CAPITAL BUDGETS: The Building Blocks for Government Infrastructure
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CAPITAL BUDGETS
The Building Blocks for Government Infrastructure

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Capital budgets are used to allocate funds for physical assets that are to be acquired, constructed, renovated, and rehabilitated. In order to develop a capital budget, a jurisdiction must assess its infrastructure needs, prioritize among projects, integrate long-term capital plans into the service-delivery responsibilities of the government, evaluate a range of funding options, and schedule the regular repair and replacement of the capital stock. This is most often achieved through the adoption of a formal capital improvement program (CIP), which sets forth a jurisdiction's construction and maintenance plans over a five- or six-year period. The National Advisory Council on State and Local Budgeting (NACSLB) recommends that state and local governments undertake a series of steps to manage their capital assets.

A government's goals of providing efficient and effective services to its citizens for an equitable price can be enhanced by separating its budget into at least two parts: the operating budget and the capital budget. A dual budget system allows for a balanced operating budget and for the possibility of borrowing funds for a financed capital budget. It also enhances awareness of the capital budgeting process and, therefore, leads to closer managerial control over the implementation of the capital budget. While operating budgets provide funds for a host of expenses, such as salaries and police uniforms, capital budgets are restricted in scope to provide funding for only physical projects or fixed assets. The revenue sources for capital budgets include own-source revenues (taxes and fees), debt, and intergovernmental revenues. The feature that makes a capital budget's revenue structure different from an operating budget's is the use of long-term debt. State and local governments can borrow funds from investors and use those funds in a capital budget to cover the costs of construction, rehabilitation, and major repair. Although local government policies vary on items or projects that are eligible for funding in the capital budget, typically a facility or structure is expected to be consumed or used up over a period of time that minimally exceeds one year or for many governments exceeds three or five years. Governments may also have dollar thresholds for items to be included in the capital budget, and the threshold depends on the size of the government's budget.

This article provides an overview of the capital budgeting process. More specifically, it addresses:

- The role of capital budget managers in coordinating the CIP and preparing the annual capital budget
- The capital budgeting cycle
- The principles of financing capital facilities
- The relationship between the capital budget and the operating budget
MANAGING THE CAPITAL BUDGET

The locus of capital budgeting frequently is found in the finance department, the budget office, or the planning and development department. The capital budget process is most often housed in the budget office with close consultation with the planning and engineering agencies. An important decision is whether the capital budget approval process will be done concurrently with the operating budget or separately. Coordination of the two budgeting processes permits policymakers to analyze the total operating, maintenance, and construction costs of capital projects. Since monies from the operating budget are generally used to fund the ongoing maintenance of capital assets, it is crucial to coordinate the operating and capital budgeting processes to ensure that new capital asset construction will not overburden the operating budget in the future.

THE CAPITAL BUDGETING CYCLE
IN STATE AND LOCAL GOVERNMENTS

In general, the capital budgeting cycle incorporates six important stages: 1) asset inventory, infrastructure needs assessment, and cost analysis; 2) project prioritization; 3) financing plan development; 4) CIP and capital budget preparation and adoption; 5) capital budget execution; and 6) CIP evaluation and updating.

Stage 1: Asset Inventory, Infrastructure Needs Assessment, and Cost Analysis

NACSLB Recommended Practice 2.2 calls on governments to "have a process for inventorying its capital assets and assessing the need for, and the condition of, these assets." A sound needs assessment requires collaboration among capital budget managers, engineers, planners, and finance specialists. The goal of such collaboration is to provide decision makers with a realistic appraisal of the condition of existing capital assets, reasonably accurate demand estimates for current and future facilities, verifiable costs of maintaining, repairing, or replacing capital assets, and an analysis of long-term opportunity costs.

Once the needs assessment is complete, a list of candidate capital projects is developed, including renovated and new facilities. The list of candidate capital projects for the CIP can originate from numerous sources, including governmental agencies, advisory groups, citizen and business groups, chief executives, and members of the legislative branch. Public hearings are often held from which additional projects may be placed on the capital budgeting agenda for consideration.

Stage 2: Project Prioritization

The second stage of the capital budgeting cycle is the identification and prioritization of projects for inclusion in the CIP. The NACSLB recommends that projects be prioritized based on explicit criteria agreed upon prior to the planning process. Each criterion should be weighted to reflect its relative importance to the jurisdiction compared to all other criteria. For example, weighted criteria should help a jurisdiction decide whether a project to protect the health and safety of the citizens or a project that creates or protects jobs in the area is more important to the community. Exhibit 1 presents an example of a project priority ranking worksheet.

Stage 3: Developing a Financing Plan

It is important that a government identify potential funding sources for each of the projects included in the CIP. Such a requirement greatly increases the likelihood that resources will be available for each year of a multi-year project, and discourages decision makers from perpetually pushing unfeasible projects into the out-years of the plan.

Funding for infrastructure projects is derived from three sources. One source is cash contributions that are generated from the government's authority to collect own-source revenues during the current fiscal year as well as from accumulated savings or reserves from previous years. The second revenue source consists of contributions from other levels of government (i.e., intergovernmental aid). A third is borrowed money or debt issues.

Stage 4: Preparation and Adoption of the CIP and Capital Budget

The fourth stage of the process is the preparation and adoption of the CIP and the capital budget. In most governments, the capital budget is the first year of the CIP. A capital budget should include:

- A detailed description of each project to be considered in the current budget year
- A statement of the purpose of each project
- A description of the method for financing each project and the sources of funds
- A schedule for the completion of multi-year projects.

After the schedule of completion and citizen evaluation are completed, the capital budget—as a separate fund for accounting purposes—is then submitted to the legislative branch for approval. Capital budgets are usually placed in a separate fund that self-balances all capital projects and funding sources.
Exhibit 1: Project Priority Ranking Worksheet

<table>
<thead>
<tr>
<th>Project</th>
<th>&quot;A&quot; Priority Factors</th>
<th>&quot;B&quot; Priority Factors</th>
<th>A x B</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;A&quot; Weighting Factors</td>
<td>Evaluation Criteria</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Public Health and Safety</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Regulatory Mandate</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Frequency of Problem</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.5</td>
<td>Disruption if failure occurs</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Able to finance local share</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Other finance sources</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Cost of project</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Repair/replace vs. New/expand</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Adequate plans to proceed</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Age/Condition</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Generation of revenues from user fees</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Effects on O &amp; M costs</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>1.0</td>
<td>Benefits to existing users</td>
<td>1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL RANKING POINTS: 

Source: Center for Public Management and Regional Affairs, Miami University, mimeo for Issue 2 prioritization.

Stage 5: Execution of the Capital Budget

This fifth stage of the capital budgeting process involves close cooperation and communication between finance staff and line agencies responsible for executing capital projects. Whether a project is contracted out or performed in-house, the line department is typically expected to maintain strict oversight of the project. This project oversight role is important to keeping a project on time and on budget, as well as to make sure that contractors comply with applicable laws and regulations. The "watchdog" role for agencies is important to prevent abuses, to curb cost overruns, and to make sure that contractors and the government agency comply with applicable federal, state, and local laws and regulations on issues such as child labor, building codes, and affirmative action.

Stage 6: Evaluation and Updating of the CIP

The final stage of the capital budgeting process involves evaluating and updating the CIP. NACSLB Recommended Practice 11.5 advocates that all governments monitor, measure, and evaluate capital program implementation. An important reason for conducting an evaluation or audit of a capital asset after its acquisition and/or construction is to determine whether scheduling and financing goals outlined in the CIP were attained. During the acquisition and/or construction of capital assets, delays or cost overruns are not unusual. The post-completion evaluation highlights problems encountered from initiation to completion of the project. The identification of problems is important so that efforts can be initiated to prevent the same problems from arising in the future. The post-project evaluation should review the accuracy of cost and benefits projections made prior to selection and construction of projects. The evaluation should include explanations of any differences between pre- and post-project costs and benefits and, if warranted, estimating procedures should be adjusted.

A government's CIP should be reviewed on a yearly basis and updated as necessary. At minimum, as the first year of the CIP becomes the next fiscal year's budget, a new final year should be added to the CIP annually. (Governments that have biennial budgets typically also choose to revise their CIPs every two years.) Changes in economic forecasts, revenue estimates, citizen demand, legal mandates, priorities of the legislature, or other factors may necessitate additional adjustments to the multi-year CIP.

PRINCIPLES OF FINANCING CAPITAL FACILITIES

One of the most important decisions in the capital budgeting process is whether to pay capital costs today from "savings" or to pay them later over an extended period of time from "borrowed" funds. NACSLB practices 4.3 and 4.4 recommend the development of policies on pay-as-you-go and pay-as-you-use financing. Policies can help formalize the capital spending philosophy.
The “pay-as-you-go” approach may require sudden tax increases to fund needed projects, a strategy that may be a politically dangerous proposition for elected officials. A sharp increase in tax rates might have a negative impact on state and local economic development by reducing the incentive for firms and individuals to remain within a jurisdiction.

“Pay-as-you-use” Financing

Advocates of the pay-as-you-use strategy present the following arguments.

- First, a pay-as-you-use financing strategy reduces the payments from current revenues that jurisdictions must make to finance capital facilities. This permits a jurisdiction to maintain low tax rates or to increase tax rates marginally in order to generate sufficient revenue for debt retirement.
- Second, a pay-as-you-use strategy permits communities to build facilities when needed, rather than when jurisdictions have accumulated adequate funds.
- Third, a pay-as-you-use financing strategy allows the jurisdiction to repay debt in reduced-value dollars. Inflation over time gradually reduces the value of money.
- Finally, the pay-as-you-use method promotes intergenerational equity by spreading the costs of a capital project over the “useful” life of the project. A criticism of the pay-as-you-go method is that future users benefit from a capital facility without having to pay for it. The pay-as-you-use method forces all beneficiaries — current and future — of a facility to defray its costs. Issuance of debt, however, must be done carefully so that the length of the bond’s maturity roughly approximates the “useful life” of the capital facility. The normative goal of intergenerational equity is violated when future taxpayers no longer pay for projects that were initiated and paid for by previous generations of taxpayers.

The “Benefits” and “Ability-to-Pay” Principles

In addition to assessing the importance of intergenerational equity to capital funding schemes, state and local policy makers must decide whether direct beneficiaries of a capital project will pay more than other residents in a jurisdiction. The benefits principle holds that those who use the capital facility or the flow of services from the facility should pay proportionately more for its construction and maintenance than nonusers should pay. The imposition of user fees or specific use taxes is the primary mechanism for implementing a capital financing system based on the “benefits principle.”
The ability-to-pay principle holds that payments for a capital facility are not based on consumption but on an individual's financial situation. These capital facilities tend to be funded with general tax revenues or through variable fee schedules that are designed to redress the burden on low-income users. In short, the benefits and ability-to-pay principles should be considered explicitly by financial managers and policy makers when devising financing strategies for infrastructure.5

LINKING CAPITAL AND OPERATING BUDGETS

Public decisions on constructing new public infrastructure or renovating existing infrastructure are too frequently made without linking those capital-spending decisions to impacts on their operating budget. Maintenance spending, because of its ongoing nature, usually is funded from the state and local government's operating funds. Often, the approval process of state and local budgeting separates the timing of operating budget deliberations from those involving the capital budget.

Some governments have begun to address this issue of a "disconnect" between the operating budget and the capital budget by explicitly incorporating an operating budget impact in the capital budget approval process. Operating budget impacts list the projected operating costs for each year of a capital project.

NACSLB guidelines designed to help state and local governments adequately maintain their infrastructure assets recommend that state and local governments should know the value and condition of their physical assets, prepare explicit policies for acquiring and maintaining those facilities, develop funding options, and prepare, implement, and evaluate a multi-year capital improvement plan. To the extent that state and local governments can invest in the administrative capacity to produce these documents, the decisions about the type, volume, location, and size of new capital facilities should better match the government's funding capacity and the service-level demand for government facilities.

The public's demand for infrastructure facilities and the supply of resources to meet that demand are in constant tension as state and local governments strive to maintain a competitive tax structure within a balanced-budget constraint. Yet, regular replacement of existing infrastructure is often deferred during economic downturns. The decision is often to maintain service-delivery levels during an economic downturn, which often means postponing infrastructure investment, or at least reducing the level of capital spending.

CONCLUSION

Capital budgets identify the infrastructure or capital assets that are to be constructed, renovated, and repaired; match funding sources to specific infrastructure and other physical assets of a governmental entity; and present to the citizens a statement of expectations about the basic facilities and structures a jurisdiction will be responsible for providing. This process helps communities answer crucial questions such as: what are our long-term infrastructure needs based on our priorities and values? And how will we fund projects when we have selected them?

The capital budgeting process typically encompasses the following decisions and activities:

- Determination of who should manage capital budgeting and how that process should be completed
- Inventory and needs assessment
- Project prioritization
- Development of a financing plan
- Adoption of the capital budget
- Execution of the capital budget
- Evaluation and updating of the CIP

Understanding the appropriate uses of funding sources for different types of capital and how capital projects affect government services over the long term are fundamental to capital planning. Aligning capital budget decisions with other policy processes such as the long-range capital improvement program and the operating budget will help ensure the efficient and effective use of government resources. Capital projects are often expensive undertakings that require unique funding structures. These are often structures that state and local governments may not be accustomed to arranging. Thus, separating major infrastructure spending from the operating budget signifies the importance of capital planning and gives stakeholders more opportunities to be involved in planning and monitoring long-term projects. Ultimately, however, operating and capital budgets are inextricably linked and decisions made in one process will affect decisions in the other. Therefore, it is critical that government officials and
managers have a firm grasp of the long-term effects, both positive and negative, that capital spending will have. I

Notes

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Glossary
Capital assets are assets of significant value that have a useful life of several years. Capital assets also are called fixed assets.

Capital budgets identify the infrastructure or fixed assets that are to be constructed, renovated, and repaired; match funding sources to specific infrastructure and other physical assets of a government entity; and present to the citizens a statement of expectations about the build environment.

Capital improvement plan identifies priorities and a timeframe for undertaking capital projects and provides a financing plan for those projects.

Capital improvement program is synonymous with the capital improvement plan and identifies priorities and a timeframe for undertaking capital projects and provides a financing plan for those projects.

Cost-benefit analysis is an analytical technique that compares the social costs and benefits of proposed programs or policy actions. All losses and gains experienced by society are included and measured in monetary terms. The net benefits created by an action are calculated by subtracting the losses incurred by some sectors of society from the gains that accrue to others. Alternative actions are compared, so as to select one or more that yield the greatest benefits, or ratio of benefits to costs.

Fixed assets are assets of significant value that have a useful life of several years. Fixed assets also are called capital assets.

Net present value is the value of a certain sum discounted at a specific rate of interest due and payable at a future date. Thus, with an interest rate of 5 percent, the present value of $105 due one year hence is $100.

Operating budget impacts provide the projected operating costs for each year of a capital project. Operating costs could include new staff salaries, debt service payments, maintenance expenses, and utilities.

Opportunity costs are the cost of making an investment that is the difference between the return on one investment and the return on an alternative.

Useful life is the expected period of time during which a depreciating asset will be productive. I

Pay-as-you-go financing is premised on billing the current users of the facility and borrowing funds to cover the costs of construction. Common sources of pay-as-you-go financing include general obligation bonds, revenue bonds, and lease/purchase agreements.

Pay-as-you-use financing is a savings plan in which revenues collected in earlier years are expended once a sufficient amount has been saved. Common sources of pay-as-you-use financing include capital reserve funds and intergovernmental revenues.

Note

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