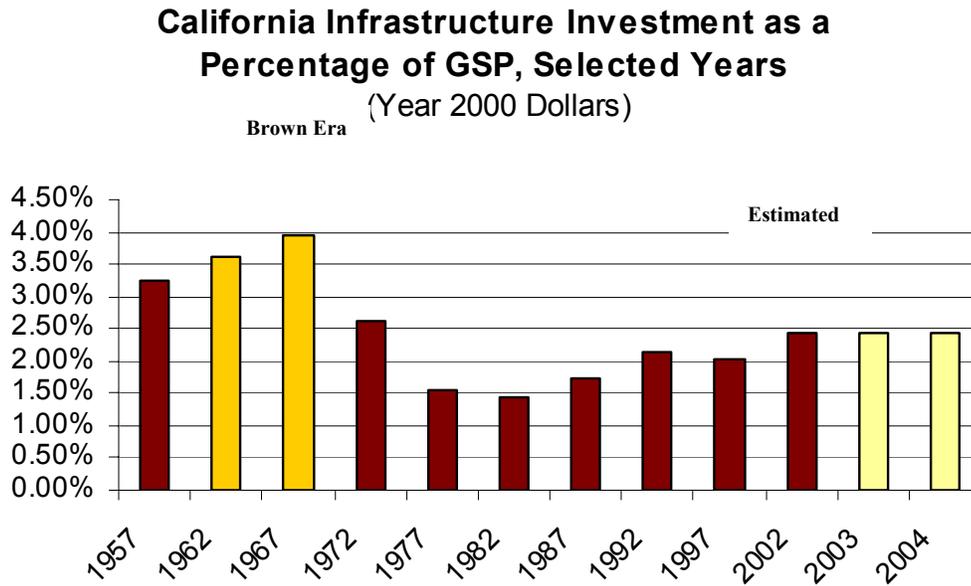
Period	Average \$ Value	Percent GSP
1957 to 1967	10,829	3.60%
1967 to 1977	11,322	2.63%
1978 to 1987	10,538	1.57%
1988 to 2002	24,634	2.21%
	45 Year Average	2.50%

4

During the last 45 years, California has on average invested 2.5 percent of Gross State Product (GSP) in infrastructure. At the peak, during the Pat Brown years from 1957-1967, California invested 3.6 percent of GSP. At the low point, from 1978 to 1987, the investment rate as a percentage of GSP dropped to 1.6 percent. More recently (1990 to the present) the investment rate has risen to 2.2 percent, which is still below the 45-year average of 2.5 percent. Figure 4 illustrates California’s historical rate of infrastructure investment.

⁴ The data used to derive historical and future infrastructure expenditure estimates were assembled by the author from various sources including the State Treasurer’s Office, the Public Policy Institute of California, the U.S. Census Bureau, and the U.S. GNP Price Deflator.

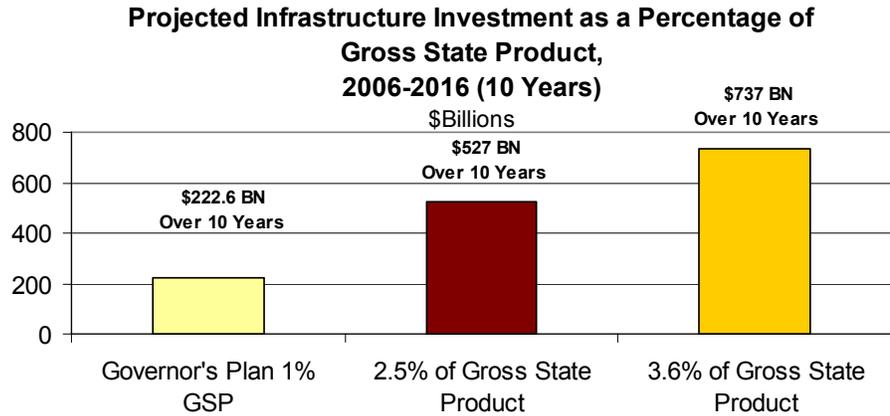
Figure 4



Excluding the Pat Brown years, the average investment rate drops to 2.06 percent. To make up for the lean years (1972-2002) at 1.57 percent, the state would have to invest \$27.75 billion on a one-time basis to restore the rate of infrastructure investment to the 2.5 percent 45-year average rate of investment.

Going forward, if the state were to sustain a 2.5 percent of GSP rate of investment through 2016, the same ten-year period contemplated by the governor's Strategic Growth Plan, it would have to invest \$527 billion. And at 3.6 percent, reflecting the Brown era, the ten-year total would be \$737 billion (Figure 5). These estimates assume a 2 percent population growth and a 3 percent GDP growth and a GNP price deflator of 2.5 percent.

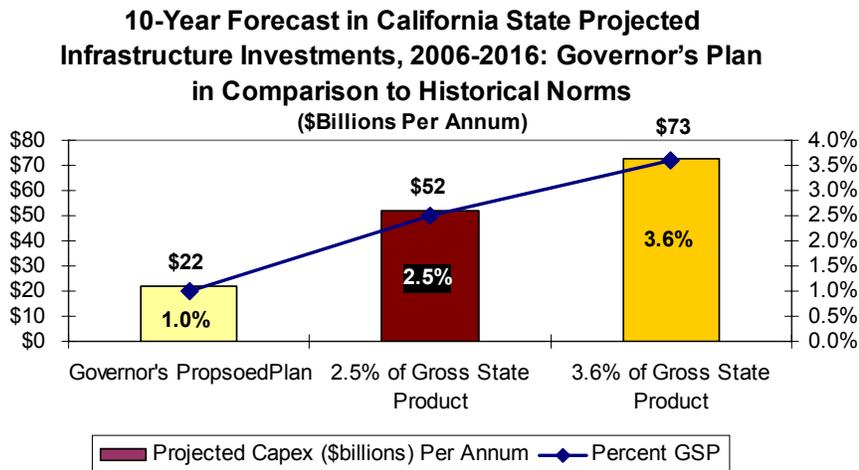
Figure 5



This analysis is revealing. Although the governor’s Strategic Growth Plan is viewed as ambitious, it falls far short of the level of investment necessary to meet the 45-year 2.5 percent average. A similar conclusion would apply to the \$37 billion general obligation bond package that will be on the November ballot, which is approximately half what was proposed in the Strategic Growth Plan. If the 45-year 2.5 percent average accurately reflects the level of investment required to maintain a competitive national and global economic position, then the state may be under investing in its future.

Figure 6 further illustrates this point. The state would have to commit to 2.4 times the Governor’s 1 percent level of investment over 10 years in order to sustain the 45-year 2.5 percent historical rate of infrastructure investment.

Figure 6



5

⁵ The data used to derive historical and future infrastructure expenditure estimates were assembled by the author from various sources including the State Treasurer’s Office, the Public Policy Institute of California, the U.S. Census Bureau, and the U.S. GNP Price Deflator.

Perhaps the most important finding is that the state is unlikely to have adequate fiscal resources to fully fund any of the infrastructure investment plans in Figure 6. In each case it is expected that the state will have to increase indebtedness in order to fund investment. The Strategic Growth Plan calls for a \$68 billion increase in General Obligation Bonds over 10 years and the recently approved \$37 billion bond package is 54 percent of this amount. When combined with other planned indebtedness, this level of expenditure is likely to push the state's debt service ratio into the 6 to 7 percent range, which typically defines the maximum level considered prudent by the leading credit agencies.

Is 1 percent, 2.5 percent, or 3.6 percent the desired level of infrastructure investment for California? One way to evaluate this question is to compare the level of infrastructure investment in California to the global standard for infrastructure investment for economies of similar size and maturity. Doing so suggests that to remain globally competitive, California may need to invest closer to 2 percent or 2.5 percent of GSP. For example, in the U.K., which has a GDP of \$1.8 trillion compared to California's \$1.55 trillion, the rate of infrastructure investment has ranged from 2 percent to 2.5 percent over the last 10 years. This higher range follows a lengthy period prior to the early 1990s of sub par investment in the 1 percent range, which is similar to California from 1977-1987.

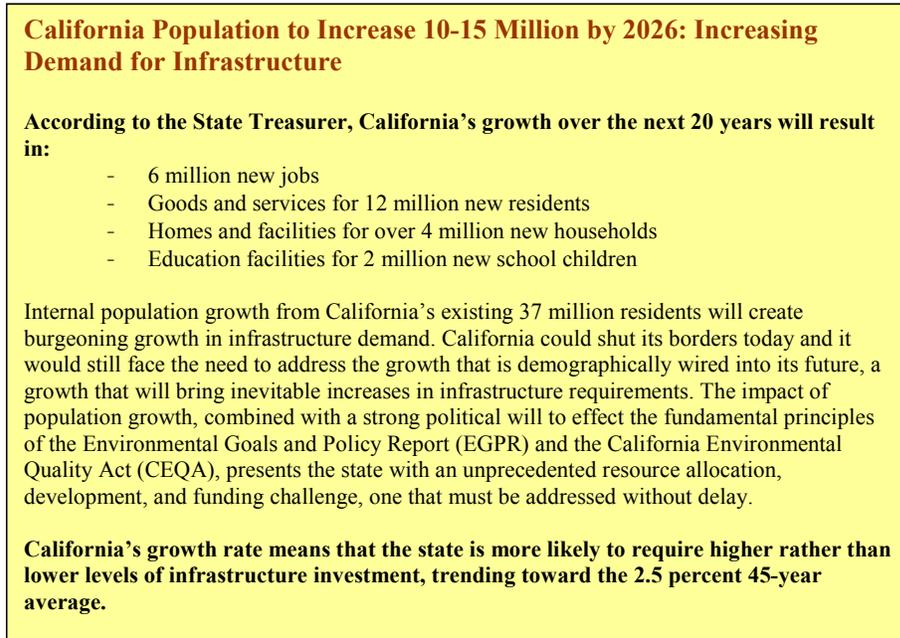
California should ask two key questions related to its level of infrastructure investment:

- What is the state's global stance compared to similar economies and does it want to maintain a competitive edge as a global economic player?
- How will the state allocate resources across competing and crosscutting policy goals and objectives, and what is the potential for "debt crowding out"?

The potential increase in debt burden ratios brought on by increases in indebtedness across a wide range of state debt-funding requirements could "crowd out" the state's ability to issue bonds for long-term infrastructure and other types of projects. Demographic trends point to 10 to 15 million in non-immigration driven population growth over the next 20 years and an attendant need for additional infrastructure. The development of infrastructure which is vital to the state's long-term economic health, may therefore be threatened by a lack of funding.⁶ The tension between debt "crowding out" and population growth promises to create a significant public policy and fiscal challenge for the state. The urgency of California's infrastructure requirements and its current fiscal limitations therefore call for new methods of infrastructure development and funding (Figure 7).

⁶ California State Treasurer's Office, *California at the Fiscal Crossroads: Cutting Our Debt and Building Our Future, The State of California Debt Affordability Report*, November 2003.

Figure 7



d) Fiscal Policy: Short, Medium, and Long Term

The tension stemming from California's desire to be fiscally prudent and its need to invest in infrastructure could be eased by considering new finance rules and methods. Two fiscal rules against which the performance of fiscal policy is judged in the United Kingdom, where similar long-term infrastructure investment issues were prominent in the early 1990s, might be useful when considering the current situation in California.

"The golden rule: over the economic cycle, the Government will borrow only to invest and not to fund current spending.

The sustainable investment rule: public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level.

The fiscal golden rule requires the current budget to be in balance or have a surplus over its cycle, allowing the government to borrow only for infrastructure spending; that is, "borrowing is permitted to finance public investment. It ensures fairness between generations in that "the Government does not pass on the costs of services consumed today to the taxpayers of the future – each generation is expected to meet the current cost of the public services for which they benefit."⁷

⁷ HM Treasury, Financial Statement and Budget Report 1999, HC 298, 1998/1999.

The economic rationale for these fiscal rules is that they promote economic stability by ensuring sound public finances while allowing flexibility. The fiscal rules are set over the economic cycle, allowing fiscal balances to vary year to year, in keeping with the cyclical position of the economy. This allows the automatic stabilizers in the economy, such as income tax receipts and unemployment payments, to operate freely, dampening the effects of fluctuations away from trend by boosting or dampening aggregate demand. The interaction of the two rules promotes sound infrastructure investment while ensuring the sustainability of public finances in the longer term.⁸

California's version of the fiscal golden rule is reflected in the proposed 6 percent debt cap (SCA 21). The notion of a debt cap is consistent with maintaining sound fiscal principles with regard to long-term infrastructure investment, by setting a guideline for fiscal management.

Given the importance of sound fiscal management, SCA 21 should be expanded to incorporate additional flexibility. A static 6 percent debt cap may not allow adequate flexibility for managing the state's level of indebtedness over the business cycle. California's Gross State Product is currently in the range of \$1.55 trillion per annum. Depending on the measure used, California's economy ranks between 5th and 9th among nations. An economy of California's size should, within reason, be able to manage macroeconomic policy over the business cycle, utilizing fiscal policy tools and restraints.

The normal sequence of debt issuance and retirement managed by the State Treasurer's office would naturally show periods when a static 6 percent debt cap was either of lesser or greater concern relative to the health of the state's economy and the average weighted maturity of outstanding debt. For example, if the level of indebtedness was 8 percent due to the issuance of new debt in an environment where a sufficient quantity of debt was due to be retired within one year, resulting in a 4 percent level of indebtedness, then it might be acceptable to incur a higher debt level for one year, or perhaps 2 to 3 years.

Enhancements to the proposed 6 percent debt cap could include the following:

- A constitutional amendment that limits debt investment to long-term infrastructure investment. In effect, the amendment would prohibit the use of debt for current spending. Debt is typically used only to fund long-term infrastructure investment and not current investment.
- A debt cap averaging 6 percent over a predetermined time frame or economic cycle, perhaps within a range of 0 to 10 percent, that enables the state to incur higher levels of indebtedness over the business cycle in a manner that is consistent with the size of the state's economy and the maturity profile of its outstanding debt.
- A condition that indebtedness may not exceed 8 percent unless the State Treasurer can demonstrate that near-term (2- to 3-years) debt retirement will bring the average level of indebtedness below 6 percent over the cycle.

⁸ HM Treasury, Financial Statement and Budget Report 1999, HC 298, 1998/1999.

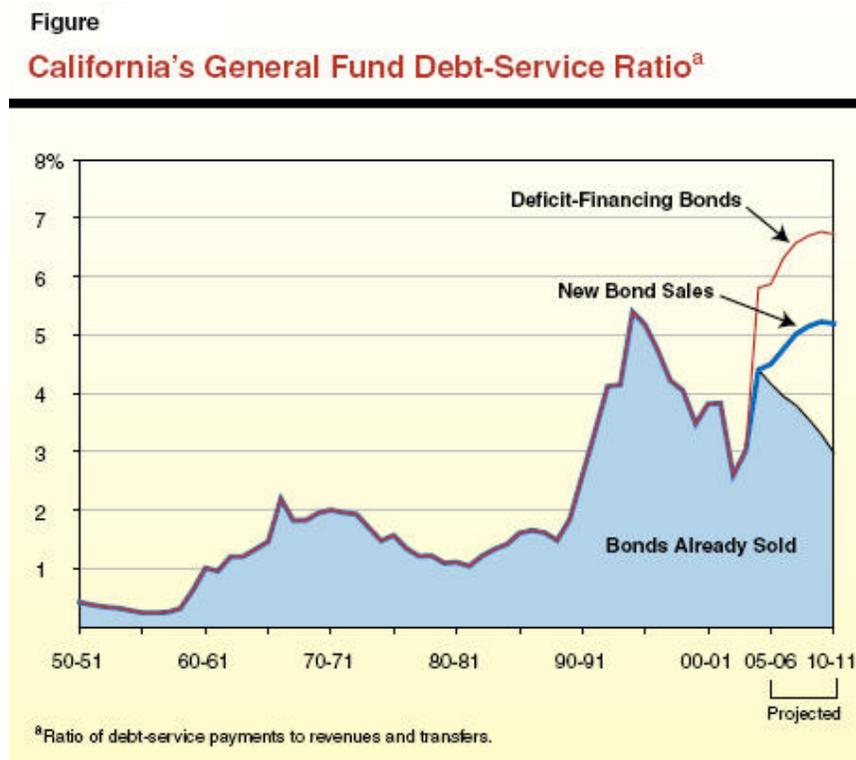
- A debt cap combined with a policy that pegs the weighted average maturity of debt outstanding, or the duration of the state's debt, to a level that provides for appropriate fiscal flexibility while maintaining an adequate level of restraint on total debt outstanding.
- A combination of the absolute prohibition on using debt to fund current expenditures and a debt cap with either a short variable range or tied to the state's outstanding debt. This option may provide the best fiscal discipline while retaining an element of flexibility.

In evaluating its options, the state should address the need to provide fiscal and macroeconomic management tools that allow fiscal balances to vary from year to year in keeping with the cyclical position of the economy. By implementing this type of policy the state has the opportunity to implement the golden rule and the sustainable investment rule in a manner that protects the state's fiscal reputation in financial markets. The positive beneficial effect of a well-coordinated fiscal policy is that short-term budgeting is synchronized with long-term infrastructure investment in a manner that assures value for money and productivity and protects the state's competitive position in the national and global economy.

California's credit ratings figure prominently in the dialogue surrounding fiscal management policies. The state is scored as A, A1, and A+, respectively, by the nation's three major rating agencies—Standard & Poors, Moody's Investor Services, and Fitch Ratings. Although these are all investment-grade ratings and reflect recent improvement, they remain among the lowest of all states rated by these agencies. The state's current low ratings are principally related to factors other than the amount of debt outstanding—most notably, the ongoing potential for budget imbalances between current revenues and investment and the ongoing structural deficit this implies. Better than planned tax receipts during the first half of 2006 have contributed to a recent ratings upgrade. While the recent upgrade is a positive development the state has not addressed its medium to long term fiscal concerns. It would appear that the main adverse implication of the low ratings thus far has been the additional interest premium the state has had to pay on its new bond issues compared to what AAA-rated states pay.

Some parties in the investment community look to the debt service ratio (that is, the DSR, or ratio of annual debt service costs to yearly revenues) as a general guideline or indicator as to whether the state has become overextended in its debt burden. In past years, for example, concerns have been voiced when a state's DSR began to exceed 5 or 6 percent. Figure 8 shows that California's DSR increased in the early 1990s and peaked at somewhat over 5 percent in the middle of the decade.

Figure 8



Reference ⁹

The estimated DSR will stand at about 4.5 percent for 2005-06 and 4.8 percent for 2006-07 for infrastructure related bonds, or 5.9 percent and 6.3 percent respectively if its deficit-financing bonds are included. It is possible that the DSR could rise to a level that might lead to investor concerns, higher interest costs, and possibly challenges in marketing the state's bonds.¹⁰

The likelihood of the latter occurring is far greater in the case where the level of infrastructure investment is maintained at or near the historical norm. It is therefore important that in addition to developing a more robust set of fiscal policy tools as described above, the State should develop a well-thought-out, multi-year infrastructure investment plan capable of convincing investors that the plan makes financial sense, provides value for money in public infrastructure investment, would be effectively carried out, and would eventually pay dividends in terms of benefiting the California economy. (See Appendix C, Strategic Growth Plan Fiscal Analysis, for a more in-depth review of fiscal impacts.)

⁹ Legislative Analyst's Office, *A Primer: The State's Infrastructure and the Use of Bonds*, January 2006.

¹⁰ Legislative Analyst's Office, *A Primer: The State's Infrastructure and the Use of Bonds*, January 2006.

e) Infrastructure Project Planning—Value for Money in Public Infrastructure Investment

To create a more effective process for infrastructure planning and budgeting, state and local government should seek an improved framework for achieving value for money and productivity in infrastructure investment. The guiding principles of value for money are based on the need to maximize the productivity of public sector resources and achieve a genuine improvement in the design, engineering, investment, construction, operations, and maintenance of infrastructure. An effective infrastructure investment process must also secure advantageous financing arrangements and transfer risk from the public to the private sector. In addition to providing an alternative means of funding for public sector infrastructure assets, the policy should offer a compelling framework for evaluating and attaining value for money and life cycle costing of public infrastructure.

The value for money standard of investment should be considered with respect to a broad range of crosscutting public policy considerations including:

- The potential to apply global best practices in PPP and DBFO to California (CPFI) and achieve the 15 percent to 30 percent life cycle cost savings that has been successfully demonstrated elsewhere in the global economy.
- Clear measures of performance across functions and departments.
- The Infrastructure Planning Act, Chapter 606, Statutes of 1999 (AB 1473, Hertzberg), which requires the governor to submit a proposed five-year infrastructure plan to the legislature with the intent that the legislature will consider the proposal and adopt a five-year infrastructure plan for the state. The governor released the most recent California Five-Year Infrastructure Plan in March 2006, which incorporates the level of infrastructure investment outlined in the governor’s proposed Strategic Growth Plan.
- The Environmental Goals and Policy Report (EGPR). The EGPR proposes several integrated and potentially incompatible goals and policies for California, with the overarching goal of sustainable development. EGPR argues that none of California’s infrastructure elements stands alone, but are all intimately connected. Achieving efficiency and sustainability relies on linking these elements, which is key to preserving natural resources, to ensuring public goods are used to serve people equitably, and to making the most of tax dollars.¹¹
- The California Environmental Quality Act (CEQA). The California Environmental Quality Act (CEQA), enacted in 1970, has as its goal to evaluate and mitigate the environmental impacts of all development proposals and projects in California, public or private, which are regulated by public agencies. There is a great amount of uncertainty in the law, which is caused by the flexible and vague standards regarding its substantive objectives. The language for such key standards as determining the “significance” of effects to be mitigated, and for determining what constitutes an appropriate mitigation, was left purposely vague. This vagueness also holds for the legal requirements for cumulative impacts and

¹¹ Office of Planning and Research, *Governor’s Environmental Goals and Policy Report*, November 2003.

alternative analysis, which are “considered confusing even among experts.” These features of the law can be problematic for development as it “provides would-be petitioners with footholds to challenge projects.” One of the major consequences that arises from its inconsistency and vague requirements is that project applicants and lead agencies “bullet-proof” EIR’s against lawsuits, generating extensive and redundant documentation.¹²

Many aspects of CEQA implementation run counter to the principles of value for money in infrastructure investment and the principles of the EGPR. This statement is not meant to suggest that the environmental principles advanced by CEQA and the EGPR are not important. However, it does suggest that in order to effectively manage the important crosscutting public policy goals and objectives of value for money, EGPR, and CEQA in infrastructure investment, policy reforms are needed to ensure that public department heads and finance professionals can realistically implement these policies. (See Appendix D for further analysis and review of CEQA.)

Taken together, the goals and objectives of an effective process would ensure value for money and productivity in public infrastructure investment while addressing the broader policy agendas enacted by the proposed 6 percent debt cap or similar fiscal management tools, and the goals and objectives embodied in the EGPR and CEQA among other public policy initiatives (Figure 9).

Figure 9

Reconciling Crosscutting Goals & Objectives of Value for Money Public Infrastructure Investment, EGPR, CEQA, SCA 21 and other Key Public Policy Objectives

The Public Infrastructure Investment Process should

- provide an effective strategic planning and infrastructure investment process that integrates the policy implications of EGPR, CEQA, and SCA 21 (or similar fiscal management tools) as they relate to the timely implementation of planned infrastructure investment;
- encourage greater participation by both the public and private sectors; and
- stimulate new ideas for improving the deployment of government resources.

Overall, California should adopt a life cycle strategic planning and infrastructure investment process that makes the most of federal, state, and local investment capacity; takes advantage of user fees; sets priorities for state-supported projects; and ensures that the most productive method of investment is utilized.

¹² Elisa Barbour and Michael Teitz, “CEQA Reform: Issues and Options,” Occasional Paper (San Francisco, CA: Public Policy Institute of California, April 2005).

II. Infrastructure Project Budgeting

a) Historical View

The governor's Strategic Growth Plan is not a comprehensive infrastructure budget, and is not designed to represent a dynamic infrastructure budgeting process (as distinct from a static infrastructure budget.) At least in part this is because the state does not have a dynamic infrastructure budgeting process that enables department heads and elected officials to effectively evaluate infrastructure budgeting decisions in a 10-, 20-, and 30-year infrastructure life cycle process.

While most sectors in state government engage in some form of planning, few agencies rigorously link strategic planning with infrastructure investment. Even fewer provide long-term financial plans for the delivery of infrastructure services. Most agencies neither explore alternative forms of service delivery nor identify non-infrastructure alternatives for meeting future needs. This traditional supply-side planning made sense in the 1950s when California was growing rapidly, and there was a broad consensus in support of growth. But now, the environment has changed. Not all citizens view the state's economic and demographic growth as desirable. The historical process has become politicized, based mostly on pork-barrel dealmaking. In short, the context in which the state plans and funds infrastructure is vastly different now than during the Earl Warren and Pat Brown eras.¹³

b) Today's Process

Today most planning in the state originates at the department level, with infrastructure budgets based on proposals for individual projects, guided by the State Administrative Manual. A lengthy process follows as the infrastructure budget is put together for the governor's budget, reviewed by the legislature and the Legislative Analyst's Office (with hearings, etc.) before final budget approval.

Some agencies have more flexibility for project streamlining. The state's most sophisticated planning and development efforts operate at the margins or completely outside of the Administrative Manual procedures. The process leaves California relatively strong on project planning by individual agencies and weak on statewide planning and strategy. Decisions are often guided by the details of the annual budget process rather than by broad policy goals that take into consideration the implications of life cycle planning. This rewards short-term budget balancing rather than long-term decision-making.¹⁴

This decision-making process needs repair. Piecemeal reform cannot address the lack of statewide vision or strategy. An alternative approach should stress strategic thinking, coordination, and efficient information management.¹⁵

¹³ David E. Dowall and Jan Whittington, *Making Room for the Future: Rebuilding California's Infrastructure* (San Francisco, CA: Public Policy Institute of California, March 2003).

¹⁴ California Infrastructure, Institute of Governmental Studies, University of California, February 2006.

¹⁵ Commission on Building for the 21st Century, *Invest for California: Strategic Planning for California's Future Prosperity & Quality of Life*, September, 2001.

c) Upgrading California's Infrastructure Investment and Strategic Planning Process

The state should establish a standard for best practices in procuring public sector infrastructure (Figure 10).

Figure 10

Guiding Principles for Improving California's Government Investment Skills, Processes, and Best Practices

The state needs to improve infrastructure budgeting, strategic planning, and infrastructure investment skills and ensure that department heads and state employees have the capacity and support required to engage in long-term planning. This should include conventional investment, PPP and DBFO methods. To improve its role as a public sector client, the state should

- Establish a statewide strategic planning and infrastructure budgeting process that embodies the principles of long-term life cycle (10-, 20-, 30-year) strategic planning and infrastructure budgeting, consistent with the state's policy goals and objectives across sectors and departments;
- Enable public sector department managers to focus more effectively on securing overall productivity and value for money in public infrastructure investment, taking into consideration life cycle costing, allowing for innovative design, and using discretion and good judgment in evaluating alternative investment options;
- Implement the Public Private Sector Comparator (PPSC) to ensure an economically rigorous appraisal of a project's business case prior to its investment and allow an alternative investment route (PPP, DBFO) to be chosen if it offers better value for money than traditional public methods of investment;
- Increase the speed with which investment is delivered to the public by reducing the time spent;
- Reduce the cost to the public sector of procuring infrastructure, improving value for money;
- Adopt best practices in public investment that encourage public and private sector interaction around PPP and DBFO projects and in traditional investment methods, strengthening competition and innovation in public infrastructure investment;
- Institute a new assessment of the potential for value for money investment options to ensure that PPP and DBFO are used in those situations where it is appropriate. ;
- Establish a final assessment of the competitive interest in a project and the market's

Figure 11 provides an overview of the design criteria and functionality for a proposed framework for life cycle planning and infrastructure investment in California. Based on the process outlined in Figure 11, it is proposed that the life cycle planning and infrastructure budgeting process and the state legislature's budgeting and spending cycle, both be converted to a triennial cycle. This multi-year approach to budget and investment decisions permits better measurement and evaluation of public policy goals, objectives, and outcomes. Annual budget reviews would focus on adjustments that ensure the ongoing alignment of resources to planned public policy goals, objectives, and outcomes. This change will enable better decisions regarding the allocation of scarce resources and improved public policy management, in contrast to the gridlock that has characterized the budget process in recent years. It would also allow the State Treasurer to conduct fiscal management of the state's indebtedness in a manner that is consistent with the state's long-term fiscal policy, and with the fiscal golden rule and the sustainable investment rule.

Figure 11

Proposed Framework for Life Cycle Planning & Infrastructure Investment in California

I. Triennial Life Cycle Needs Assessment

- Identify state and local needs by sector
 - Cut across departments, functions, and policy goals at all levels of government
- Prioritize
 - Complete needs assessment based on public policy goals, objectives, and outcomes in contrast to sector and departmental goals
 - Prioritize projects based on Supply/demand
 - Reconcile EGPR objectives
 - Identify & address CEQA considerations
- Size infrastructure requirements
- Establish preferred time line for implementation
- Draft Infrastructure Expenditure Plan (IEP)
 - Develop detailed output specifications that align with public policy, goals, objectives, and outcomes
 - Identify quantitative measurements and metrics

II. Strategy, Finance, & Budgeting

- Implement the California Infrastructure Planning & Budgeting Model
 - Develop life cycle financial projections (10, 20, 30 years)
 - Formulate sources & uses of funds analysis (triennial budgeting)
 - Integrate plan into ongoing State financings requirements (annual basis by State Treasurer)
 - Assess economic impact
- Obtain fiscal review viz. debt cap and general indebtedness
- Optimize sources and uses
 - Value for Money
 - Public Private Sector Comparator (PPSC)
 - Impact on and measurement of public policy goals, objectives, and outcomes
 - Implementation and management of fiscal policy
- Formalize Infrastructure Expenditure Plan
 - Secure executive and legislative approval for 3 year plan

III. Continuous Infrastructure Investment Process

- Implement Management and value for money best practices
 - Gateway Process (Figure 12)
 - PPSC (Figure 13)
 - Project Review Group (Figure 14)
- Implement Standard Form of California PFI Contract
 - Design, Build, Finance, and Operate (DBFO) (Figure 23)
- Use Output vs. Input Specifications and Investment Practices
 - Apply Standardized California RFQ form (Figure 22)
 - Integrate the RFQ, PPSC, and Standard Form of PFI contract into Human Resources management process.
 - Establish clear lines of accountability
 - Set performance standards to public policy output specifications (goals, objectives, and outcomes)
 - Delivery timing
 - Cost effectiveness
 - Customer satisfaction
 - Availability
 - Reliability
 - Overall measure of value for money
- Implement CEQA & EGPR Gateway
- Establish department head training & implementation
- Establish equitable labor code of conduct (Reliable Contractor guidelines)

IV. Formalize Feedback Loop to I, II and III

- Implement continuous measurement and critique of the performance of the investment process as it relates to the delivery of clearly defined public policy goals, objectives, and outcomes as expressed in the output specifications set for individual projects. Rigorous accountability in government for adopting pay-for-performance standards in infrastructure delivery.

d) Process Management Best Practices

In order to ensure the effectiveness of the proposed life cycle planning & budgeting process the state should implement three process management tools that will establish value for money in public infrastructure investment.

(i) Gateway Process

The Gateway Process (Figure 12) provides a context for project evaluation and management that complements the Public Private Sector Comparator (PPSC) and Project Review Group described below.

Figure 12

The Gateway Process

Gate 0 Strategic Assessment: The evaluation is applied at the start of a project or program and is designed to consider the public policy and business need for the proposed infrastructure expenditure.

Gate 1 Business Justification: This evaluation occurs once the business case for the proposed infrastructure expenditure has been clearly articulated. Its aim is to confirm that the business case is robust and make recommendations for improvements where necessary.

Gate 2 Investment Strategy: Prior to the invitation for bids, consider the project's potential for success.

Gate 3 Investment Decision: Establish whether the recommended investment decision is appropriate prior to awarding a formal contract. It also examines the processes in place to select a winning bidder.

Gate 4 CEQA & EGPR: Address the specific requirements of CEQA and EGPR in a timely manner. The objective is to ensure that environmental review processes and issues are resolved in a timely manner so as to avoid potentially costly delays in project development.

Gate 5 Readiness for Service: Examine how the public sector department responsible for the project will ensure the delivery of effective project management and set measurable standards for judging performance against the immediate and broader public policy goals for the project. It should also assess the basis for evaluating the projects ongoing performance against these objectives, ensuring that well-defined metrics are in place for measuring progress against planned outcomes.

Gate 6 Benefits Evaluation: Ensure the delivery of benefits and Value for money as set out in the initial business case.

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¹⁶ *PFI: Meeting the Investment Challenge*, HM Treasury, July 2003. (Note Gate 4 CEQA & EPGR reflects a modification to the original text that pertains to the application of the Gateway in California.)

While all of the gateways are important, the CEQA and EGPR gateway deserves additional comment. While CEQA and EGPR have been in place for many years, they lack systemic coordination and resolution. The failure to resolve the crosscutting goals and objectives of these and other related policies in a timely manner typically results in significant time delays and opportunity costs in implementing projects, resulting in tens of billions of dollars in lost value. Two considerations need to be carefully engineered into the CEQA and EGPR gateway.

First, the CEQA and EGPR gateway should ensure that CEQA and EGPR design requirements are appropriately represented in the project Request for Quotation (RFQ) or output specification. For example, a road contractor responding to an RFQ for a transportation system should be challenged by the RFQ to utilize the best available design, engineering, investment, and construction methods to ensure that the appropriate CEQA and EGPR goals and objectives are being met. Early identification of these issues enables project participants to get a head start in resolving CEQA and EGPR requirements.

Second, Gateway 4 should be designed to accommodate two tracks. The first track should accommodate an expedited CEQA and EGPR review which ensures that CEQA and EGPR requirements are satisfactorily resolved within the same time frame as the investment decision.

The second track should accommodate situations where a project delay is justified by CEQA and EGPR requirements (i.e., where these requirements make a sound social and environmental case to delay the investment decision in the context of the overall value for money proposition. This second track should include an assessment of the anticipated impact of the delay on the life cycle cost of the project, with that cost impact being approved through independent third-party review by the Project Review Group described below. The Project Review Group should establish predetermined parameters for the time frame and cost of the proposed delay, and in the event they are exceeded the Peer Review Group review team should approve any subsequent delay or cost impact.

The CEQA should be reformed to accommodate an appropriate “proportionate allocation” of the cost of any delays to the parties who are filing the CEQA action(s). Value for money in public goods investment should create an equitable apportionment of responsibility for attaining the goals and objectives of CEQA and EGPR. All parties must act as stakeholders with a vested interest in value for money in public infrastructure investment. Indefinite delays in implementing projects at any cost, defined by time and resources, should be thoroughly justified, as they may be harmful to the public good in the context of life cycle costing, the attainment of value for money and ultimately the State’s competitive position in the national and global economy.

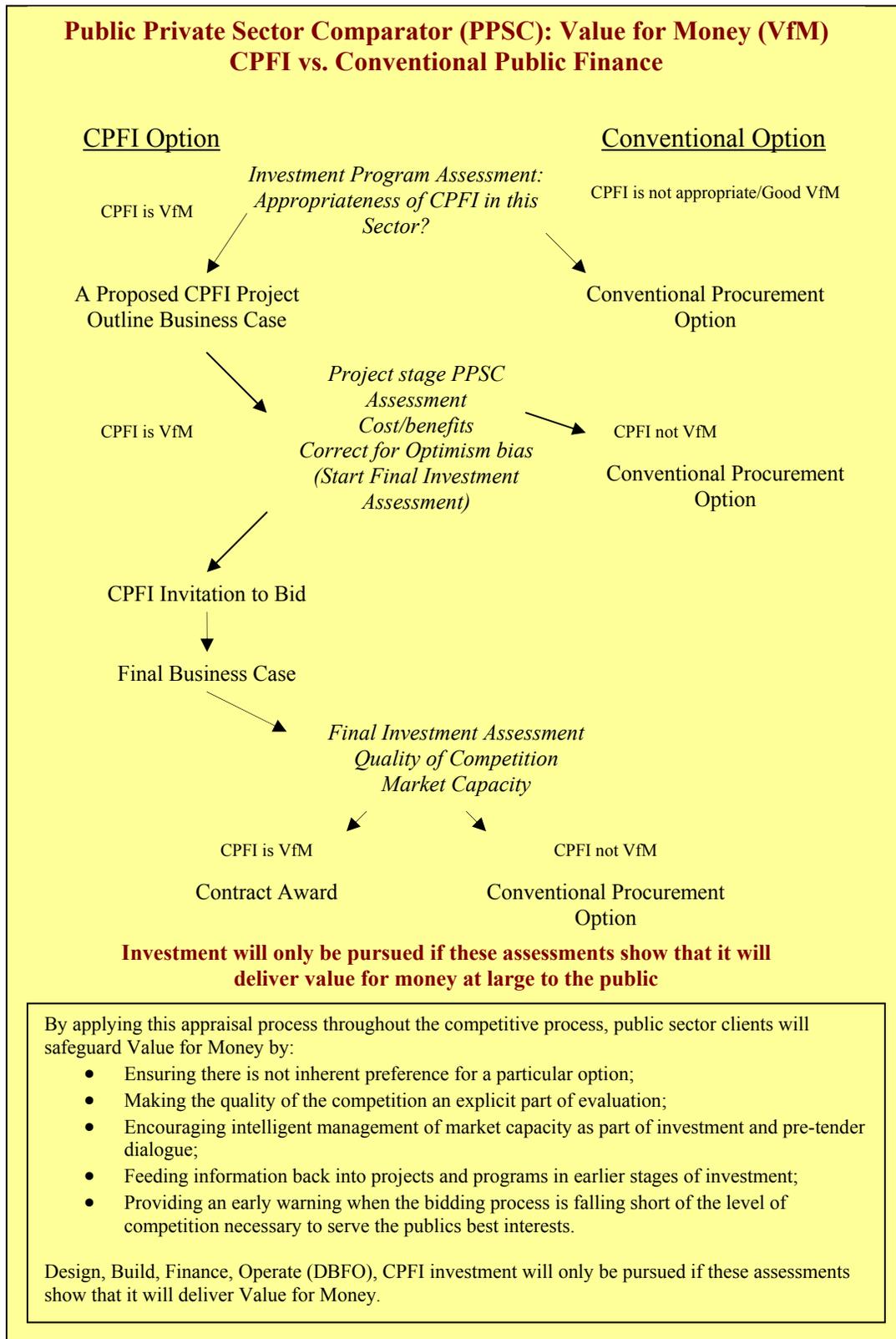
(ii) Public Private Sector Comparator

The Public Private Sector Comparator (PPSC) (Figure 13) plays a key role in seeking value for money in public infrastructure investment.

- First the Comparator ensures that the appropriate investment method, whether public or private, is used to achieve value for money in public infrastructure investment.
- Second the Comparator provides public sector department heads and public finance officers with an operating model for executing on the value for money proposition in public infrastructure investment.
- Third the Comparator gives California the best chance of achieving the 15 percent to 30 percent improvement in life cycle costing that has characterized global DBFO projects.
- Fourth, when applied in conjunction with the lifecycle budgeting and planning process outlined in Figure 11, the Comparator has the potential to reduce the impact of short-term thinking, partisan politics, and pork-barrel dealmaking in infrastructure investment.

The Comparator provides a transparent methodology for substantiating that value for money and productivity in infrastructure investment is being attained, and provides an important governing process for public sector department heads and public finance officers.

Figure 13¹⁷



¹⁷ PFI: Meeting the Investment Challenge, HM Treasury, July 2003.

(iii) Project Review Group

The Project Review Group (Figure 14) is designed to provide independent evaluation and track the entirety of the investment process in an objective and unbiased manner. The purpose of the Project Review Group is to ensure that all branches of government receive regular and consistent feedback on the implementation of the Gateway Process and PPSC and the planning elements outlined in Figure 11.

Figure 14

Checking Project Deliverability – The Role of the Project Review Group

Key criteria for the Project Review Group (PRG) in assessing the viability of projects are:

- Affordability;
- Output specification;
- Design quality;
- Risk allocation;
- Key terms and conditions;
- Bankability;
- Use of appropriate comparators;
- Alignment and consistency with public policy;
- Indicative timetable;
- Project team;
- Timely CEQA and EGPR resolution;
- Suitability of advisors;
- Commitment of sponsors/users;
- Statutory process;
- Adequacy of measurement of project outputs in relation to public policy objectives; and
- Overall contribution to Value for Money and productivity in public infrastructure investment.

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¹⁸ *PFI: Meeting the Investment Challenge*, HM Treasury, July 2003.

III. Public Private Partnerships: Value for Money and Productivity in Public Infrastructure Investment

There are well-developed archetypes in the global economy for strategic planning, infrastructure budgeting, and investment. The U.K. offers one of the more promising case studies, as its economy is similar in size to California, and only 15 years ago it was experiencing similar deficiencies in infrastructure investment. The U.K. has made tremendous progress in advancing sound fiscal practices for infrastructure investment, and it is well on its way to addressing an infrastructure expenditure deficit that was very similar to what California is experiencing today. The description below borrows from the U.K. experience and suggests that California might address the need to reform and accelerate its infrastructure investment process by expanding the scope and magnitude of the DBFO approach to infrastructure investment.

a) Public Private Partnerships Defined

Public Private Sector Partnerships (Figure 15) can be defined in three broad categories:

- the introduction of private sector ownership into state-owned business, using the full range of possible structures (whether by public flotation or by the introduction of a strategic partner, with the sale of either a majority or minority stake);
- the Private Finance Initiative (PFI), and similar arrangements, where the public sector contracts to purchase services on a long-term basis, to take advantage of private sector management skills. The private finance partner carries the risk and thus is given an incentive to succeed. PFI includes concessions and franchises in which a private sector partner takes on the responsibility for providing a public service, including maintenance, improvements, and construction of the necessary infrastructure;
- service contracts in which government services are sold in wider markets; and
- other partnership arrangements where private sector expertise and finance are used to exploit the commercial potential of government asset.

Figure 15

Three Types of Public Private Sector Partnerships (PPP)

- Privatization
- **Private Finance Initiative (PFI) – Concession-Based PPP**
- Service Contracts

In California today the most likely application of the PPP is in the context of the **PFI**.

Under the most common form of PFI the private sector **Designs, Builds, Finances, Operates (DBFO)** facilities based on output specifications decided by public sector managers and department heads.

The broad definitions above reflect the types of public and private partnerships that have been in place in the U.K. since 1992. These types of partnerships can be pursued in California as the state seeks to increase its infrastructure investment. In California there have been a limited number of examples where the PPP concept has been applied, but no formal government program for applying the technique across a wide range of state and local applications. Given the current fiscal situation and the state of infrastructure investment in California, the remainder of this paper will focus on the PFI, which may have the greatest potential for broad application in California at the state and local levels.

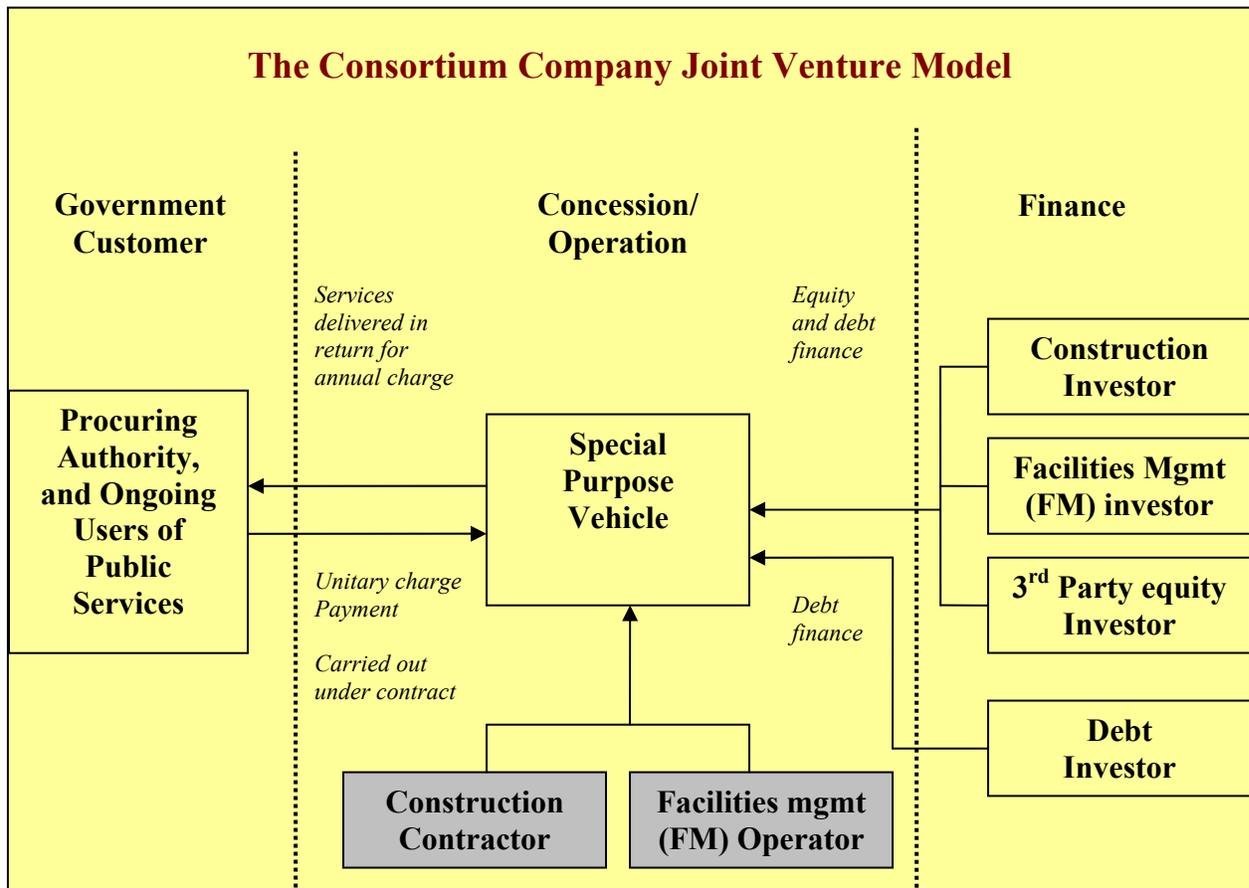
PFI is a form of public and private partnership that marries a public investment program, where the public sector purchases infrastructure items from the private sector, to an extension of contracting out, where public services are contracted from the private sector. It differs from contracting out in that the private sector also provides the infrastructure asset, financing, and services. Under the most common form of PFI, the private sector Designs, Builds, Finances, and Operates (DBFO) facilities, based on output specifications decided by public sector managers and their departments. Under the PFI agreement, the public sector does not initially own the asset, such as a bridge, power plant, hospital, or school, but pays the PFI contractor a stream of committed revenue payments for the use of the facilities over the contract period. Once the contract (typically referred to as a Concession Agreement) expires, ownership of the asset typically remains with the public sector, or is conveyed to the private sector, depending on the terms of the original contract.¹⁹

¹⁹ The Private Finance Initiative (PFI) Research paper 01/117, Economic Policy and Statistics Section, House of Commons Library, December 18, 2001.

The center of any PFI project is a Concession Agreement (Figure 16) within which the public sector specifies the output it requires from a public service facility, as well as the basis for payment for the output. The level of output required by the public sector is typically drawn up in close consultation with public sector workers who will be using the asset and support services provided through the PFI contract. This contract is the key document that sets out the risk-sharing arrangements between public and private sectors in a PFI project and is subject to extensive guidance.

Public service requirements are normally framed not as precise input specifications and designs for a particular asset, but as an output specification defining the service required. This approach helps utilize the private sector’s ability to provide innovative solutions to meet these requirements. Once the public sector has determined the level of output it requires to run the public services, the private sector is invited to submit proposals that meet the desired output objectives, using the best private sector expertise and know-how to deliver the service.

Figure 16



Typical consortium company joint venture model for PFI²⁰

²⁰ PFI: Meeting the Investment Challenge, HM Treasury, July 2003.

PFI ensures that contractors are bound by long-term maintenance contracts and shoulder the responsibility for the quality of the work they do. With PFI, the public sector defines what is required to meet the public needs, and remains the client throughout the life of the contract. The public sector also ensures, by contract, delivery of the output goals it sets and has the right under those contracts to change the output required from time to time. Consequently, with PFI the public sector can harness the private sector to deliver investment in better quality public services while maintaining frontline services in the public sector.²¹

To be effective, such projects need to achieve a significant improvement in costs, timing, and productivity while transferring the risk from the public to the private sector. In addition to providing an alternative means of funding for public sector infrastructure assets, the PFI offers a compelling framework for evaluating and attaining value for money in public sector infrastructure finance and development. The most effective form of PFI reduces current spending by the public sector and replaces it with a stream of future liabilities that is less costly on a Net Present Value (NPV) basis than a similar stream of direct public expenditure. This is due to real net savings from improved timing, improved developmental and/or operating productivity, better financing arrangements, and a transfer of risk.²²

The benefits PFI can offer, in terms of on-time and on-budget delivery and life cycle costing flow from ensuring that the many different risks inherent in a major investment program—for example, construction risk or the risk associated with the design of a building—are borne by the party who is best placed to manage them. In this way, the private sector has an incentive to perform well because it is responsible for the work and its infrastructure is at risk.

To be effective, PFI needs to be managed as a mature relationship between the public and private sectors that recognizes their mutual responsibilities. PFI relationships are very different from privatization, in which the market and price mechanism defines the service provided.

While an effective client relationship with the private sector is important to ensure PFI is a success, the government places equal importance on working with both its own employees and the private sector to ensure staff are protected. There also needs to be an optimal sharing of risks between the private and public sector. There are certain risks that are best managed by government, and seeking to transfer them would neither be viable nor offer value for money for the public sector.²³ The Public Private Sector Comparator (PPSC) is an important tool to be used in sorting out how to best determine value for money in public sector infrastructure investment. The PPSC provides an important metric for ensuring transparency and objectivity in public versus private delivery decisions.

²¹ *PFI: Meeting the Investment Challenge*, HM Treasury, July 2003.

²² The Private Finance Initiative (PFI) Research paper 01/117, Economic Policy and Statistics Section, House of Commons Library, December 18, 2001.

²³ *PFI: Meeting the Investment Challenge*, HM Treasury, July 2003.

PFI can be applied at all levels of local, state, regional, special district, and federal government, and it has historically incorporated the full breadth of capital goods and services traditionally provided by the public sector.

i. Types of PFI

1. Freestanding projects

The private sector is responsible, on a project-by-project basis, for seeing that all costs will be recovered through a charge for services to the final user (for example, bridge projects are often financed entirely from bridge tolls). The government may contribute value to the project in terms of initial planning and statutory procedures, or in determining the route of a road, location of a school, university campus, or hospital. When the private sector is wholly responsible for a project needing government approval, and can recoup costs through charges at the point of use, it is typically not necessary to assess the financing of the project with a Public Private Sector Comparator (PPSC).

PPSC's are helpful when evaluating the cost/benefits of developing a project in a public and private sector partnership where the project assets are commingled or it is less clear how value for money is being attained.

2. Joint Ventures

In the context of public-private sector partnerships, joint ventures are projects in which both the public and private sectors contribute, but where the private sector has overall control. In many cases, the public sector contribution is made to secure wider social benefits, such as road decongestion. In other cases, government may benefit by obtaining services not otherwise available within the time scale required. Joint venture projects have several requirements:

- Private sector partners in a joint venture should be chosen through competition.
- Control of the joint venture should rest with the private sector.
- The government's contribution should be clearly defined and limited. Costs will need to be recouped from users or customers.
- The government's contribution can take a number of forms, such as concessionary loans, equity, transfer of existing assets, ancillary or associated assets, or some combination of these. If there is a government equity stake, it will not be a controlling one. The government may also contribute in terms of initial planning regulations, grants or subsidies.

- The allocation of risk and reward will need to be clearly defined and agreed upon in advance, with private sector returns subject to clearly defined standards of improved timing, developmental and/or operating productivity, and risk transfer. The public sector must be able to clearly demonstrate a gain when the joint venture arrangement is evaluated through the PPSC.²⁴

3. Services Sold to the Public Sector

Services sold to the public sector include those services provided by the private sector, often where a significant part of the cost is infrastructure expenditure.

For example:

- a private sector firm selling kidney dialysis services to a state-run-hospital;
- the private sector providing accommodation and day care for the elderly; or
- the provision of mental health facilities by the private sector through designing, building, financing, and operating new mental health facilities.

b) Costs and Benefits of PFI

Does PFI offer value for money?

It is frequently argued that PFI is more expensive than public sector investment, principally because the public sector can borrow more cheaply than the private sector. Typically, financing costs make up from 20 percent to 25 percent of the net present value of the total project cost. And the differential between the public and private sector cost of infrastructure is in the range of 2.5 percent to 5 percent of the net present value of a typical project. The value for money case for PFI rests upon the service provider being able to deliver greater cost savings than the increased financing cost in relation to the remaining three-quarters of the total project cost.

In the U.K., PFI has been used across many different types of projects, departments and sectors with net savings, after taking into consideration financing costs, in the range of 15 percent to 30 percent of project life cycle cost. This includes projects that are self-funding, such as toll roads and bridges, and projects that are paid for by the government via shadow tolls, availability payments, and other forms of direct rent payment obligations. Similar results are being demonstrated in many countries around the world.

²⁴ The Private Finance Initiative (PFI) Research paper 01/117, Economic Policy and Statistics Section, House of Commons Library, December 18, 2001.

The key point here is that PPP, PFI and DBFO methods of project development and financing are capable of rendering substantial life cycle cost savings across a broad range of applications. The PPSC should be applied rigorously to determine where the government should use these methods to improve value for money and productivity in infrastructure investment and public policy goal attainment. California is a world-class economy that clearly possesses the potential to achieve the upper bound (30 percent) in life cycle cost productivity improvement in public infrastructure investment.

In 2002 the U.K. Treasury conducted a survey of 70 PFI projects in order to assess the effectiveness of PFI. PFI was initiated in the U.K. in 1992, and the survey reflected a 10-year review of value for money. Properly applied, the survey found that PFI offers a viable public policy tool for instilling value for money in public investment based on the following value drivers.

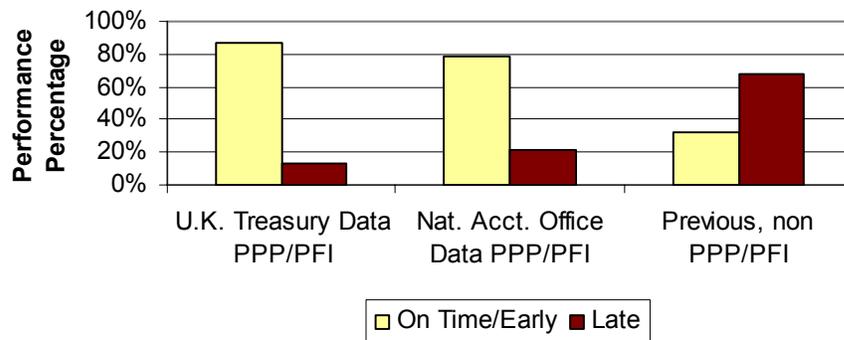
i. PFI Value Drivers

The 2002 U.K. study looked at three key project evaluation measures: delivery time, construction performance, and cost.

The on-time or early delivery of projects was consistently favorable over the 10-year period covered by the study.²⁵ In fact, the PFI projects had better completion times because the contractors hired by the private sector relied on construction management that followed industry best practice standards. Improvement in completion times is often cited as one of the more important contributors to the value of PFI in public infrastructure investment (Figure 17).

Figure 17

Project Delivery PPP/PFI vs. Previous Methods of Delivery

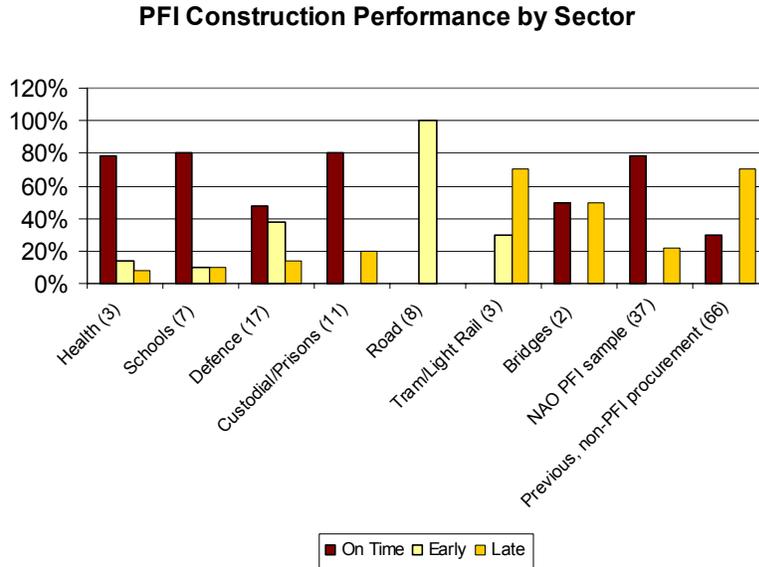


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²⁵ PFI: Meeting the Investment Challenge, HM Treasury, July 2003.

PFI construction performance by sector was consistently favorable (Figure 18).²⁷

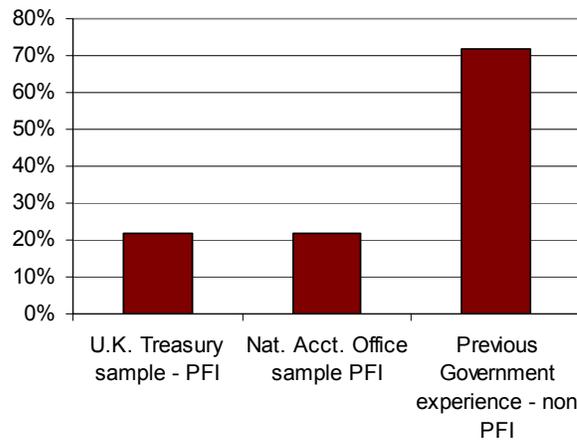
Figure 18



There was marked improvement in delivery to budget. (Figure 19).²⁸

Figure 19

Delivering to Budget - Price Uncertainty in Public Procurement



The U.K. survey included interviews with key public sector project sponsors and managers that revealed the following top 6 value for money drivers out of 18 drivers evaluated.

²⁶ PFI: Meeting the Investment Challenge, HM Treasury, July 2003.

²⁷ PFI: Meeting the Investment Challenge, HM Treasury, July 2003.

²⁸ PFI: Meeting the Investment Challenge, HM Treasury, July 2003.

1. Risk Transfer

The primary reason that PFI projects bring value for money is that the PFI projects transfer risk to the private sector, which is better able to manage the risk. Public sector sponsor comments included:

- “Risks have been transferred to the contractor which will now be better managed, (e.g., investment of new accommodation and delivery of ongoing maintenance of improvement of accommodation).”
- “The contractor has shown itself better placed than the government to dispose of surplus accommodation, negotiate lease terms with landlords and contract for the delivery of services on a national basis.”
- “Risks were carefully costed at the outset, so there was a sound basis for assessing bids. Tender documents specified which risks would be retained or shared by the client; all other risks were to be borne by the contractor. This approach worked well.”

2. Long-Term Contracts (Life Cycle Costing)

Long-term contracts are seen as a key condition for delivering value for money because of the scope of time they allow for recovering the initial investment, developing alternative approaches to service delivery, and focusing on life cycle costing. Public sector sponsor comments included:

- We experienced “significant change of relationship compared with earlier projects: a sense of longer term planning and a more thoughtful deliberate approach.”
- The “large scale capital investment in [the] early years is repaid by a long-term contract, thereby allowing full cost to be recovered over the life of the asset.”
- The long-term contract “provided real opportunities for the private sector to deliver ‘invest to save’ plans that improve value for money.”
- “The PFI solution had lower whole life, service and utilities costs. The proposed solution was a better overall package, aided by long-term responsibility lying with one organization.”

3. Output-Based vs. Input-Based Specification

One of the principal differences between PFI and conventional investment is that in the former the project deliverables are specified as outputs and in the latter as inputs. Outputs are the products of a service, the delivery of which may require an asset. Input specification would describe the asset, which would subsequently be used to provide a service.

Services provided under PFI contracts are specified as outputs, and payment is linked to the quality of their delivery. In the output method, the public entity is selling the rights to a concession contract through a competitive bid process to a private entity. In contrast, the traditional input-based public investment process

relies solely on the public sector to define the project without the benefit of competitive private sector input in all aspects of engineering, investment, construction, operations, maintenance, and finance.

The output specification common to PFI scored highly in the U.K. survey. Public sector sponsor comments included:

- The output specification was “key in allowing innovation.”
- It “enabled bidders to exercise freedom and use tier professional expertise to the fullest in terms of identifying the best approach to delivering outputs.”
- It “positively encouraged innovative approaches to service delivery that spanned traditional boundaries, and will continue to encourage innovation in terms of approaches to service delivery.”

4. Competition

Competition scored very high in the U.K. survey. The value for money of a project is easier to demonstrate where there has been an effective price-led competition. Public sector sponsor comments included:

- “After losing the first two contracts, two bidders were desperate to win. These two were matched ‘head to head’ in the final round.”
- “Market forces helped eliminate waste.”
- “This is the most important value driver for me. The winning bidder knew they had to put keen prices in if they were going to win the competition.”
- “Open and transparent investment and evaluation processes encouraged consortia to form, remain in place and continue to strive for new ways of delivering value for money in their bids. If a preferred bidder had been identified earlier in the process, there is no doubt that poorer value for money would have been achieved.”

5. Performance Measurement and Incentives

Performance measurement and incentives act as a means of securing the delivery of the value for money promised by the original competitively priced deal. Public sector sponsor comments included:

- Performance measurement “has kept pressure for good performance.”
- “Basic performance was set at or above industry norms.”
- “Since the contracts became operational the performance measures have been instrumental in securing high quality performance delivery.”
- “The performance management system operated by the contractor ensures that payment deductions are made for service delivery that does not meet the required standards.”

6. Private Sector Management Skills

The ability of the private sector to deliver management and operational efficiencies is crucial to the success of PFI. In the U.K., greater emphasis has developed over time on recognizing and exploiting the respective skills of the public and private sectors and combining the two in effective partnerships.

Public sector sponsor comments included:

- “In the development and construction stage there were significant project management skills brought to bear from the private sector. These did have a positive influence.”
- Private sector management was “a necessary requirement to steer towards better value for money.”
- “The contractor has focused attention on front line service delivery which has had a direct impact on perceptions of service quality.”
- Private sector management “brought sharper focus to cost control.”
- “The private sector is better placed to respond to new legislation, technology and management of an ageing infrastructure. The contractor is a multinational with leading edge management and technical expertise.”

ii. PFI Value Detractors

While positive comments far outweighed negative comments, the following negative comments were mentioned in survey responses:

- It is “important to secure contractor innovation. However, output-based tenders tend to become input-based contracts as lawyers of both sides attempt to tie down the deal. This may limit future flexibility.”
- “A lot [of] work has been done on the quality and performance measurement, but more could have been done in the contract. There have been problems in settling whether the contractor is meeting the required outputs.”
- “Initially harmonious, but recently tending towards confrontational approach.”
- The “quality of project managers has been mixed. Some are excellent, some less so.”
- “The PPSC was a chore, particularly given that a non-PFI solution was not an affordable option.”
- “Our professional support (e.g., property advisors) was poor. In terms of organization and facilitation it helped, but service on the commercial aspects was frankly limited.”

- “The process took a long time and risk pricing is difficult.”
- “Too many public sector parties were involved in the approval process. We nearly lost suppliers as a result of the length of the approval process.”

iii. The Optimal Allocation of Risk in PFI

As a general rule PFI should always transfer to the supplier the design, construction, and operating risks (in terms of both cost and performance). Demand and other risks should be a matter of negotiation, with the value for money effect being tested out, using the PPSC where appropriate.

Risks typically retained by the public sector include:

1. The risk of a wrongly specified requirement. Where the requirements cannot be specified in their entirety initially, as in some information services and information technology projects, it may be possible to share with the supplier the risk of defining the remaining requirements during development and implementation. The public sector still retains the risk with respect to the initial specification.
2. Risk of criticism. A failure of a public service, even if entirely the responsibility of a supplier, may result in criticism of the government or local authority with the supplier.

iv. Employee Protection and Responsible Contractor Guidelines

A commonly cited objection of PFI relates to the effect that private sector contracting might have on public sector employees. Again, the U.K. offers a proven case study for addressing labor concerns that arise as a consequence of implementing PFI.

The U.K. Government has committed itself to ensuring fair and reasonable treatment of workers in PFI projects. In 2003 it adopted Core Value best practices, which entered into effect in March 2003. It applies to all new staff employed on PPP, PFI and outsourcing contracts.

In order to ensure that the PFI can deliver value for money in California, similar employee protection standards must be developed (Figure 20).

In the United States, and specifically in California, labor has established a set of guidelines that define the “Responsible Contractor.” Pension funds such as the California Public Employees Retirement System (CalPERS) have adopted Responsible Contractor guidelines with regard to making private sector investments. The state, and related private parties who become involved in CPFI, should adopt Responsible Contractor guidelines in order to ensure that labor best practices are working in CPFI investments. The adoption of such guidelines is a key factor in

ensuring that labor is able to offer its full support for the principles of value for money and productivity in infrastructure investment via the CPFI.

Figure 20

Employee Protection Standards – Responsible Contractor Guidelines

Pursue a strategy for enhancing worker protections and ensuring fair and reasonable treatment in DBFO based on the following principles:

- Provide transparency about workers' rights in the contracting out process.
- Protect terms and conditions for both transferees and new employees in the PFI work force by ensuring the comparability of labor contracts in the public and private sector.
- Protect staff pensions in the public and private sectors.
- Retain flexibility in public service delivery, including through Design-Build and PFI. Ensure efficient work force management and encourage innovation in service delivery. Provide incentives to public sector departments and agencies to improve performance and productivity in the life cycle cost of public sector infrastructure investment.

AB 1838 and SB 1165 currently include specific language that addresses the issue of labor compliance in design-build projects. While these proposed statutes are a step in the right direction, the state needs to develop a more comprehensive approach to adopting '**Responsible Contractor Guidelines**'

This approach should be directed at ensuring that public, private, and labor interests are aligned around Value for Money and productivity in public infrastructure investment.

v. Summary of Costs and Benefits

The higher cost of financing for private versus public sector projects does not typically negate the savings offered by PFI, provided that potential private sector savings are realized.

Project life cycle cost savings in the range of 15 percent to 30 percent, with a weighted average cost savings of approximately 20 percent, are typical in global DBFO. Projected savings are, however, sensitive to risk transfer valuations that can account for 60 percent of forecast cost savings.

The U.K. study cited earlier also revealed that there is some correlation between a high proportion of infrastructure expenditure and a high percentage of cost savings against the PPSC. Overall this suggests that the larger savings may result from incentives to maximize the efficient use of assets through a combination of strong design, tight project management, and an overall focus on life cycle costing.²⁹

²⁹ Value for money Drivers in the Private Finance Initiative, A Report by Arthur Andersen and Enterprise LSE, Commissioned by the Treasury Taskforce, January 17, 2000.

c) In What Circumstances Should PFI Be Considered?

Analysis of where the PFI model is most applicable, based on evidence from the U.K., suggests that it is most likely to offer value for money in major infrastructure projects where there are significant ongoing maintenance requirements, where the structure of the service allows the public sector to appropriately define its needs as service outputs, and where the nature of the assets to be produced allows them to benefit from life cycle costing. It is less likely to present value for money where very fast-paced change makes a long-term contract structure inappropriate, or where the costs of pursuing PFI investment are disproportionate to the benefits it brings.

In effective PFI investment (Figure 21):

- The public sector specifies the outputs that it requires and a private sector consortium then contracts to meet those requirements.
- The risk involved in the project is shared between the parties, with each party managing the risks they are best able to. This approach to risk-sharing provides powerful incentives for the private sector to perform and ensures value for money for the public sector.
- The public sector ensures that the quality and continued effective delivery of public sector services are maintained, with the ability to make deductions for poor performance, the flexibility to make necessary changes in the future, provisions for the consortium of funders to replace poor service providers, and ultimately the right to terminate the contract.

Figure 21

Characteristics of Successful DBFO

There is a case for considering PFI where:

- There is a major infrastructure investment program, requiring effective management of risk associated with construction and delivery;
- The private sector has the expertise to deliver and there is good reason to think it will offer value for money;
- The structure of the service is appropriate, allowing the public sector to define its needs as service outputs that can be adequately contracted for in a way that ensures effective, equitable, and accountable delivery of public services in the long term, and where risk allocation between public and private sectors can be clearly made and enforced;
- The nature of the assets and services identified as part of the PFI are capable of being costed on a life cycle basis, or long-term basis.
- The value of the project is sufficiently large to ensure that investment costs are not disproportionate;
- The technology and other aspects of the sector are stable, and not susceptible to fast-paced change; and
- Planning horizons are long-term, with assets intended to be used over long periods into the future.

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³⁰ PFI: Meeting the Investment Challenge, HM Treasury, July 2003.

The global experience with PPP, PFI and DBFO far exceeds the U.S. experience. These methods have been broadly applied across many sectors of investment including roads, rail systems, airports, urban mass transit, hospitals, universities, primary and secondary schools, pipelines, energy systems, public office buildings, and many other applications. Virtually all sectors of government, including defense, are touched by these methods of project development. The results are being delivered over time under conservative and liberal/labor administrations. Global DBFO/PPP has thus become a nonpartisan public infrastructure development and funding model.

The first lesson from global practice is that there is no need to work incrementally from existing arrangements. Bold departures from past practices are often the best way to get results. The biggest innovation in overseas transportation is the widespread reliance on the private sector to take responsibility for financing the construction and maintenance of major projects. The public sector remains heavily involved in the planning and permitting of projects, and usually sets the terms for investor involvement. It also supervises the construction and operations. But the actual operations are a private sector responsibility, and project financing—including the raising of toll revenues and controlling costs—is a private sector risk.

With respect to highways, this means toll roads, since the tolls provide the revenue stream that investors need. It is the private sector that is financing, building, and operating most of the major new highways in countries as diverse as Canada, Britain, Ireland, France, Spain, Italy, Greece, Hungary, Poland, China, India, Pakistan, Turkey, Indonesia, Malaysia, Israel, South Africa, Philippines, Argentina, Brazil, Chile, and Jamaica. Examples include:

- Toronto's Highway 407 ETR
- Great Britain's M6 Toll
- Paris's A86 Tunnels
- Australia: Melbourne CityLink
- Australia: Sydney's Toll Roads and Tunnelways

Australia, Britain, Canada, and France have shown that projects conceived and developed to preliminary design stage by the public sector can be successfully put to public bid, and that investor groups will compete for the right to fund, manage, construct, and operate those projects in return for a right to a toll. Major metropolitan areas in these countries have managed to deliver mega-projects on budget and on time with private sector toll concessions. With investment money involved, local groups seem more accepting of tolls, and there seems to be more discipline to resist project creep than when they are engaged with a public entity.³¹

³¹Robert W. Poole, Peter Samuel, and Brian F. Chase, *Building for the Future: Easing California's Transportation Crisis with Tolls and Public-Private Partnerships* (The Reason Foundation, January 2005).

d) Application of Design, Build, Finance, Operate and the California Private Finance Initiative (CPFI)

Two remaining features of the DBFO and CPFI process for California will be highlighted in this section: the CPFI bid development process (Figure 22) and the elements of the standard form California DBFO and CPFI Contract (Figure 23).

The following observations pertain to the CPFI Project Development Process:

- Bidders prefer as short a process as practically possible. The reason is that this type of project development process is often very costly for the bidder, and the longer the process the higher the cost. On large-scale projects, bidding costs often run into the millions of dollars for each bidder.
- The public sector department sponsoring the project has an incentive to encourage a competitive and thorough bid process, where the bidders present the very best designs and solutions for a project reflecting the highest standard of value for money to the public sector. By capturing the bidders' experience, insights, creativity, and management skills through the bidding process, as well as during construction and operation, the state creates value for money and improves productivity.
- The competitive tension delivered by the competitive project development and bidding process is one of the key determinants to value for money and productivity.
- To encourage qualified bidders to participate in the bidding process, it is critical that the process be highly transparent, offer a level playing field for competitive bidding, and be fair and equitable to all bidders.
- In some projects, where the complexity of the project warrants a longer bid process, the public sector provides the short-listed bidders with a stipend that is designed to offset a portion of their bidding costs. The purpose of the stipend is to encourage bidders to stay with the process and deliver the most creative productivity-enhancing solutions for a project at the lowest possible cost. The stipend typically does not cover all of a bidder's bidding cost, thereby ensuring that the bidder has some risk and an incentive to maintain a high level of productivity during the bid process.

There are three main objectives in developing a Standard Form Contract for Design, Build Finance, Operate and CPFI projects in California:

- Promote a common understanding of the main risks which may be encountered in a Design-Build (DBFO), CPFI project;
- Allow for consistency of approach and pricing across a range of similar projects;
- Reduce the time and costs of negotiation by enabling all parties to agree on a range of areas that can follow a standard approach without extended negotiations.

The standard form contract is an important value for money and productivity-enhancing management tool in the overall process.

Figure 22

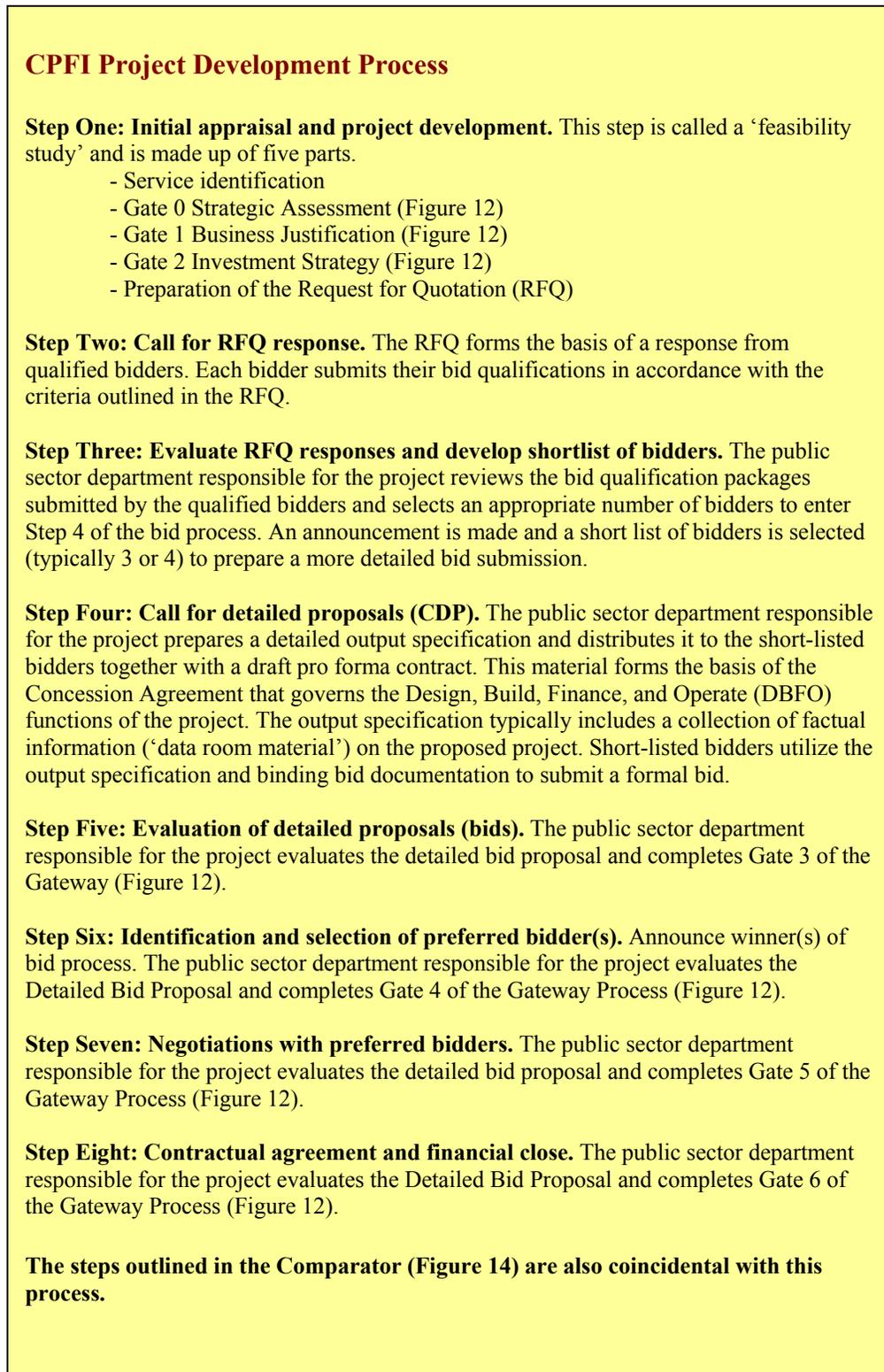


Figure 23

Elements of Design, Build, Finance, Operate CPFI Standard Form of Contract

Recommended outline elements for the Standard California DBFO, CPFI contract. The outline below reflects the standard form contract in the U.K., which has been in use for over 10 years and reflects the accumulated knowledge and experience of over 677 projects totaling \$57 billion in contract value. The elements of a typical standard form contract are outlined below.

The standard form U.K. contract can be found at:

http://www.hm-treasury.gov.uk/documents/public_private_partnerships/key_documents/standardised_contracts/ppp_keydocsstand_index.cfm

1. Duration of Contract
2. Service Commencement
3. Protections Against Late Service
4. Supervening Events
5. Information Warranties
6. Service Requirements and Availability
7. Maintenance
8. Performance Monitoring
9. Price and Payment Mechanism
10. Payments and Set-Off
11. Change in Service
12. Change in Law
13. Price Variations
14. Sub-Contractors & Employees
15. Assignment
16. Change of Ownership
17. Termination
18. Treatment of Assets on Expiration of Service Period
19. Early Termination
20. Surveys of Expiration and Termination
21. Indemnities, Guarantees, and Contractual Claims
22. Insurance
23. Information and Confidentiality
24. Intellectual Property Rights
25. Dispute Resolution
26. Authority Step-In
27. Miscellaneous Provisions
28. Direct Agreement
29. Land and Other Property Interests
30. Alternatives to and Variants of Project Finance
31. Commitment Letters
32. Due Diligence Over Sub-Contracts and Financing Documents

V. Conclusions and Implementation

By addressing short, medium and long term budgeting and fiscal management issues when planning for long-term investment, the State has a unique opportunity to secure California's future. Resources dedicated to rebuilding California's infrastructure can help to ensure world-class public services and California's competitive position in the national and global economy.

To attain these goals the state should consider the following:

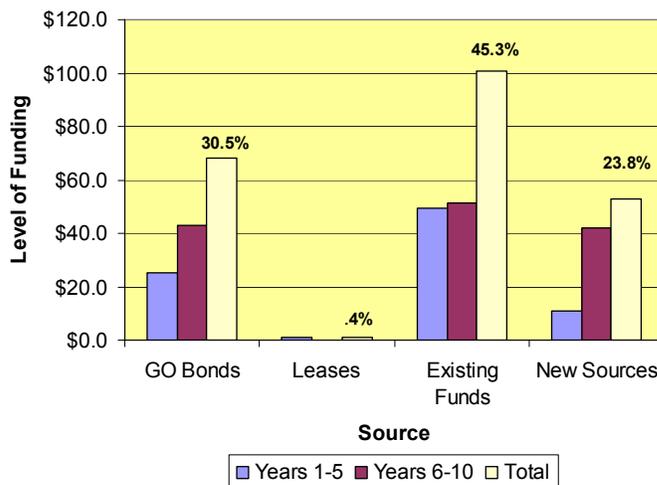
- Develop legislation that synchronizes the state's fiscal situation with its short-, medium-, and long-term infrastructure investment strategy;
- Implement a statewide strategic planning and infrastructure investment process (Figure 11) that embodies the principles of long-term life cycle (10-, 20-, 30-year) strategic planning that is consistent with public policy goals, objectives, and outputs across sectors and departments;
- Recognize that the level of infrastructure investment currently being debated is in the range of 1 percent or less of GSP. This level of expenditure is substantially below the 45-year 2.5 percent average, and may be inadequate to ensure the state's national and global competitive position;
- Strive to be globally competitive by meeting or exceeding the global standard for infrastructure investment, which is closer to 2 percent to 2.5 percent of GSP;
- Recognize that the tension between debt "crowding out" and population growth promises to create a significant public policy and fiscal challenge for California, which calls for new methods of infrastructure development and funding;
- Adopt a fiscal policy that eliminates debt financing for current expenditures and provides a more flexible version of the proposed debt cap;
- Integrate the policy implications of EGPR, CEQA, and a more flexible debt cap into a more integrated process for infrastructure investment;
- Adopt the Fiscal Golden Rule and the Sustainable Investment Rule;
- Apply DBFO best practices aimed at achieving a real improvement in timing, developmental and/or operating productivity, financing arrangements, and risk transfer in infrastructure investment;
- Adopt a life cycle planning and infrastructure budgeting process that runs in a triennial cycle with the State's general budgeting process;
- Adopt process management best practices to ensure that all participants in the infrastructure investment process have the tools they need to maximize the value of the state's investment:
 - Gateway Process (Figure 12)
 - Public Private Sector Comparator (Figure 13)
 - Project Review Group (Figure 14)
- Master the transition from input specifications to output specifications in infrastructure investment;

- Master the DBFO and CPFI investment methods necessary to achieve a 30 percent life cycle cost savings in infrastructure investment over the next 10 years;
- Seek value from the following high value-added elements of DBFO and CPFI:
 - Risk transfer
 - Life cycle costing
 - Output versus input-based project specifications
 - A bidding environment that fosters competition
 - Performance measurement and incentives
 - Private sector management skills
- Adopt employee protection standards (Reliable Contractor guidelines) that ensure that public and private labor interests are aligned around value for money and productivity in public infrastructure investment;
- Implement a formal CPFI Project Development Process as outlined in Figure 22;
- Adopt a standard form of concession agreement (Figure 23) for DBFO and CPFI, to reduce risk and project development costs for all participants.

The Governor’s Strategic Growth Plan calls for 23.8 percent of investment from new sources such as DBFO and PFI (Figure 24). Other plans debated in the legislature appear to fall short of this level of investment. Whatever the outcome, there is significant potential to increase infrastructure investment and improve value for money based on global best practices.

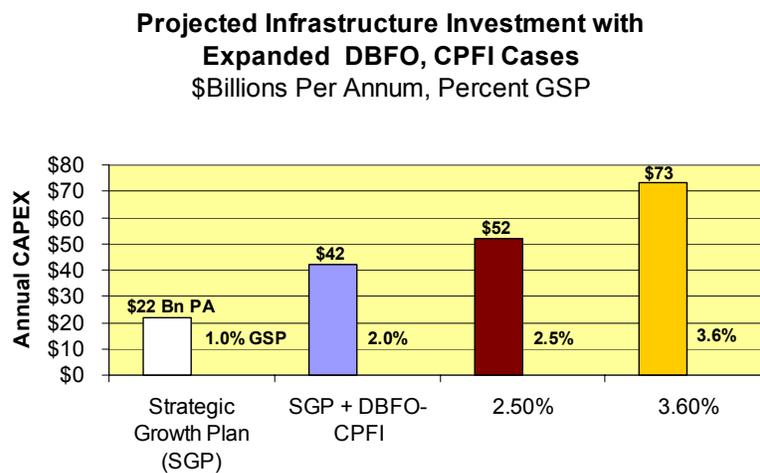
Figure 24

**California Five-Year Infrastructure Plan 2006
Funding Composition**



Given the global availability of funding for CPFI applications, the state should more thoroughly evaluate the potential for application of DBFO and CPFI in order to substantially enhance the volume and pace of public infrastructure investment. Based on current conditions, there may be sufficient capacity in global capital markets to support a CPFI program that could double the governor’s proposed \$222.6 billion Strategic Growth Plan over the 10-year life of the plan. Notwithstanding the legislatures decision to advance \$37 billion in infrastructure general obligation bonds to the voters in November 2006, CPFI has the potential to produce investment of \$42 billion per year, or a total of \$420 billion over 10 years, reaching a level that represents approximately 2 percent of GSP (Figure 25), and which is closer to the global rate of investment for economies of similar size.

Figure 25



Implementing the concepts in this report would provide a proven foundation for implementing value for money and productivity improvement in public infrastructure investment.

Appendix A

Overview of California's Proposed Strategic Growth Plan

In January of 2006 Governor Schwarzenegger proposed a Strategic Growth Plan for financing California's infrastructure. The plan calls for \$222.6 billion in investments over ten years, of which 31 percent, or \$68 billion, would be financed through General Obligation (GO) bonds. Existing resources, such as revenue from state and federal gas taxes, would provide 43 percent, or \$96 billion, of the required funding, while the remaining \$59 billion would come from other "new" resources.³²

On Friday May, 5, 2006 state lawmakers approved a plan to let voters decide whether to spend a record \$37 billion (54 percent of the Governors proposal of \$68 billion as originally proposed in the Strategic Growth Plan) on roads, schools and flood control. The bond package, which has broad public support but failed to pass the Legislature, now goes to Gov. Arnold Schwarzenegger, who called it "a landmark accomplishment that will yield benefits for generations to come." Voters in November will be asked to consider four propositions: \$19.9 billion for roads and transit projects; \$10.4 billion for school and university buildings; \$4.1 billion for flood control; and \$2.85 billion for affordable housing projects. Together, they make up the largest bond package in California history.

Irrespective of the changes that have taken place during the many months of debate around the Strategic Growth Plan the plan provides valuable insight into public policy addressing California's infrastructure needs.

According to the Office of the Governor, the proposed plan "balances the necessity of meeting infrastructure needs with prudent and fair approaches to funding those needs" so as to ensure "California's quality of life and foster continued economic growth."³³ It also addresses the needed infrastructure improvements the state should consider making in order to account for population growth and the related demands the state will experience for its services, such as schools, highways, and courts.³⁴

The governor's Strategic Growth Plan includes a proposal to amend the state constitution to set a debt service cap. This cap of 6 percent would serve to limit the investment the state could take on for infrastructure debt service each year relative to the general fund. This attempt at a "prudent and fair" approach for financing infrastructure needs could, under certain circumstances, interfere with the "state achieving an optimal mix of infrastructure versus other types of spending" and "encourage the use of nonoptimal bond maturity structures simply...to circumvent the cap."³⁵ If these circumstances were to present themselves, the California Legislative Analyst's Office concludes that a debt service cap would not be in the public's best interest.³⁶

³² *Overview of the Governor's Budget*, Legislative Analyst's Office (January 2006).

³³ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

³⁴ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

³⁵ *Overview of the Governor's Budget*, Legislative Analyst's Office (January 2006).

³⁶ *Overview of the Governor's Budget*, Legislative Analyst's Office (January 2006).

The \$222.6 billion in funding to meet California’s infrastructure needs over the next ten years would be distributed as follows:

- Transportation/Air Quality – \$107 B
- Higher Education – \$11.7 B
- Public Safety – \$17.4 B
- K-12 – \$48.2 B
- Flood Control & Water Supply – \$35.0 B
- Courts and other Public Service Infrastructure – \$3.3 B

The proposed \$68 billion in funding for the issuance GO bonds would be distributed as follows:

- Transportation/Air Quality – \$12.0 B
- Higher Education – \$11.7 B
- Public Safety – \$6.8 B
- K-12 – \$26.3 B
- Flood Control & Water Supply – \$9.0 B
- Courts and other Public Service Infrastructure – \$2.2 B

In contrast the \$37 billion in funding approved by the legislature for the November ballot is allocated as follows:

- Transportation/Air Quality – \$19.9 B
- Education (Higher, K-12) – \$10.4 B
- Public Safety – \$0.0 B
- Affordable Housing – \$2.85 B
- Flood Control & Water Supply – \$4.1 B
- Courts and other Public Service Infrastructure – \$0,0 B

Summary of differences in General Obligation Bond Issuance between the Strategic Growth Plan and the \$37 billion package being sent to the voters in November 2006:

GO Bond Comparison: Strategic Growth Plan, \$37 billion approved by legislature

	Strategic Growth Plan GO Bonds	\$37 billion GO bonds November ballot	Change
Affordable Housing	0	2.85	2.85
Courts & Other Public Infrastructure	2.2	0	(2.20)
Higher Education	11.7	-	-
K-12 Education	26.3	-	-
Education (Higher, K12)	-	10.4	(27.60)
Flood Control & Water Supply	9	4.1	(4.90)
Public Safety	6.8	0	(6.80)
Transportation Air Quality	12	19.9	7.90
	68.0	37.25	(30.75)

The time table for the issuance of the proposed \$68 billion in GO bonds is:

- 2006-2007 \$25.2 B
- 2008-2009 \$10.2 B
- 2010-2011 \$18.9 B
- 2012-2013 \$8.7 B
- 2014-2015 \$5 B

Transportation

The governor’s Strategic Growth Plan aims to address, as one of its primary targets, the present problems of congestion on the state’s highways while accommodating future demands on the statewide system stemming from population growth. The plan also seeks to ensure that the infrastructure is capable of sustaining and, as importantly, promoting California’s economic growth and expansion.

The major goals of the proposed plan are: (1) enable more traffic to move through existing roadways; (2) rehabilitate thousands of miles of roads; (3) add new lanes; and (4) increase public transportation ridership. The building of dedicated truck lanes and high occupancy vehicle (“HOV”) toll lanes, and the addition of new capacity on present highways to increase “throughput” in the transportation system, represent some of the proposed methods for accomplishing the stated goals. “This effort will require innovation in transportation planning, construction and management, sustained coordination among regional transportation agencies and the state, and dedicated funding.”³⁷

³⁷ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

Funding for addressing the transportation-related infrastructural needs includes: (1) \$47 billion in existing transportation funding sources such as the gas tax, Proposition 42, and federal funds; (2) \$48 billion in new funding from leveraging existing funds and new bond funds to attract increased federal, private, and local funding, as well as revenue bonds repaid from state gas tax and federal funds; and (3) \$12 billion derived from GO bonds.³⁸

The proposed plan anticipates that \$13 billion will be available for transportation over the next ten years through Proposition 42, which allocates 40 percent of its funds to local streets and roads. The Legislative Analyst's Office thinks that "it is highly unlikely that the total amount [of \$13 billion] would be available for state purposes."³⁹ The administration has proposed to "protect" Proposition 42 funds for transportation through a constitutional amendment. This would eliminate the option for future administrations and legislators to suspend the allocation of these monies.

The plan proposes to use Design, Build, Finance, Operate contracting, where the same contractor is used to both design and construct the project, to "deliver projects more quickly and efficiently." This approach could provide up to \$1 billion in projected savings. Caltrans, the Department of Transportation, does not have the authority or experience in using this approach, posing a potential source of conflict. Additionally, this proposed approach to shortening project delivery time has the potential for controversy as there would need to be assurances and methods of ensuring continued public accountability so that contracts are awarded fairly and competitively.

"The Strategic Growth Plan reflects \$18.9 billion for major goods movement projects. Bond funds totaling \$4 billion are proposed for the state contribution to this overall effort. Most, if not all, of the projects are to be accomplished through a variety of public-private partnerships to provide significant matching funds to the bonds."⁴⁰ Public private partnerships are to be used where a predictable stream of revenue can be generated to repay infrastructure investments—for example, toll roads or dedicated truck lanes. Specifically:

- \$2 billion for HOV and toll lanes (public and private investment)
- \$14 billion trade/goods movement ("state money to be required 1:1 for port mitigation and 4:1 for goods movement").

The \$107 billion in funding to meet the state's transportation-related infrastructure needs would be distributed as follows:

- \$21.2 billion for major projects on state interregional routes and to expand HOV lane system

³⁸ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

³⁹ *Overview of the Governor's Budget*, Legislative Analyst's Office (January 2006).

⁴⁰ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

- \$18.9 billion for expansion of trade corridors and regional priorities
- \$18.9 billion for adding auxiliary lanes, technology to assist drivers and improving interchanges on major corridors
- \$4.5 billion for expanding transit rail, new urban commuter rail, and intercity passenger rail
- \$28.9 billion for rehabilitation and preservation of state highway system
- \$7.9 billion for safety and operational improvements
- \$3.0 billion for technology and intelligent transportation systems
- \$2.0 billion for port improvements and environmental mitigation
- \$943 million for expansion of park & ride system , bike, and pedestrian routes
- \$471 million for improvement of transit and rail services
- \$297 million for expansion of freeway service patrol

Education

Over the next ten years, the Office of the Governor estimates that there will be an increase in the enrollment of California’s college and university systems by 600,000 students, with an additional 250,000 students entering K-12 schools. In order to absorb this estimated increase in California’s student population, the strategic growth plan recommends that \$48.2 billion be invested in the state’s education infrastructure.⁴¹

State institutions of higher education will receive \$11.7 billion for facilities needs, with the remainder of the education spending to be channeled to the K-12 system. It is proposed that \$26.3 billion of the funding come from the issuance of GO bonds, with \$10.2 billion coming from existing sources. These “existing” sources are largely comprised of funds from “local match from school districts for new bonds.”⁴² As proposed, the bond funds would be allocated for charter schools, career technical education facilities, new construction, and modernization of school facilities.

⁴¹ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

⁴² *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

California's Water Supply

The governor's proposed infrastructure spending for California calls for a \$35 billion investment in the state's water supply system over the next ten years. The funding will be applied toward providing safe and reliable water supplies for California's residents, as well as to improve the levee and flood control system. Coupled with the proposed funding, the administration has proposed a package of reforms in order to ensure the improvement and maintenance of the state's flood management system.⁴³

- AB 1665 to reform flood management and the financing of flood control improvements
- ACA 13 to allow flood management projects to proceed as other necessities such as water and sewer service

Of the \$35 billion cited as necessary for funding, \$9 billion will be raised through the issuance of GO bonds while \$5 billion in new funds will come from California's Water Resource Investment Fund, which is a new fee that will be collected from each retail purveyor. It is proposed that the remaining \$21 billion will come from federal funds (\$5 billion) and from the fees collected by local public water agencies (\$16 billion). The Legislative Analyst's Office notes, though, that "this level of federal and local investments is uncertain." The reasons cited for this uncertainty are: (1) the federal government must authorize projects, and the funding must be appropriated for the projects, and (2) the level of local investment for local water projects is uncertain, as the state does not track these local investments and the decision-making related to local investment is generally not part of state planning.⁴⁴

Public Safety⁴⁵

The governor has proposed to "partner" with local agencies to help them manage inmate populations across the state and across local governments so as to relieve overcrowding. To this end, the plan calls for \$17.4 billion in funding over ten years, of which \$6.8 billion will come from the issuance of GO bonds. The remainder of the funds is expected from the following sources:

- \$4 billion from various counties to match grant awards received from the state for jail construction.
- \$4 billion from the funds of the California Department of Corrections and Facilities budget for population and contract jail beds.
- \$2.2 billion from projected funding by general fund, special funds, and federal funds. This level of funding is "consistent with historical contributions of these funding sources."

⁴³ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

⁴⁴ *Overview of the Governor's Budget*, Legislative Analyst's Office (January 2006).

⁴⁵ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

The majority of the funding will go toward “address[ing] state and local detention facility needs;” that is, building new prisons and juvenile detention facilities. Some of the funding will be allocated for the replacement or relocation of deteriorated emergency response facilities for the Department of Forestry and Fire Protection, such as forest fire stations, air attack bases, and conservation camps. There is also an allotment for providing the Department of Justice with funding to provide for the permanent replacement of their current DNA lab.

The Legislative Analyst’s Office raises the following concerns regarding the administration’s proposals:

“This raises fundamental questions about the roles and responsibilities of the state and local governments. Because law enforcement is a local responsibility in California, it generally makes sense that local governments bear the cost of building jails. However, given that state law establishes crimes and punishments, it may be appropriate for the state to share in the cost of jail construction. Although the administration has proposed to use one-third of the additional jail beds to relieve overcrowding in state prisons, it is not clear what the ongoing programmatic and fiscal implications are of this aspect of the proposal.”⁴⁶

Courts and Other Public Service Infrastructure⁴⁷

In order to bring court facilities to current security standards, working conditions and/or accessibility standards, the governor’s Strategic Growth Plan outlines the expenditure of \$3.3 billion over the next ten years. The majority of the funding (\$1.8 billion) is raised through the issuance of GO bonds. In order to address the “most critical infrastructure needs” of other public services, \$400 million in GO bonds will be used in the next five years. These “critical” needs include the seismic retrofitting of state buildings at high risk, as well as health and safety issues at various state parks facilities.

⁴⁶ *Overview of the Governor’s Budget*, Legislative Analyst’s Office (January 2006).

⁴⁷ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006)

Appendix B

History of California Infrastructure Investment

History of California Infrastructure Investment

Before World War II, California's infrastructure development was largely segmented and localized. Most major projects were paid for and managed by the city benefiting from the project, and due to the relative population density in the urban areas, this was an efficient way of managing resources.

The decade following World War II saw rapid growth in California's population and economy. Over 100 new cities were formed, most of them suburban, drastically changing the state's infrastructure needs in a single decade. The large cities were no longer the only beneficiaries of the major projects, and therefore many more agencies and municipalities became involved in planning and executing strategies for growth. New highways and universities were critical to support the growing economy, but projects were held up by difficult and complex negotiations between local stakeholders. Local governments turned to the state for help, and while the state was willing and able to do so, the 1950s saw many large-scale plans drawn up but few projects completed.

What the state needed was a master politician who could provide leadership to local agencies to compromise and push projects through. While Governor Goodwin J. Knight (1953-1959) had attempted to do so in the mid-1950s, it was Governor Pat Brown (1959-1967) who finally succeeded. With the help of an aligned legislature, Brown was able to transfer authority for projects to state agencies and regional authorities, and he aggressively brokered deals that kept projects moving—this was the true key to his success.

Brown focused his efforts on three major infrastructure needs: the state water system, higher education, and the state highway system. The state highway system, worth \$300 billion today, was and still is the largest public works project built by a single organization.

The state water system was a project that had roots extending back 30 years. The need to transport water from the resource-rich north to the more populous south was nothing new. In 1945, the state engineer drew up a plan for a massive development of dams, aqueducts, and pumps to accomplish this feat. Not only was it expensive at \$3 billion (\$14 billion in today's dollars), but it was a very sticky political issue to convince northerners to send "their" water south.⁴⁸ To fund the project, Brown raised the largest bond issue ever attempted—at \$1.75 billion, it was nearly as big as the entire state budget.

⁴⁸ Page 162.

While the U.C. system dates back to the nineteenth century, the need for more regional colleges began in the 1920s. The U.C. system was hesitant to expand into new campuses, as it was very concerned about losing its right to research funding. The state began transforming local teaching and technical colleges into liberal arts colleges in the 1920s and 1930s, but it wasn't until the early sixties that California's Higher Education Plan was formalized. Brown helped formalize the roles and requirements of the University of California system, the California State University system, and the California Community College system. The U.C. system would retain its place as the primary research center, while the C.S.U.s would meet the educational needs of local economies. The Community College system would provide education to anyone and everyone who could benefit from it. "While [the three-tiered approach] was not a radical shift from the existing system, it instituted a political compromise that has proven remarkably durable and influential."⁴⁹

California's transformation in the 1960s was remarkable. Infrastructure growth was visible and widespread. Unfortunately, the changes may have been too much, too fast. Rapidly increasing property taxes, environmental awareness, and the desire to avoid invasive programs such as highways increased the cost of new projects. Under the two governors following Pat Brown, the growth of state spending was severely limited.

Population grew by 43 percent in the 1980 to 2000 with even higher job growth, which strained existing infrastructure and made metropolitan transportation more complicated. Growth of the high tech and financial sectors increased college enrollment in the late 1980s. Many of these shifts paralleled the postwar era, but were unfolding in a much larger, more diverse and populous state, with a larger and more complicated government. For example, "at the State level in 1960, there were 22 State departments; now there are 11 agencies, 79 departments, and over 300 boards and commissions."⁵⁰ Pushing new projects through also requires addressing far more nonprofit and special interest groups than in the postwar era. The cost of building has increased significantly faster than inflation. For example, building a road in the 1990s cost three times more than in the 1960s in real dollars.⁵¹ In addition, there is less money available for projects, and it is more difficult to raise taxes or other funds.

California's growth over the last three decades has left infrastructure funding trailing and debt soaring. Despite the fact that very few major new projects have been initiated since the 1960s and per capita spending has increased steadily since the mid-1970s, basic maintenance for the state's existing structures is severely lacking. While it is difficult to conclude how much maintenance is actually required, the most obvious needs can be identified. The Department of Transportation estimates a need for \$30 billion in state highway rehabilitation and reconstruction from 2002-2012. The Department of Water Resources says that aging levees in the Central Valley flood control system need \$1 to \$1.5 billion just to rehabilitate them to operating at their original capacity.

⁴⁹ Page 96.

⁵⁰ Neuman and Whittington, 2000, Cal Performance Review Commission, 2004, PPIC 169.

⁵¹ PPIC 170.

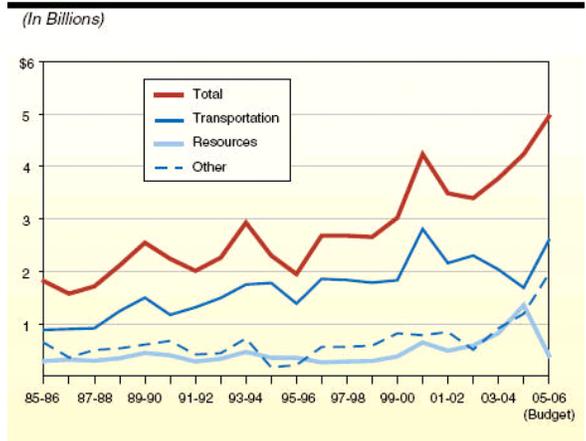
Figure B.1 California's Major State Infrastructure

<p>Water Resources</p> <ul style="list-style-type: none"> • 34 lakes and reservoirs. • 25 dams. • 20 pumping plants. • 4 pumping-generating plants. • 5 hydroelectric power plants. • 701 miles of canals and pipelines—State Water Project. • 1,595 miles of levees and 55 flood control structures in the Central Valley.
<p>Transportation</p> <ul style="list-style-type: none"> • 50,000 lane miles of highways and 12,000 bridges. • 9 toll bridges. • 11 million square feet of Department of Transportation offices and shops. • 209 Department of Motor Vehicles offices. • 141 California Highway Patrol offices.
<p>Higher Education</p> <ul style="list-style-type: none"> • 10 University of California campuses. • 23 California State University campuses.
<p>Natural Resources</p> <ul style="list-style-type: none"> • 287 park units containing 1.5 million acres and 4,000 miles of trails. • 228 forest fire stations, 39 conservation camps, and 13 air attack bases. • 16 agricultural inspection stations.
<p>Criminal Justice</p> <ul style="list-style-type: none"> • 33 prisons and 43 correctional conservation camps. • 8 youthful offender institutions. • 11 crime laboratories.
<p>Health Services</p> <ul style="list-style-type: none"> • 5 mental health hospitals comprising over 4 million square feet of facilities and 2,300 acres. • 5 developmental centers comprising over 5 million square feet of facilities and over 2,000 acres. • 2 public health laboratory facilities.
<p>General State Office Space</p> <ul style="list-style-type: none"> • 8.5 million square feet of State-owned office space. • 16.6 million square feet of leased office space.

Figure B.1 shows the breadth of major infrastructure projects in California. The cost of maintaining these facilities is enormous. The state is increasing spending to respond to these issues, but the investments are not maintaining, let alone expanding, the existing infrastructure (Figure B.2).

Figure B.2

Figure 2
Recent State Expenditures on Capital Outlay



Reference⁵²

California's recent budget crisis has required the raiding of funds intended for maintenance and new projects. Although Proposition 42 mandated that the gasoline tax be allocated to transportation projects, only about 10 percent had actually been transferred until the governor's recent transfer for 2005-06. The rest had been borrowed by the general fund.⁵³ In 2004-05, AB 687 dedicated new Tribal Gaming Compacts to repaying the Proposition 42 transfer; yet to date, AB 687 has not provided any funding. While the

⁵² A Primer: The State's Infrastructure and the Use of Bonds, Legislative Analyst's Office, January 2006.

⁵³ CTC Page 13.

current administration has promised to fund Proposition 42, the “volatility and poor financial condition of the State transportation program illustrate how untenable California’s current transportation financial structure has become.”⁵⁴ Furthermore, the CTC believes that the “ongoing budget crisis has exposed the need and perhaps created the opportunity for a major restructuring of transportation finance in California.”⁵⁵

Governor Schwarzenegger has made California’s infrastructure needs a high priority, a perspective that is shared by California voters reflected in the Legislature’s decision to place a large package of infrastructure bonds on the November ballot . His latest budget proposal promises to fully fund Proposition 42 in the 2006-07 year⁵⁶, and his proposed Strategic Growth Plan proposes to pay back reallocated funds early. The governor has also proposed a Proposition 42 firewall to prevent the reallocation of funds in the future. Despite the governor’s intentions, his budget for 2006-07 budget is not balanced and relies on the \$6.4 billion in revenue surplus in 2004-05 and an expected surplus for the 2005-06 year.

⁵⁴ CTC Page 25.

⁵⁵ CTC Page 25.

⁵⁶ (http://www.governor.ca.gov/govsite/pdf/press_release_2006/SGP_Overview.pdf)

Appendix C

Strategic Growth Plan Fiscal Analysis

Strategic Growth Plan Fiscal Analysis

In January of 2006 Governor Schwarzenegger proposed a plan for financing California's infrastructure. The plan calls for \$222.6 billion in investments over ten years, of which 31 percent, or \$68 billion, would be financed through General Obligation (GO) bonds. Existing resources, such as revenue from state and federal gas taxes, would provide 43 percent, or \$96 billion, of the required funding, while the remaining \$59 billion would come from other "new" resources.⁵⁷

An analysis of California's current state of indebtedness provides a picture of the state's ability to take on more debt for the purposes of investing in its infrastructure. As of November 1, 2005, California has \$52.6 billion worth of outstanding debts, the breakdown of which is:⁵⁸

- \$34.5 billion in general obligation ("GO") bonds
- \$7.8 billion in lease-revenue bonds
- \$10.4 billion in deficit-financing bonds (issued in 2004) – secured by 0.25% of the local sales and use tax

The state also holds \$37.2 billion in debt that is of yet unissued. The breakdown of this debt burden is:

- \$29.9 billion in GO bonds
- \$3.2 billion in lease-revenue bonds
- \$4.1 billion in deficit-financing bonds

The Legislative Analyst's Office estimates that general fund debt payments on GO and lease-revenue bonds for infrastructure-related purposes are:⁵⁹

- \$3.9 billion in 2005-2006
- \$4.3 billion in 2006-2007

The total debt service costs to the general fund stemming from GO, lease-revenue, *and* deficit-financing bonds are:

- \$5.1 billion in 2005-2006
- \$5.8 billion in 2006-2007

⁵⁷ *Overview of the Governor's Budget*, Legislative Analyst's Office (January 2006).

⁵⁸ *A Primer: The State's Infrastructure and the Use of Bonds*, Legislative Analyst's Office (January 2006).

⁵⁹ *California's Fiscal Outlook*, Legislative Analyst's Office (November 2005).

Additionally, the Legislative Analyst's Office estimates that general fund debt service costs will likely increase, and could reach over \$6 billion by 2010-2011.

California's debt service ratio, as presented by the administration, for infrastructure-type bonds is:⁶⁰

- 4.5% for 2005-2006
- 4.8% for 2006-2007

According to the Legislative Analyst's Office, the state's debt service ratio for infrastructure-type bonds *plus* deficit-financing bonds for the same time frame is:⁶¹

- 5.9% in 2005-2006
- 6.3% in 2006-2007

Currently, California's bond ratings are A, A2, and A as rated by Standard & Poor's, Moody's Investor Services, and Fitch Ratings, respectively. These ratings represent the lowest given to all the states rated by these agencies. Some of the factors to which the low bond ratings can be attributed are: the state's structural deficit, the continued projected imbalance between revenues and investment, and the multibillion dollar operating deficits projected through 2010-2011.⁶² One of the potential adverse implications and effects to California that is borne out of the low bond ratings is the higher interest rate premium the state has to pay on new bond issues. For example, as of early August 2005 the state's 20-year bond was trading at 0.22 points of interest higher than AAA averages.⁶³ This effect could limit the state's ability to afford additional debt in order to finance its infrastructural needs.

“It certainly is possible that [California's] DSR could rise to a level that might lead to some investor concerns, higher interest costs, and possibly some challenges in marketing the bonds. This might occur even if the state's bond ratings held constant or improved, due to the need to attract a sufficient number of new bond investors to absorb the added debt. Under these conditions, it would be particularly important that the state mitigate the situation by being committed to a well-thought-out, multiyear capital infrastructure plan capable of convincing investors that the plan made financial sense, would be effectively carried out, and would eventually pay dividends in terms of benefiting California's economy. Thus, it is critical that the state have an effective capital outlay game plan and implementation process in order to accommodate a substantial amount of new bond debt without adverse financial consequences.”⁶⁴

⁶⁰ *Strategic Growth Plan Briefing Packet*, Office of the Governor (January 2006).

⁶¹ *A Primer: The State's Infrastructure and the Use of Bonds*, Legislative Analyst's Office (January 2006).

⁶² *A Primer: The State's Infrastructure and the Use of Bonds*, Legislative Analyst's Office (January 2006).

⁶³ *Debt Affordability Report*, Phil Angelides, California State Treasurer (2005).

⁶⁴ *A Primer: The State's Infrastructure and the Use of Bonds*, Legislative Analyst's Office (January 2006).

The governor recently released his proposed budget for FY 2006-2007. It outlines \$123 billion in total state spending, with an increase of general fund spending by 8.4 percent to \$97.9 billion, and special funds spending of \$25 billion.⁶⁵ It is expected by the administration that general fund revenues for FY 2006-2007 will grow by 4.9 percent, or \$4.3 billion, to approximately \$92 billion. Personal income tax revenue, 76 percent of which was paid by 12 percent of taxpayers, is estimated to provide for 53 percent, or \$48.7 billion, of the general fund. Of the \$92 billion that makes up the general fund, \$12 billion of this income stems from capital gains and stock options. The total estimated revenue for FY 2006-2007 in the State of California that is expected is \$116 billion, leaving an operating deficit on the order of \$7 billion.

Current data for May 2006 indicate that revenues are ahead of plan and may be sufficient to address the budget shortfall forecasted earlier in the year. The Governor's most recently released budget update for May 2005 shows a \$2 billion positive balance without the use of Economic Recovery bonds.

⁶⁵ *Overview of the Governor's Budget*, Legislative Analyst's Office (January 2006).

Appendix D

California Environmental Quality Act

Along with outlining a fiducially responsible funding process to complete the infrastructural projects needed in California, there must be a clear understanding and analysis of the possible effects of CEQA on this modernization process.

The California Environmental Quality Act (CEQA), enacted in 1970, has as its goal to evaluate and mitigate the environmental impacts of all development proposals and projects in California, public or private, which are regulated by public agencies. The four major intents of CEQA, as stated in the statute, are:

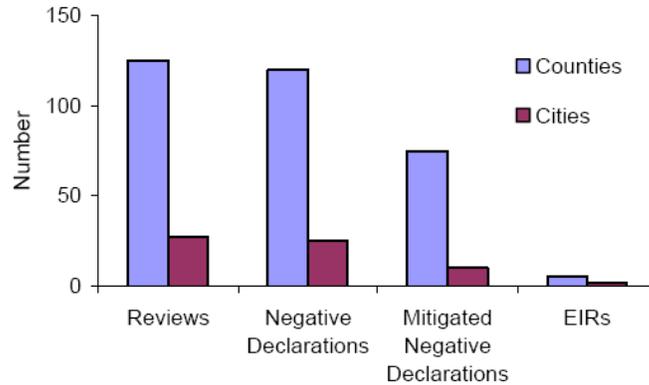
1. To “inform governmental decision-makers and the public about the potential significant environmental effects of proposed activities.”
2. To “identify ways that environmental damage can be avoided or significantly reduced.”
3. To “prevent significant, avoidable damage to the environment by requiring changes when the governmental agency finds the changes to be feasible.”
4. To ensure that a governmental agency “discloses to the public the reasons why [it] approved [a] project . . . if significant environmental effects are involved.”

An analysis of the impacts of CEQA shows that, according to a report published by the Public Policy Institute of California (PPIC),⁶⁶ in 1990 there were between 30,000 to 34,000 negative declarations produced by city and county lead agencies, while there were between 1,600 to 1,900 Environmental Impact Reports (EIR) produced. The Governor’s Office of Planning and Research conducted a survey revealing that there were substantially lower levels of CEQA activity in 1999 compared to levels in 1990.

In 1990, the typical county conducted 125 reviews. Of these, 120 resulted in negative declarations and only five EIR’s. The typical city that year processed 27 reviews, resulting in 25 negative declarations and two EIR’s. According to PPIC’s report, the median cost for an EIR in 1990 was \$47,333, and the mean was \$38,124 (in 2004 dollars, the median would amount to about \$68,400). However, the variation was quite wide, with 10 percent of EIR’s costing more than \$125,000.

⁶⁶ Elisa Barbour and Michael Teitz, “CEQA Reform: Issues and Options,” Occasional Paper (San Francisco, CA: Public Policy Institute of California, April, 2005).

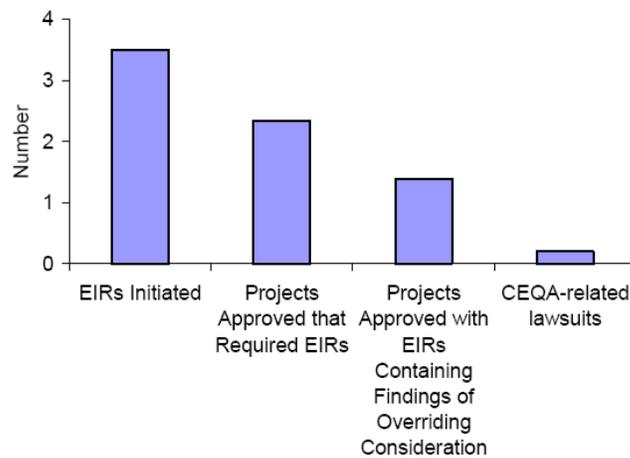
Figure D.1 CEQA Activity in the Typical Median California City and County in 1990



This same 1990 study found that EIR’s were most frequently required for large projects, projects that generated significant traffic problems, projects that threatened open space, projects in communities where growth was contentious, and projects that seriously threatened air or water quality or endangered species habitat.

It was found that after the launching of EIR’s, two-thirds of the corresponding projects were ultimately approved. The one-third of projects that were not approved were “more likely dropped or postponed due to either financing problems or changes in market conditions.” The average number of CEQA-related lawsuits faced by respondent jurisdictions was less than one (0.2). Overall, only one of every 354 CEQA reviews was taken to court, and, as shown by a Bay Area survey conducted at about the same time, when CEQA reviews were taken to court, disposition usually favored the lead agency.

Figure D.2 Average Number of EIR’s, Approved Projects with EIR’s and CEQA-Related Lawsuits for Cities and Counties, 1990

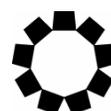


Throughout its 36-year history, the Act has gone through numerous reforms, though its core values have remained intact. The feature of CEQA that is most contentious is its lack of substantive standards. There is a great amount of uncertainty in the law that is caused by the flexible and vague standards regarding substantive objectives. The language for such key standards as determining the “significance” of effects to be mitigated, and determining what constitutes an appropriate mitigation, was left purposely vague in the law. This vagueness also holds for the legal requirements for cumulative impacts and alternative analysis, which are “considered confusing even among experts.” These features of the law can be problematic for development as it “provides would-be petitioners with footholds to challenge projects.” One of the major consequences that arises from inconsistent and vague requirements is that project applicants and lead agencies “bullet-proof” EIR’s against lawsuits, generating extensive and redundant documentation.

In order to address the problems that the vagueness inherent to CEQA may cause, a number of reforms have been proposed. Some of these proposed reforms are:

- Clarify the terms and requirements for CEQA compliance, but in such a way as to avoid a mandated standardization;
- Streamline requirements for review and litigation;
- Expand and automate the state’s role in oversight, guidance, and information collection;
- Standardize significance thresholds and mitigation measures (whether this is to be mandated or only encouraged is still debated as additional research may be needed);
- Delineate in plan-level review the ways in which the plan EIR will be used for subsequent approvals, which could serve to limit legal compliance standards and judicial scope for subsequent reviews;
- Promote consistency between local plan-level (as opposed to project-level) EIR’s and state or regional plans and policies;
- Investigate the expansion of exemptions for housing development;
- Develop long-range comprehensive community plans that identify growth and non-growth areas;
- Identify the growth goals, objectives, and performance standards of the state so as to coordinate state agency roles.

As development increases, these reforms, and others that may be proposed in the future, will play a crucial role in determining the efficiency with which the necessary capital improvement in the infrastructure of the State of California will proceed. This capital improvement will in turn have a direct influence on the future of the state’s economic growth. It is imperative, then, that a more thorough and up-to-date analysis of the role of CEQA be undertaken.



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