

Louisiana Port Priority Program: An Application of Benefit-Cost Analysis to Project Appraisal

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In this study Louisiana's Port Construction and Development Priority Program and the methodology utilized therein to evaluate capital investments are described. The program is designed to allocate state funds, with incentives for participation by public ports and the private sector. To ensure maximum participation by stakeholders, several measures were adopted at the program formulation stage, and continuing outreach efforts were made to assist ports throughout implementation of the program. The experience gained from operating this program is thought to be unique for several reasons: first, the multifaceted role of public ports both as commercial enterprises and as agents of economic development differs from the role of other public transportation providers, requiring adjustments in project appraisal methodology; second, competitive and cooperative postures among private and public port terminals raise unique policy dilemmas for public intervention in the market; and third, working with small to medium-size, semiautonomous local port authorities for program implementation requires various adjustments in policy prescriptions. Also discussed are the program provisions specifically designed to address these structural characteristics in the maritime sector. The evaluation methodology that was developed takes into account social, economic, environmental, and other impacts from the state's point of view. Over the initial 5-year period, 75 public port projects valued at about \$166 million have been evaluated and funded. The program has been successful, with broad acceptance from public ports and the state legislature.

In 1989, Louisiana's citizens approved a constitutional amendment establishing a Transportation Trust Fund (TTF) to ensure a stable and dedicated source of revenue for the construction and maintenance of transportation infrastructure. The major sources of revenue for the TTF are state taxes on gasoline and other fuels, and revenues from state motor vehicle license taxes. The TTF Act provides broad guidelines regarding allocation of revenues to different transportation modes and activities, including highways, statewide flood control, ports, airports, mass transit, and state police traffic control. The TTF provided a funding source for the Port Construction and Development Priority Program (PCDP), which was created by Act 452 of the same year. This act authorizes the Louisiana Department of Transportation and Development (DOTD) to contract with the Louisiana State University National Ports and Waterways Institute to assist in developing a methodology for evaluating and prioritizing proposed port projects. The program operated under interim rules and regulations for the first 3 years until more comprehensive rules and regulations were adopted in 1992.

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The focus of this paper is to describe the PCDP formulation and implementation process. From the outset, enhancement of productivity and competitiveness of ports through rational investment of public funds was the primary goal of the program. With this objective in mind, procedures were developed to disburse state funds to projects with the highest prospects for success as determined by objective standards of technical and financial feasibility and other overall socioeconomic impacts to the state.

The experience gained from operating this program is thought to be unique for several reasons: first, the multifaceted role of public ports both as commercial enterprises in the transportation business and as agents for economic development differs from that of other public transportation providers, requiring appropriate response in the project appraisal methodology; second, competitive and cooperative postures among public and private port terminals raise unique policy dilemmas for public intervention in the market; and third, working with small to medium-size, semiautonomous, local port authorities for program implementation requires various adjustments in policy prescriptions.

This paper includes a description and an analysis of salient features of the PCDP and the procedures adopted in its formulation and implementation. More specifically, the paper evolves as follows: (a) description of critical characteristics of the maritime industry that influenced the program's framework; (b) explanation of program requirements and the user outreach program undertaken for its implementation; (c) review of program methodology developed to evaluate proposed projects; and (d) evaluation of program experience gained and review of areas for further improvements.

BASIC APPROACH

Several structural characteristics specific to the maritime industry largely determined the content and form of the PCDP. Three major characteristics in particular, namely, the diversity of port size and operations, the diversity of port missions and goals, and private sector participation in waterborne commerce, made development of standard project evaluation procedures extremely challenging. A program formulated within the current industry framework and evolving as an outgrowth of the existing system was foreseen as critical to broad public participation and program success.

Louisiana Maritime Sector

Louisiana is endowed with an extensive system of ports and waterways. With access to the Mississippi River System, the Intracoastal

Waterway, and international shipping through the Gulf of Mexico, Louisiana in recent years has handled more than 400 million tons of waterborne cargo annually. Of the 24 active public ports located in different parts of the state, 18 are categorized as shallow-draft and 6 as deep-draft ports (Figure 1). Generally, the shallow-draft ports are inland ports accommodating vessels having less than 25-ft draft and engaged primarily in domestic trade. Four of the state's ports, South Louisiana, New Orleans, Baton Rouge, and Lake Charles, are among the nation's largest ports. In addition to public ports, a large number of private marine terminals also contribute to the port output in the state. The maritime sector provides substantial economic benefits to the state and the nation in terms of resource development, employment, personal income, business revenue, and taxes.

Organizational Setup of Public Ports

In many localities ports serve not only as links in the freight transportation chain, but also as nodes for industry location with easy access to land and other infrastructure facilities. Furthermore, local port authorities act as grass-roots leadership organizations for community development and economic planning. The organizational setup of most of the ports reflects a desire to maintain local autonomy in business and planning decisions, and it seems to be generally averse to centralized state control. This sentiment is partly reflected in the procedures followed for appointment of port commissioners. In the case of shallow-draft ports, 79 percent of the port commissioners are appointed by local authorities and 21 percent by the governor. For the deep-draft ports, 78 percent of the appointments are made by the governor and 22 percent are either appointed by local authorities or are elected. Essentially, all port commissioners are from the local community. Therefore, one guiding principle in formulating the program procedures has been to maintain local responsibility for the port planning process and decision making.

State Funding for Public Ports

State funding is a major source of capital investment for public ports in Louisiana. It is estimated that, from 1977 to 1984, Louisiana expended more funds for ports than any other state in the nation. For this period Louisiana spent \$26 million on shallow-draft ports and \$173 million on deep-draft ports for a total of \$199 million (1). Before the PCDP, the state funded port projects through the Capital Outlay Program without requiring feasibility studies. The basis for priority rating and funding depended on political sponsorship of projects at the state legislature, which was dictated mainly by regional sociopolitical interests.

Size of Public Ports

Public ports eligible for funding under the program varied substantially from well-established deep-draft ports with many berths catering to ocean shipping, to new shallow-draft ports with very limited or no physical infrastructure. The availability of professional staff and the levels of financial and technical capabilities also varied widely with the scale of operations and the duration in port business. These variations had to be reconciled and addressed in program formulation. For example, the project appraisal methodology and the application procedure had to be logical and technically acceptable, but simple enough to be understood by all port participants.

Stakeholder Participatory Process

Outreach efforts to obtain input from program participants and stakeholders were conducted in two stages: initially, in formulating the rules, regulations, and procedures for the program; and on a continuing basis during implementation. In 1990 a Transportation Infrastructure Evaluation Committee was appointed by the governor to provide a general overview of the capital improvements required to the state's transportation network. This committee was composed of legislators and public and private sector officials representing state agencies and the various modes of transport. The PCDP benefited, specifically, from the input provided by an advisory committee representing deep- and shallow-draft public ports. The comprehensive rules and regulations were adopted by the DOTD in 1992 with approval and support by the state legislature and the port industry. In addition, several provisions in the program provided for public ports to participate on a continuing basis in the program as it is implemented. These aspects will be discussed next.

Missions, Goals, and Philosophy of Public Ports

In the past, public ports in Louisiana have not operated strictly as profit-driven commercial enterprises. Predominant in their missions and goals is the diversification of the local economy and community development, mainly through fuller utilization of local resources. In fact, the *ad valorem* property tax assessments passed by many communities indicate that such a role for ports is desired. Implicit in these voter actions appears to be that communities are willing to subsidize port enterprises in order to revitalize local economies, especially to generate local employment. Therefore, creation of jobs is considered a major project benefit under the program.

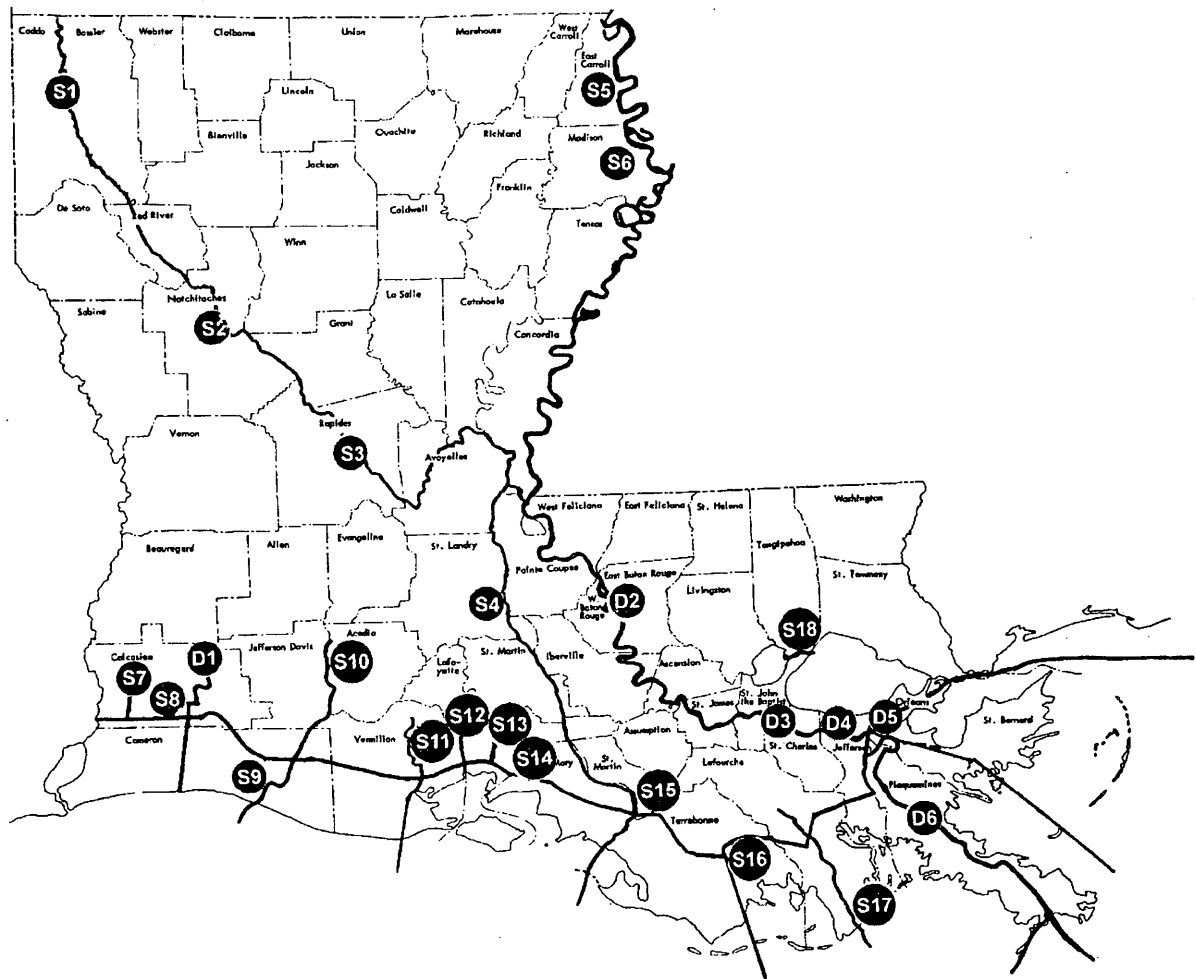
The objectives of ports lead them to support various economic development enterprises other than traditional cargo handling and transfer activities. For example, some industries located in the port industrial park may have only a very peripheral relationship with water transport, but the port may choose to support them by, for example, providing storage services, rail links, or other infrastructure facilities. The economic activities previously undertaken by the ports have indicated that the program methodology must be robust in accommodating and evaluating various economic development projects even if they are not directly involved in maritime commerce.

Public Ports Versus Private Terminal

Public ports interact with private sector operators in two main ways: competing with the private sector by owning and operating terminals; and, more frequently, acting as "landlord ports"—leasing public terminal facilities to private sector operators. Although in most cases this competition tends to be indirect (types of cargo handled are different), the program had to be extremely cautious so that infusion of subsidized capital to public ports would not adversely affect the inflow of private capital and entrepreneurship. In order to ensure that reasonable port tariffs are charged for the use of facilities funded under the program, sponsoring ports are required to structure tariffs (port revenues) to satisfy a minimum rate of return on program funds. This aspect is discussed further in the following section.

PROGRAM FRAMEWORK

In this section several requirements incorporated into the program will be analyzed in order to explain the general objectives and the



Deep Draft Ports

- D1 - Port of Lake Charles
- D2 - Port of Baton Rouge
- D3 - Port of South Louisiana
- D4 - Port of New Orleans
- D5 - St. Bernard Parish Port
- D6 - Plaquemines Parish Port

Shallow Draft Ports

- S1 - Caddo-Bossier Port Commission
- S2 - Natchitoches Parish Port Commission
- S3 - Alexandria Port Authority
- S4 - Greater Krotz Springs Port Commission
- S5 - Lake Providence Port Commission
- S6 - Madison Parish Port Commission
- S7 - Vinton Harbor & Terminal District
- S8 - West Calcasieu Port, Harbor & Terminal District
- S9 - East Cameron Port Commission
- S10 - Mermentau River, Port, Harbor & Terminal District
- S11 - Abbeville Harbor & Terminal District
- S12 - Twin Parish Port Commission
- S13 - Port of Iberia
- S14 - West St. Mary Parish Port, Harbor & Terminal District
- S15 - Morgan City Harbor & Terminal District
- S16 - Terrebonne Port Commission
- S17 - Greater LaFourche Port Commission
- S18 - South Tangipahoa Parish Port Commission

Figure 1 Shallow- and deep-draft public ports in Louisiana.

underlying reasons for their inclusion. Two documents incorporating rules and regulations and program procedures were developed for use by the port participants (2,3). In essence, all program requirements are directed to ensure maximum economic impacts to the state with limited program funds. However, they target three specific policy areas: first, that the program funds be invested in specific types of maritime projects to ensure maximum sectoral impact; second, that cost sharing be encouraged to ensure maximum leverage of program funds; and third, that high standards of credible project data be provided by port sponsors, both for project evaluation purposes and to ensure the quality of decision making by port sponsors themselves.

Type of Projects

A wide variety of projects are funded under the program, ranging from construction, to improvement, to capital facility rehabilitation, and to expansion of publicly owned port facilities. This includes intermodal facilities, maritime-related industrial parks, and port infrastructure such as wharves, storage facilities, cargo handling capital equipment, utilities, railroads, and primary access roads. Excluded from program participation are state sponsorship of new construction and/or maintenance of federally authorized navigable waterways, and land acquisition by ports for speculative reasons. Land acquisition is eligible for funding only when it is an integral component of a project and necessary for the project benefits to be derived. These requirements are intended to avoid large outlays in areas marginal to the maritime sector and to concentrate funds specifically for the development of infrastructure that serves port objectives.

Cost-Sharing Procedures

The PCDP identified four main sources of project financing: program funds, port funds, federal funds, and private sector funds. The legislative act provided that the sponsoring port provide a minimum of 25 percent of the project cost (construction and engineering, etc.). This requirement was subsequently changed to 10 percent of project construction costs, excluding engineering fees. The change was made to allow construction of port infrastructure sooner, inasmuch as DOTD was no longer required to review engineering selection, contracts, and fee schedules.

To encourage higher funding participation levels from ports and the private sector, an additional benefit-cost ratio was calculated. All project benefits were divided by the program investment. This ratio is utilized in the final evaluation and ranking. By utilizing program investment in the calculation, projects with higher levels of port and private sector funding will rank higher and possibly be funded sooner.

Project Information Requirements

The most challenging task in formulating program rules and regulations was to specify project information requirements to be submitted by the sponsoring ports. The information submitted had to be logical and acceptable for evaluation. The wide diversity of port projects as well as the range of technical capabilities available to the various ports had to be reckoned with in framing the regulations.

Furthermore, because project benefits are closely related to anticipated future market developments, certain guidelines had to be provided regarding market forecasts. Discussions with port authorities and the private sector port operators were helpful in drafting these requirements. The following section is a brief analysis of the major project definitions and concepts included, and the outreach program undertaken to explain the requirements.

The information requested from sponsoring ports on proposed projects can be divided into five major categories (Table 1). The section on project description is designed to focus on defining the physical and financial parameters of the project. According to the nature and goals of the project, sponsors are required to provide a narrative description of the project in sufficient detail to clearly convey the purpose, design, and major components of the project. The discussion of alternatives is aimed at ensuring that the proposed project is selected as a result of an objective analysis. The adequacy of components requirement directs port planners to evaluate port operations as a total integrated system, to identify possible bottlenecks resulting from implementing the new project, and to plan corrective action.

The demonstration of immediate need for the project is extremely important, and if the need is not adequately justified, the project is rejected at the early stages of evaluation. Most of the information required in this section is to support market forecasts and estimates, and port authorities are encouraged to justify market projections through detailed market analyses and commitments by port users to utilize the expanded project facilities. Furthermore, ports are required to establish the level of utilization of existing facilities by providing data on cargo throughput for the last 5 years. If congestion was experienced, it was necessary to identify facility bottlenecks and how they were overcome. With regard to cargo forecasts, ports are advised to extrapolate past trends and/or to follow national projections of waterborne commerce as estimated by the U.S. Army Corps of Engineers (4,5). Any deviations from these growth rates are expected to be justified either as diverted cargo from other facilities or as cargo generated by new agricultural and industrial developments. In such cases, the sources of cargo, origins and destinations, and shares for different transportation modes need to be analyzed and justified.

Preliminary plans and cost estimates are included to further describe the proposed port projects. The level of detail is conceptual in nature, but enough detail must be provided to indicate that adequate thought and planning has been accomplished to provide for the needed infrastructure to satisfy a real and definable market need. It is not the purpose of the program to build infrastructure on speculation ("... and they will come").

Benefits from the proposed projects are evaluated from the state's point of view, which includes the taxpayer's point of view and the port's point of view. Accordingly, if benefits are to be counted for any cargo diverted from another Louisiana port, the project must demonstrate an improvement in the overall efficiency of the state's port system through transportation cost savings. Overall, benefit estimates are required to be logical, verifiable, and based on sound judgment and acceptable industry norms. If the claimed benefits are not adequately justified or do not conform to industry norms, they are adjusted before evaluation. At the same time, benefits that may have been overlooked by port applicants are brought to their attention at the preliminary review of applications.

The creation of new permanent jobs or retention of existing jobs in local communities is considered a major project benefit. For evaluation purposes, several guidelines are provided to estimate the

TABLE 1 Program Requirements and Guidelines for Port Participants

Information Requirements	Guidelines Provided
1. Project Description	Focus on physical and financial parameters of the project.
Project Definition	An activity derives benefits after program investments.
Nature and Goals	To convey the purpose, design, and components of the project.
Project Financing	Indicate total funds needed and funding sources.
Alternatives	Indicate which alternatives were considered and explain why the project was selected over alternatives.
Adequacy of Components	Establish that all the components necessary to derive the benefits are available.
2. Demonstration of Immediate Need	Focus on marketing potential of the project.
Cargo History	Establish the level of utilization of existing facilities.
Market Analyses	Forecast the cargo that will use the project for ten years.
Industrial Development	Indicate what new industrial development with project.
Letters of Commitment	Submit letters of commitment from industrial tenants.
3. Preliminary Plans and Costs	Focus on engineering aspects of the project.
Design Criteria	List criteria needed for design, e.g., 300 LF of bulkhead.
Design Calculations	Provide conceptual design calculations.
Preliminary Construction Plans	Sufficient detail to conceptually convey project components and requirements.
Cost Estimates	Detailed cost estimates of project components and recurring maintenance costs.
Progress Schedule	Provide an anticipated implementation schedule.
4. Determination of Benefits	Focus on economic returns of the project.
Definition of Benefits	Indicate net benefits "with the project" condition.
Revenues and Expenses	Estimate net port revenues "with the project" condition.
Number of Jobs	Indicate the # of jobs created/saved.
5. Environmental Impacts	Focus on positive and negative externalities of the project.
Impacts on Resources	Water quality; habitat modification; fish and wildlife; cultural, historical, and archeological features.

number of jobs created and the payroll. First, the jobs created have to be identified either as directly related to port activities or as related to other industries. Second, the number of jobs is estimated from industry norms such as capital investment per worker, volume of cargo handled per worker, and the number of employees per firm. A classification of commercial firms in port related industries in the state by employee size is provided for reference purposes (6). In order to measure employment impacts in an equitable manner across projects, a standard payroll for managerial, skilled, and

unskilled workers was made available for use by all project applicants. On the assumption that true net benefits from employment diminish over time, the payroll benefits resulting from the project are allowed to decay in a linear manner annually, reaching zero at the end of 10 years. Furthermore, spillover benefits of payroll are calculated as equal to payroll benefits, creating an earnings multiplier of two for all projects throughout the state. The spillover benefits also decay in a linear fashion annually, reaching zero at the end of 10 years. Since project benefits are from the state's point of view, if

jobs are displaced elsewhere in the state due to the project, only the net benefits are taken into account.

Port revenues and expenses are also estimated for both the "with" and "without" project conditions in the determination of benefits. Revenue estimates are based on present and future port tariff rates or must conform to industry norms. In the calculation of expenses, project maintenance costs are included along with operational expenses. Only the projects that realize a minimum rate of return of 3.7 percent as net port revenue for the state's investment are funded by the program. This minimum rate of return requirement was incorporated into the program principally for two reasons. First, because the general objective of all public ports is to develop viable commercial operations, it was necessary to ensure that new investments do not adversely affect the financial position of ports. Second, the public port tariff rates need to reflect the cost of providing the facilities (including return on investment) to protect private sector terminals from unfair competition by subsidized public ports.

BENEFIT-COST METHODOLOGY

Project Definition

For purposes of benefit-cost evaluation, investments are divided into two categories: "total project" and "project." The total project includes all improvements that are necessary by both the public and private sectors in order to derive the benefits identified in the application. Project refers to that part of the total project for which the port is seeking program funds from the department. The project includes all components to be built/acquired by the public port within the program's limit of two consecutive years for implementation.

Project Life and the Planning Horizon

Project life for civil construction work is estimated to be 30 years, and for mechanical equipment such as cranes and other cargo handling equipment, it is variable, ranging from 10 to 20 years. The number of years over which the benefits and costs of the project will be evaluated is limited to 10 years. If the project life exceeds the evaluation period, the salvage value is determined using the straight line method of depreciation and is tabulated as a benefit.

Discount Rate

The discount rate used in the evaluation process is 3.7 percent. This rate is derived from the average interest rate paid on 30-year General Obligation Bonds (GOB) during the period 1987 to 1990 (7.7 percent) by the state, less the average inflation rate (4.0 percent) as indicated by the Consumer Price Index. Because these bonds were the funding source for public ports before the new program started, it is assumed that this discount rate reflects "opportunity cost" of capital to the state. However, as long-term interest rates and the rate of inflation change, periodic adjustment of this discount rate will be necessary.

PROJECT PRIORITY CRITERIA

Minimum Threshold Requirements

If the proposed projects do not meet project information requirements and some minimum financial indices, they are not further considered for priority rating. These are identified as minimum threshold requirements (Table 2). Incomplete applications are rejected because evaluation and ranking of projects require sufficient information. Establishing the need for the project in terms of market developments or operational requirements of the port provides the basic foundation for project benefits. As discussed in an earlier section, the minimum rate of return on investment for net port revenues is introduced to ensure that public port tariffs cover reasonable costs, including a return on investment. Since public ports generally act as landlord ports leasing basic infrastructure to private operators, the final tariff rates at public terminals are expected to be competitive with private sector tariff rates. A benefit-to-total cost (B-C) ratio of 1 is considered a minimum threshold for the proposed project. In calculating this B-C ratio, the costs include the total investment, both private and public, needed to implement the total project and derive the benefits.

Scoring Criteria and Ranking of Projects

In the final analysis, the program procedures require the department to prepare a recommended list of projects in priority order and sub-

TABLE 2 Project Criteria: Minimum Threshold Requirements

Minimum Requirement	Guidelines
Completeness	If application incomplete, advise applicant of missing data.
Project Need	The need has to be verifiable and real for the application to be considered.
Location	Ports should provide adequacy of highway, rail, and waterway access to support increased activity with the project.
Return on Investment	All acceptable projects must generate at least 3.7% rate of return in terms of net port revenues on Program investment.
Benefit-Cost Ratio	B-C ratio of total project must be 1 or >1. Costs include all public and private sector project costs.

mit the list for funding consideration to the state legislature. The scoring criteria followed for ranking of projects are shown in Table 3. For a project to qualify under technical feasibility, it must score a minimum of 15 points. Some indications of technical feasibility are completeness of project design, appropriate consideration of alternatives, compatibility of the project with the port's master plan, level of detail of preliminary plans, and a cost estimate sufficiently detailed to allow verification. The project with the highest benefit-cost ratio receives the maximum 100 points. Scoring for the other projects is prorated. The cost used in economic feasibility and economic impacts is the amount of program funds required for the project. This requirement encourages ports to contribute a higher amount of matching funds, and maximum leverage of program funds.

PROGRAM REVIEW

Investment Levels

Since the inception of the program in 1989, about \$82.5 million of program funds has been allocated to the PCDP, which has allowed funding of 75 port projects (Table 4). Some of these are multiyear projects and will require an additional \$8.5 million of program funds to complete, totaling \$91 million. With matching funds from the ports, private sector port tenants, and other agencies, the program has provided for \$166 million worth of projects to the port sector in the state. At this writing, approximately \$13 million in projects have been completed, \$22.1 million are under construction, and construction plans specifications are being prepared for the balance. The major types of projects funded are: ship berths and bulkheads, warehouses at ports and industrial parks, access roads and rail spurs to ports, and rehabilitation of existing port infrastructure. Over the initial 5-year period, the legislature has approved the list of projects essentially as priority rated in the evaluation process.

Type of Projects Funded

Investment in facility expansion projects is \$92 million, and upgrading and maintenance of existing facilities total \$74 million. The deep-draft port facilities received 65 percent (\$108 million) of the investments, and about 60 percent of this is spent on maintenance projects. The shallow-draft ports allocated 84 percent of their investments to expansion of existing facilities or construction of new terminals.

Public-Private Partnerships

In terms of cost sharing, the program share in total investments is 55 percent, compared to 45 percent from the ports and other sources. This indicates that the program is successful in leveraging other funding sources over and above the minimum program requirement of 25 percent. The participating ports in many instances were able to join with the private sector port tenants and operators in packaging innovative project financing methods.

An important dimension of the PCDP investments is the broader impact on local resource development and the leverage of private capital and entrepreneurship for the development of maritime facilities. A significant percent of port projects undertaken are private and public sector partnerships providing incentives to local resource based industries which generate cargo for the public port. Construction of warehouses for new industries on port premises (such as fabrication of off-shore oil-rig equipment and metal fabrication); direct rail and waterway access to port tenants which may lead to transportation cost savings and business expansion; and upgrading of cargo handling equipment for private operators managing a public terminal are some examples of public/private partnerships.

Areas for Further Improvement

Two of the most difficult challenges that emerged during several years of evaluating project applications are as follows. Because of

TABLE 3 Project Ranking: Scoring Criteria

Feasibility Measure	Feasibility Indicator	Maximum Points	Scoring Method
Technical Feasibility	Capable of being built	45	To qualify must score a minimum of 15 points.
Economic Feasibility	Benefit-cost ratio	100	Project with the highest B-C score 100; others are prorated.
Economic Impacts	# of jobs created or saved	20	Project with highest job potential score 20; others prorated.
Environmental Impacts	No adverse impacts or enhance environment	15	Project with no adverse impacts score 10; if it enhances the environment, 15.
Management of Port	Return on Investment	20	Port with highest ROI for the last five years scores 20; others prorated.
Total Points Possible		200	

TABLE 4 Types of Projects Funded and Cost-Sharing Levels by Various Entities

Cost Sharing Entity	Expansion of Facilities					Upgrading of Facilities			
	Shallow - draft		Total Sh. draft	Total Deep dr.	Total (sh./ deep)	Shallow Draft	Deep Draft	Total (sh./ deep)	Grand Total
Existing Ports	New Ports								
(in \$ millions)									
Program Share *	15.8	12.9	28.7	19.3	48.0	6.3	37.0	43.3	91.3
Port/Others Share *	10.3	10.3	20.6	23.7	44.3	3.2	27.4	30.6	74.9
Total Cost	26.1	23.2	49.3	43.0	92.3	9.5	64.4	73.9	166.2
Total Cost Shares (percent):									
Program Share	10	8	17	12	29	4	22	26	55
Port/Others Share	6	6	12	14	27	2	16	18	45
Total Cost	16	14	30	26	56	6	39	44	100

* Includes commitments through financial year 1995/1996

the wide variety of project types, credible demand projections had to be made not just for diverse cargo flows, but also for industrial uses of port facilities (such as demand for off-shore oil rigs and demand for equipment fabrication and maintenance). Secondly, a very difficult judgment must be made regarding the role of subsidized public capital in public-private partnerships. Infusions of subsidized capital may be necessary to attract certain industries, but in the long run these enterprises have to be strong and viable to compete under open market conditions.

Since an understanding of program rules, regulations, and procedures by the participating ports is key to the successful implementation of the program, various outreach efforts were undertaken to provide instructions and guidelines to port officials in the state. Port officials nominated by the Ports Association of Louisiana were included on the committee which developed the program rules, regulations, and procedures. These were then submitted to the general membership for comment. Several workshops were conducted to explain the theoretical aspects of project evaluation and cost benefit analysis, and engineering information required with project proposals. In addition, technical assistance was provided to participating ports on an individual basis in a presubmittal review of project applications. This preliminary review proved to be very effective in assisting port officials to streamline their applications and to present information effectively, in conformance with program rules and regulations. Further, it helped to ensure that infrastructure is built for a given and real market need and increased the probability of a successful operation.

For 3 years after the completion of a project funded under the PCDP, the port authority is required to submit a report comparing the actual benefits derived with the estimated benefits in the project proposal. This report requires that significant deviations be identified and corrective actions be enumerated. At present, a review of these project monitoring procedures and the development of a standard reporting format are under way. The development and maintenance of a statewide inventory of maritime facilities and a database on Louisiana's marine terminal operations is considered an additional product of the program.

CONCLUSIONS

The creation of PCDP has resulted in several structural adjustments in the Louisiana maritime industry. First, it provided a dedicated and

stable source of funding for construction and maintenance of port infrastructure. Second, it established an objective methodology for project evaluation and ranking for funding purposes. In developing this methodology, input and cooperation from the participating ports was obtained, and technical assistance is provided to ports on a continuing basis to improve project proposals. Third, and perhaps most importantly, the program provisions in many ways encourage public and private sector alliances in building maritime transportation infrastructure for accelerated economic development.

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