
Chapter 2

Discussion of Issues

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ISSUE 1: U.S. COAL EXPORT POTENTIAL

A series of comprehensive studies of the world coal situation have predicted massive increases in coal trade over the next two decades and a large U.S. share of that future market.¹ It is likely that goals of doubling or tripling coal usage for energy production in Europe and Japan will be achieved by the year 2000 because those countries have aggressive policies to reduce their dependence on OPEC oil.

Since most of the coal to satisfy the new demand in Europe and Japan will be imported, total world trade in steam coal could expand by 5 to 10 times and reach about 500 million tonnes per year (mmt/yr) in 2000. (World trade in metallurgical coal of 175 mmt/yr is expected to remain constant.)

The U.S. share of this new steam coal trade will depend on how well this country prepares for the export market in comparison with other major suppliers. This preparation includes providing ample and efficient facilities to handle the transportation and assuring foreign buyers of both U.S. competitive prices and a secure supply. The United States must maintain reliability of supply and price that compares favorably with Poland, South Africa, Australia, and maybe other supplier countries as well.

Under the previous administration, the Interagency Coal Export (ICE) Task Force prepared an analysis of future U.S. coal export potential drawing on previous studies such as the World Coal Study and International Energy Agency studies and using some newly available data on growing coal demand worldwide. A draft report was issued January 20, 1981. It predicted U.S. steam coal exports to grow to 200 mmt/yr by 2000. That figure did not include metallurgical coal and was based on assumptions of demand only in Europe and the Far East. It assumed U.S. prices would be only slightly higher than other suppliers and that foreign buyers would view the United States as a reliable source of supply.²

Adding a level of 55 mmt/yr of metallurgical coal to the ICE projections would bring total U.S. exports to 255 mmt/yr by 2000. The projection appears achievable given aggressive efforts to promote these exports by both the Government and private industry and if developments in other countries do not drastically alter present trends.

Federal actions in dredging coal port harbors could have a substantial impact on U.S. price competitiveness. Federal actions in foreign trade policy development could have a sizable impact on foreign buyer's views of the relative security of U.S. coal supply in the future. Private industry in the United States appears to be making substantial investments to improve the coal export system, which should help to provide reliable supplies at competitive prices.³

Whether the goals of U.S. exporters will be achieved depends on a host of interrelated decisions by utilities, transporters, producers, and governments, but there are clear incentives to move toward U.S. coal usage by other countries and recent trends are supporting that movement.

International Trends and Actions

In the early effort to bring greater focus to the coal trade issue, the International Energy Agency (IEA) reviewed the prospects for steam coal to 2000 and published a report in 1978 examining this topic.⁴ While some of the quantitative estimates are conservative in light of the more recent large increases in prices of alternative fossil fuels, the conclusions of the report advocate a massive substitution of coal for oil by both industrial societies and developing countries.

IEA also concluded that the creation of an immensely expanded world trade in coal is in part dependent on the adoption and execution of co-

ordinated Government policies to facilitate coal development and usage. Goals to increase coal use among the industrialized countries are stated in the studies referenced above and in the Tokyo economic summit communique of June 1979 and the Venice economic summit communique of June 1980.⁵

At the conclusion of the seven-nation economic summit meeting in Tokyo on June 29, 1979, the heads of state of Canada, the Federal Republic of Germany, France, Italy, Japan, the United Kingdom, and the United States focused on the issue of coal and agreed to increase as far as possible coal use, production, and trade, without damage to the environment,

In an effort to build on and strengthen the Tokyo coal pledge as well as to take a long-term view of coal production, utilization, and trade, the heads of state of the seven summit countries in their June 1980 Venice summit communique⁶ indicated agreement on several points.

- They intend to double coal production and use by 2990..
- They will encourage long-term commitments by coal producers and consumers.
- It will be necessary to improve infrastructure in both exporting and importing countries, as far as is economically justified, to ensure the required supply and use of coal.
- They will consider promptly the recommendations of the report of the IEA Coal Industry Advisory Board.
- They will do everything within their power to ensure that increased use of fossil-fuels, especially coal, does not damage the environment.

The IEA Governing Board in July 1979 approved the formation of the Coal Industry Advisory Board. It was created as a means to assist the industrialized countries in identifying and removing barriers to increased coal production, use, and trade. A report by that board submitted to IEA in December 1980 recommended specific government and industry actions to meet the goals of doubling coal use by 1990 and tripling it by 2000.⁷

World Coal Study

In June 1980, an analysis of the world's energy and coal prospects to 2000 was prepared by the Massachusetts Institute of Technology's World Coal Study,⁸ an international project involving 80 people from 16 major coal-producing and consuming countries. Among the conclusions of the World Coal Study are:

- Coal is capable of supplying a high proportion of future energy needs. It now supplies more than 25 percent of the world's energy. Economically recoverable reserves are very large—many times those of oil and gas—and capable of meeting increasing demands well into the future.
- Coal will have to supply between one-half and two-thirds of the additional energy needed by the world during the next 20 years, even under the moderate energy growth assumptions of the study. To achieve this goal, world coal production will have to increase 2½ to 3 times.
- Many individual decisions must be made along the chain from coal producer to consumer to ensure that the required amounts are available when needed. Delays at any point affect the entire chain. This emphasizes the need for prompt and related actions by consumers, producers, governments, and other public authorities.

The ICE Task Force

Formed in the spring of 1980, the ICE Task Force considered the evidence of world coal supply and demand projections from previous studies and prepared some independent analyses. The ICE report, completed January 20, 1981, concludes that the United States will export 200 million tonnes of steam coal by 2000 or 40 percent of the total world trade in steam coal.⁹

The major uncertainties in this projection relate to comparative actions on price and reliability of supply among the present four major coal exporting countries: the United States, Poland, Australia, and South Africa.

The ICE Task Force concluded that the United States could obtain a stable share of the market as long as U.S. prices do not exceed a range of approximately 10 percent above other countries' delivered prices. If U.S. prices exceed this range, purchases would drop correspondingly. OTA believes that this conclusion is reasonable but it is difficult to tell how tradeoffs between price and other motivations will be calculated. The Task Force also stated that "if U.S. coal were generally priced at \$6 to \$8/tonne above others' prices, the result would be to reduce the U.S. share of the European market from 30 to 25 percent."

Despite the conditions that tend to keep U.S. prices relatively higher, the Task Force contended that the United States will "generally be able to maintain reasonable delivered prices for its coal."

A component of U.S. attractiveness, as analyzed by ICE, is the expected high demand in consumer countries. "Demand for steam coal in the next 5 to 10 years is expected to exceed the production from non-United States sources," it said, citing problems in building up nuclear power, coal's main competitor, as an alternative to oil.

Very few doubt that there will be a strong future coal demand. However, there are those who believe that the United States may not develop the required capabilities, policies, and price competitiveness to capture such a large share of the steam coal market as projected by ICE. Among the skeptics are some of the foreign buyers of U.S. coal.

Foreign Trade Factors

European and Japanese buyers of coal have been urging attention to the long-range capabilities of the United States to export coal. Some are skeptical that the Federal Government will take expeditious action or that the myriad of local and private interests can agree on a unified approach that some major expansions would require.

Since security of supply and price of U.S. coal in the future are interrelated factors affecting

growth in U.S. exports, careful planning of all aspects of foreign coal trade appear to be essential to meet export goals. Private and Government decisions will be clearer if they are closely coordinated and based on information about Government and private actions together.

Harbor dredging, new terminal development, long-term contractual arrangements, total transportation network planning, and total public and private costs are all related. It appears that effective U.S. policy to encourage the coal export potential will require careful analysis and cooperation on many levels of government and industry.

Besides the four principal export nations, exporters such as Canada could also grow substantially in the future. Other countries that may become exporters in the future include Colombia, Indonesia, Mozambique, the People's Republic of China, and the Soviet Union."

The U.S. share of the world market is dependent on interrelated considerations, such as the extent and rate of steam coal demand—how steam coal fits into the overall picture of the consuming country's energy supply, both in terms of aggregate energy demand, and in terms which energy resources are to be utilized to meet demand; the motivations and buying strategies of consumers; pricing and other policies of coal exporters competing with the United States; and actions taken by U.S. firms and the Federal Government affecting the attractiveness of the United States as an exporter.

Competitive Factors

U.S. attractiveness is in part affected by difficulties or potential difficulties competitors may experience:

- South Africa may be boycotted by several nations because of its racial policies. In addition, some foreign buyers are concerned that South Africa may experience future political instability.
- Australia had major strikes in 1980, which may recur in the future.
- Poland is severely curtailing exports of coal, and is not meeting previous commit-

ments. Coal reserves are not as abundant or as easily exploited as in other countries, and exports to other Soviet bloc countries, as well as domestic needs, may conflict with exports to Western Europe.

Aside from the United States and the other three major exporters, other coal-producing countries do not currently have sufficient mine capacity and infrastructure to export large quantities. New developments of mines and transport systems could change this outlook in the next decade.

The price of U.S. coal is now higher than that of its competitors, due in part to factors that cannot or are unlikely to be changed, such as higher labor costs and longer distances from mines to ports. Certain resulting price differentials, to the disfavor of the United States, are likely to continue even with actions such as har-

bor dredging to improve the U.S. competitive position. Thus, if buyers emphasize price, the U.S. share would tend to be residual—sold only if lower cost competitors were unable to offer sufficient quantities to meet demand.

On the other hand, the United States has potential advantages over one or more competitors in many other criteria. To the extent that buyers seek such goals as diversity and reliability of supply, and perceive that the United States provides these qualities, U.S. price disadvantages become less important. The more steam coal demand rises and the more impediments to sales experienced by U.S. competitors, the more U.S. exports should rise. The more efforts are made by both the Federal Government and U.S. industry to assure foreign buyers of meeting future commitments, the more U.S. exports should rise.

ISSUE 11: FEDERAL POLICY

Four departments—State, Commerce, Energy, and Defense's Corps of Engineers—each have specific responsibilities in coal exports, but their present activities are limited and not closely coordinated. The previous administration's efforts at coordination took the form of an inter-agency task force charged with preparing a report. It is not yet clear what form of Federal policy on coal exports will be adopted within the present administration. However, there are some indications that private industry is expected to take the necessary actions with very little Government involvement.

The previous administration's ICE Task Force report contains some Federal policy recommendations. It may be useful to consider them, among other ideas, in the formulation of future policy. During the coming months some level of Federal activities could, in cooperation with private initiatives, help achieve national goals for exporting coal.

While it is difficult to quantify benefits from Federal actions on foreign trade policy it is clear that much of the impression that foreign buyers have of the United States as a reliable coal trad-

ing partner comes from the real and perceived actions of the Federal Government.

This OTA analysis suggests that among the most important coal export initiatives by the Federal Government are decisions on harbor dredging proposals and on international trade policies. The dredging issue is discussed in issue III. Foreign trade policy development is discussed below.

Benefits of Coal Exports

In addition to the obvious benefits to industry, jobs, and the economy, the promotion of U.S. coal exports is viewed as providing some significant overall benefits to the Nation. During this study, OTA has not been able to quantify these benefits but only to identify some that appear important.

An often discussed national benefit is the improved balance of trade that coal exports bring. During 1980, the total value of U.S. coal exports was about \$4.5 billion. This compares to a total balance-of-trade deficit for the same year of \$24 billion. Therefore, one might expect future

growth in coal exports to significantly affect future balance of trade.

Another important national benefit is that of improving energy security for U.S. allies. To the extent that U.S. coal can provide them with a significant portion of their future energy needs, Western European countries will be less dependent on OPEC oil or even the proposed gas pipeline from the Soviet Union.

Finally, it has been noted by those in the port and shipping industry, that the viability of U.S. ports is vital to an overall healthy economy. Coal is an important foreign trade commodity, but only one of hundreds handled through major seaports. Coal represents about 10 percent of foreign import and export tonnage at present, although in some ports such as Hampton Roads, it is one of the major products handled. Given plausible growth rates, coal exports could account for a much larger fraction of exports over the next two decades.

Concerns of Foreign Buyers

In the development of U.S. foreign trade policies, it is important to understand some of the concerns of foreign buyers that could be addressed by those policies.

One major concern is that of U.S. labor disputes. In the past, the U.S. coal industry has experienced periodic strikes severely curtailing output. The last such strike lasted 110 days in 1977-78. The United Mine Workers voted to strike against the Appalachian coal industry in March 1981, and coal colliers began leaving the lines at Baltimore and Hampton Roads. Labor disputes affecting railroads and ports are also possible.

Another concern is the possibility that future domestic and political problems would be used as a reason to curtail or disrupt exports. Some foreign buyers would like to see a more clearly stated commitment to maintain export levels as part of U.S. coal export policy.

Past statements have included assurances that the Federal Government will not interfere with coal exports except in the case of national emergencies. However, Public Law 96-387, passed

last year, gave concern to some foreign buyers that coal exports may suffer because of domestic problems.¹³

This law provides that, until June 30, 1987, domestic ships for which coal is readily available for loading may move ahead of other ships waiting to receive export coal. This puts domestic coal use into direct competition with export trade for available U.S. port and terminal facilities.¹⁴

The practical effort of this law has so far been slight. Available information indicates that no foreign ship has thus far been delayed in taking on coal at any U.S. port because of a demand by a domestic vessel. However, this law is of great symbolic importance, and is indicative of potential future problems in U.S. export reliability under conditions where domestic demand for coal may be sharply increased, such as an embargo of oil, or future changes in domestic policy on fuel use. Moreover, shifts in New England to coal, as planned, could lead to increased coastal shipping, preempting loading facilities.

In addition to security of supply, foreign buyers are also concerned about future U.S. prices. Some foreign countries such as the Netherlands, France, and Japan have very modern, deep-draft harbors in which they can unload the largest, and most economical, coal ships. They are concerned principally that the United States will not take firm action to develop harbors capable of handling large ships and, therefore, U.S. prices will always be much higher than those of other suppliers. Another factor affecting price of U.S. coal is high U.S. railroad freight rates and the lack of alternative systems to move coal from the mines to many of the major coal terminals.¹⁵

Views of Exporters and Administrators

U.S. exporters have many of the same concerns as foreign buyers. Private industry appears to be resolving some issues such as expanding dockside facilities and negotiating long-term contracts. However, foreign policy pronouncements and high-level Federal attention to supporting coal export trade is viewed as important to reaching the future potential.

The ICE Task Force report contained several specific suggestions for improving Federal policy in coal exports and these have some support from private and public groups who were involved with the Task Force efforts.^{1b}

One suggestion is to designate a single point of contact for coal trade. Presumably one lead Federal agency could administer a special office. Many foreign governments as well as private companies are involved in coal trade negotiations. U.S. agencies such as the departments of State, Commerce, and Energy each have small activities in either promoting trade or facilitating international contacts—e.g., the Department of Commerce has trade attaches in U.S. Embassies abroad. The Department of Energy maintains contact with international organizations such as IEA. The nature of these agency functions at present seems to preclude either close cooperation or high-level policy attention.

A possible private-sector activity suggested by the ICE Task Force is to develop a U.S. Coal Export Trade Association. A number of coal producers (particularly with Western U.S. coal reserves) and coal transportation organizations have recommended the establishment of an International Coal Trade Organization or Association to act as a forum for the interests of the U.S. coal export industry. Similar organizations exist to represent the international coal interests of Australia and South Africa. In addition, there are government coal trade organizations in Poland and the Soviet Union.

The members of the existing U.S. Coal Exporters Association are coal brokers or are actively involved in coal export transactions. The recommended new organization would include a larger group of those potentially involved in coal exports and the associated infrastructure. Other suggestions included in the ICE Task Force report include:

- encourage foreign investment in U.S. mines and facilities;
- expand marketing aid programs;
- initiate bilateral conferences with major coal trade partners;
- establish an office to monitor U.S. coal export development (i.e., continue the Task Force work); and
- establish an international coal trade delegation.

Each of these suggestions and others will need careful scrutiny if they are considered for adoption. However, a well-coordinated and focused Federal role in coal export policy could be important to meeting coal export goals.

The principal categories of Federal Government actions that could increase the ability of U.S. firms to export coal and help alleviate some of the more obvious foreign concerns are:

- political pronouncements creating a climate conducive to foreign coal use, U.S. coal production, and U.S. exports;
- actions to increase U.S. physical capacity to export coal; and
- marketing activities to increase the actual sale of coal.

Within each sphere is a range of possible actions, which can be listed by degree of Federal involvement. Certain political pronouncements can be among the most productive Federal actions. The administration and Congress could reaffirm the U.S. commitment to increase domestic coal production, improve necessary infrastructure, and increase exports. The United States could also encourage other nations to increase coal use. This can be done both in domestic and international forums. International forums include economic summit conferences. Statements of Federal Government support for increasing coal exports will be important if a major U.S. share of this trade is to be attained.

ISSUE III: DREDGING

Increasingly, oceanborne trade in bulk commodities such as coal is being conducted via deep-draft vessels, which over many trade

routes offer substantial savings to shippers and their customers. Many parties believe that if the United States is to remain competitive in the

world coal market, it is essential that at least some U.S. harbors serving coal export facilities be deepened in order to accommodate deep-draft bulk carriers. A major avenue by which the Federal Government may assist coal exports is the dredging of access channels for ports with existing or projected coal export facilities. Two areas of debate that have surfaced in relation to the Federal role in dredging are:

1. *Sharing of costs between Federal and non-Federal parties.* Proposed channel improvements at four major coal ports alone would cost about \$1.5 billion, Federal budget constraints and changing perceptions concerning the desirable scope of Federal responsibilities have been reflected in suggestions to shift part of the cost burden of dredging away from the Federal Government, the party currently accepting financial responsibility for channel-deepening projects. The Reagan administration and some members of Congress have proposed changes in current practices towards recovery of an increased proportion of Federal costs through user fees imposed on perceived beneficiaries of dredging. However, there is debate over who the principal beneficiaries are, and the effect of user charges on U.S. exports. Also, specific user-fee mechanisms remain to be worked out.
2. *Expediting dredging.* Dredging projects presently take decades to progress through the various stages from project proposal to completion. This system is seen by many authorities as seriously impeding the growth of U.S. bulk-cargo capabilities. Proposals have been made to streamline the process by which dredging projects are approved and funded. Also, there is currently no national mechanism in place for establishing priorities among various proposed dredging projects. It may be necessary to create such a mechanism in order for decisions on individual projects to be made expeditiously.

Cost Sharing

Introduction

Since 1824, the Corps of Engineers has had Federal responsibility for improvement and maintenance dredging of channels of the Nation's ports and inland waterways. For all U.S. inland waterway and seaport projects, the Corps spent more than \$1 billion on dredging during 3 years from 1978 through 1980 (see app. A). About two-thirds of this amount was spent for maintenance dredging.⁷

Proposals have been made for new dredging at many ports, partially or primarily justified by coal export considerations. According to the ICE Task Force, 34 ports have been identified as having a potential for serving increased steam coal exports. Nine of these are already engaged in coal export.¹⁸ At four existing coal ports alone—Hampton Roads, Baltimore, Mobile, and New Orleans/Baton Rouge—the capital cost of proposed channel improvements would total almost \$1.5 billion in 1980 dollars. Annual operation and maintenance costs for existing channels at these four ports range from \$4 million for Baltimore to \$19.5 million for New Orleans. The channel improvements proposed would create additional operation and maintenance costs, ranging from \$800,000 for Baltimore to \$75 million for New Orleans.

In company with many other Federal programs, the current extent of Federal involvement in dredging is the subject of increasing debate. With administration budget cutbacks, the question of how to divide the limited funds to be allocated among dredging projects has gained importance. Sharing of costs is one way of dealing with these new constraints. Full Government responsibility for dredging is considered by some to be an unnecessary subsidy to private industry and other non-Federal interests.

Cost-Sharing Mechanisms.

Although private-sector responsibility for dredging is a policy alternative, debates over

the Federal role in dredging have generally envisioned retention of overall Federal responsibility, while shifting varying proportions of dredging costs to non-Federal parties. Cost sharing can be geared towards recovery of all costs, or of some percentage of the expenses of Federal dredging operations. Mechanisms can be tailored to specific harbors, or generalized to all harbors. Two basic varieties of cost-sharing mechanisms exist: user charges and direct contributions.

User charges.—User-related fees are assessed by port authorities on vessels for such things as pilotage, dockage, wharfage, lading, and stevedoring. Historically, user charges have received more attention as an option for recovering inland waterway expenditures than for maritime-related expenditures such as port dredging. Cost-sharing mechanisms suggested for inland waterways include user charges, some of which are potentially relevant to seaports. Some sources have looked specifically at user fees in connection with deep-draft dredging.²⁰ Examples of fees include:

- *License fees* imposed on operators of vessels. Fees can be uniform, or can vary according to draft, weight, capacity, or other physical dimension of a vessel.
- *Taxes.* Taxes could be levied on *cargos*, based on such criteria as commodity, weight, or value. *Fuel taxes* have been proposed by several sources to help pay for inland waterway construction and maintenance projects. Under the Inland Waterways Revenue Act of 1978, a fuel tax will be levied starting at 4 cents/gal in 1981 and progressively rising to 10 cents/gal in 1986. The Reagan administration has proposed that this tax be increased to cover a greater proportion of inland waterway costs. However, the utility of a fuel tax to cover seaport dredging costs is doubtful. The Congressional Budget Office judged that such taxes could easily be avoided by those engaged in international shipping.²¹
- *Harbor and channel use fees.* A fee could be levied each time a ship uses a dredged channel. This could be at a flat rate for all ships or a graduated rate based on draft.

Alternatively, the fee could be based on deadweight tonnage (roughly the weight of cargo) or on net registered tonnage (roughly the volume available for cargo). Harbor and channel use fees based on net registered tonnage are used by many foreign ports and for determining canal tolls.

Direct contributions.—Direct contributions could be assessed on non-Federal sources such as States or port authorities to help finance port developments. Potential sources also include foreign companies and countries, who are among the chief potential beneficiaries of dredging projects.²² The methods by which targeted parties could raise funds to share costs vary—e.g., States and port authorities could float bonds.

Combinations.—Combinations of cost-sharing mechanisms are possible. Several proposals have suggested that agencies responsible for ports, such as port authorities, reimburse the Federal Government for channel deepening, collecting necessary funds by adding on *de facto* user charges to those they already assess, such as dockage, or by charging a separate harbor use tax to deep-draft vessels taking advantage of added depths.²³ State or local responsibility has been opposed by most States and port authorities, who have argued that the Federal Government has jurisdiction over navigable waterways and has sole authority to collect user fees.²⁴ One possible alternative to local collection of fees would be direct collection by the Federal Government—e.g., employing the U.S. Customs Service or Coast Guard.

Observations. Problems in estimating user charge fees and the effect of such fees on U.S. exports will be addressed at the end of this section. Though a detailed description or comparison of cost-sharing mechanisms is beyond the scope of this memorandum, a few observations may be made.

User charges appear to be the cost-sharing mode with the most precedent and support. Out of the welter of potential beneficiaries of dredging for coal exports, many believe that shipping companies and their customers should be the

parties who bear some portion of dredging costs in company with the Federal Government .25

If this argument is accepted, the main question is what sort of user charges should be employed. The U.S. Customs Service collects a small tonnage tax on international shipping which totaled \$14 million in 1980.²⁶ There could be advantages to broadening this tax to recover dredging expenses, as the administrative machinery for collection is already in place. In addition, because it is imposed on a systemwide basis for all international vessels using U.S. ports, dredging costs would be spread widely, and therefore would be less burdensome on individual ships. However, an important drawback of such a tax is that precisely because it is spread so widely, beneficiaries would not pay what many would consider an equitable share of costs, and nonbeneficiaries—in this case, shallow-draft ships—would end up helping to subsidize dredging projects. If a tonnage tax were imposed on a port-by-port rather than uniform basis, this inequity would be reduced .27

A potentially more equitable alternative is a harbor- and channel-use fee based on ship draft, with a sliding scale in which the deepest draft ships pay the greatest charge. Relatively shallow-draft but large volume or value-cargo vessels, such as container ships, would be penalized under user charges based on tonnage, volume, or value, as would proposed new technology bulk carriers with large volumes but shallow-drafts. A user charge based on ship draft would link dredging project benefits and beneficiaries together in a more direct way. OTA contacts with interested groups indicate that this option has attracted relatively greater support than other forms of cost sharing. However, no study or legislative proposal appears to have considered this option in detail.

Cost-Sharing Proposals

The Reagan administration has proposed that user fees be applied to a variety of Government services, including certain Coast Guard activities, and aspects of the aviation system .28* Although not specifying a collection mechanism, deep-draft dredging has recently been included in administration user-fee proposals. Beginning

in 1983, user charges “will recover, through proprietary receipts, the [full] cost of dredging and maintaining deep-water channels leading to our seaports, except for that portion allocated to Government [e.g., Navy use]. Together [with inland waterway user charges], these proposals will increase revenues by \$2.1 billion over the 1983 to 1986 period, offsetting costs otherwise borne by the general taxpayer. ”29

Legislation has been submitted to implement the administration proposals, which would have “appropriate non-Federal public bodies” become responsible for reimbursing the Federal Government for certain dredging expenditures, and which would give such bodies the authority to collect user fees .30

Current congressional bills that would make non-Federal parties partners in deep-draft dredging cost sharing include S. 576 (Moynihan, Randolph) and S. 621 (Domenici, Moynihan).³¹ This approach was also present in the water policy initiatives proposed by the Carter administration in 1978.³² These proposals do not specify how such parties would raise funds.

Despite this interest in cost sharing, there have been few in-depth studies of mechanisms that apply specifically to seaports. The Corps of Engineers is looking at the issue of cost sharing, but no formal study is being made. The Department of Transportation is preparing a study on waterway user taxes and charges for navigation projects including deep-draft channels and coastal ports, as mandated by the Inland Waterways Revenue Act of 1978. This study should be completed by October of this year.

Arguments For and Against Cost Sharing

In addition to reducing Federal expenditures, proponents advance two major types of justifications for cost sharing: efficiency and equity. 33

Efficiency .—Critics of the present system argue that when taxpayers pay the bulk of the cost of a project, inefficiencies result: interested parties are likely to promote projects that may not be cost effective.

This problem, it is contended, occurs despite the nominal role of the Army Corps of Engi-

neers in conducting benefit-cost analysis of projects. Critics of the Corps argue that Corps district offices tend to become the allies of local interests in promoting projects. In addition, it is argued, benefit-cost analysis is an inexact discipline, heavily dependent on value judgments of what constitute the benefits and costs to be included in the analysis, and subject to manipulation.

Cost sharing establishes a crude but potentially effective market-like mechanism to encourage closer scrutiny of projects. As noted by one environmentalist, "The willingness of beneficiaries to cover costs is perhaps the best test of the economic merits of a water project."³⁴

These arguments have been countered in several ways. Opponents of cost sharing as a means to increase efficiency argue that deep-draft improvements are economically justified, as proved not only by favorable Corps of Engineers benefit-cost analyses (the objectivity and rigor of which are defended), but also by the financial commitments made by private industry, port authorities, and governmental units to improvements at ports targeted for dredging. Without hard financial judgments about the likelihood of increased business brought about by the combination of dredging and shoreside port improvements, it is argued, these improvements would not be made.

It is also argued that if dredging projects were prevented because of refusal by targeted parties to share costs, national benefits (described below) could be lost, resulting in greater net inefficiencies than are present in the current arrangement of Federal financial responsibility.³⁵

Equity.—Perhaps more important than efficiency arguments are arguments related to the equity of cost sharing. Advocates of cost sharing contend that it is inequitable for the Federal Government to bear the entire responsibility for deep-draft dredging operations.

Though definitions of equity vary greatly, one principle is commonly held: to the extent feasible, beneficiaries of actions should bear the costs generated by those actions. Cost-sharing proponents contend that although some benefits

accrue on a national scale, the primary beneficiaries of dredging projects are specific private or geographic entities, rather than the Nation as a whole. Federal dredging is thus viewed as a subsidy to these entities, and cost sharing is viewed as a means to increase equity.

User charges are levied on other transportation-related items, such as highway use (e.g., through gasoline taxes) and airports (e.g., through aviation fuel taxes and ticket surcharges). All transportation sectors can claim similar national benefits; it is seen as unfair that dredging be completely a Federal responsibility.

Opponents of cost sharing also argue their positions on a basis of equity. Arguments have usually focused on perceived inequities of requiring port operators to contribute to dredging costs.³⁶

Contributions by non-Federal parties. Cost sharing, it is argued, should be viewed in the context of ports and harbors as a whole, rather than in regard to dredging alone. If ports rather than dredging are taken as the unit of analysis, non-Federal contributions become substantial and constitute adequate sharing of costs.

There have been billions of dollars in private-sector investment for port facilities and other infrastructure necessary to export coal and other commodities—e.g., most coal-loading dock facilities are owned by railroads or other private companies. Private firms have indicated willingness to spend additional hundreds of millions of dollars to increase U.S. coal export capacity at ports. Investment by port authorities in port facilities is similarly large, almost equalling the Federal investment in navigation works.

Local governments are required to undertake what are called conditions of local cooperation in partnership with the Corps of Engineers to facilitate dredging operations. These often entail such things as "procurement of property or property rights, relocation of pipelines and aerial cables, deepening of terminal areas, bridge improvements or modifications, third party liability, business and residential relocations, and the provision of spoil disposal and containment facilities."³⁷ If further cost sharing is required, it

is argued, the Federal Government should in turn share the revenues gained from such sources as import duties and tonnage taxes, with port authorities, States, and/or other involved parties.

Analysis of these arguments depends on judgment of whether or not dredging should be viewed as a separate item, or in the context of port development as a whole. Some of the arguments against cost sharing become moot if port authorities are given the power to charge user fees by legislation, and such legislation is found to be constitutional in the event of court challenge. Arguments are also inapplicable to direct Federal collection of fees.

The national interest in deep-draft dredging. Opponents of cost sharing argue that seaports and actions that enhance their capacity, such as dredging, should be viewed in terms of national rather than local interests. Some of the benefits of dredging do not accrue to specific parties, but to broad regions of the country, to the United States as a whole, and even on an international scale, to U.S. allies and foreign policy interests. Federal responsibility is thus seen as appropriate.

As stated by a spokesman for the American Association of Port Authorities (AAPA), "Seaports are unique among water resource projects. Seaports are essentially transportation facilities. They are an integral part of a vast global ocean transportation structure that fosters the exchange of peoples, cultures, ideas, technologies and goods. Seaports are also a part of United States maritime and trade policy, and in time of national emergency, the nation's defense logistical system."³

Benefits of seaports are widely distributed:

- More than a million jobs are created, and billions of dollars worth of trade is conducted every year, with billions contributed to Federal, State, and local taxes.
- Ports serve large interstate regions. Inland States have a direct stake in the ability of ports to move their products overseas, and to take in needed raw materials and finished goods.

- The United States is the world's largest importer and exporter, and it depends on international waterborne trade to reduce its balance-of-payments deficit.
- Trade in specific commodities can be tied to foreign policy actions, e.g., as demonstrated in both the sale and embargo of grain to the Soviet Union.

Federal investment in ports is considered by the industry as cost effective. They argue that ports contribute billions of dollars annually to customs revenues which are taken in by the Federal Government.³⁹

It is also argued that dredging is a necessary part of port capability. If U.S. ports lag in modernization and expansion, the alternative, as stated by AAPA, is "to fall behind the world in ocean transportation technology and become a nation of obsolete ports able only to serve obsolete ships, with the price of resultant inefficiency ultimately passed on to the U.S. consumer."⁴

The benefits of dredging for coal export purposes can be national in scope, e.g.:

- Increases in coal exports will improve the U.S. balance of trade with other countries. Last year, sales of U.S. coal of all types totaled approximately \$4.5 billion. Exports have the potential to grow to levels significantly above this by the end of the century. (Dredging, would help the movement of other commodities using deep-draft vessels, such as grain, oil, and ores).
- U.S. coal exports provide an alternative for U.S. allies to dependence upon OPEC or the Soviet bloc for energy resources.

It is argued that the national and international aspects of these benefits make Federal responsibility equitable.

As with arguments based on efficiency grounds, some of the equity arguments are not directly relevant to a situation in which user fees are assessed on shippers. A more specific counter argument to the ones expressed immediately above would be that seaports are not intrinsically different from other transportation-

related facilities in terms of the extent to which they serve both local and national interests. If cost sharing is appropriate for airports, highways, and inland waterways, there is no *a priori* reason that it should not be applied to seaports as well.⁴²

Impediments to national interests entailed by cost sharing. Opponents of cost sharing argue that cost sharing will injure national interests either by preventing dredging projects from going forward, and/or by discouraging foreign shippers from calling at dredged ports.

It is argued that State and local governments or authorities, especially in poorer States, will be unable to pay even a low percentage of costs, let alone be responsible for full-cost reimbursement. Many port authorities are municipal or county agencies, special districts, or private concerns without powers to tax, and with no way to pass along assessments or costs.⁴³ States feel that they would need a Federal mandate to charge user fees. If States could not charge such fees they may forego dredging projects. One potential problem would arise if a State in which a project was located were to have sole cost-sharing responsibility, despite the likelihood that other States would also benefit from the project.⁴⁴

A second argument is that even if States could pass user charges on, the effect could be to discourage deep-draft vessels from calling at dredged ports. To the extent such charges add on to the costs of doing business, it is argued, the United States would suffer in competition with other suppliers of coal, such as Australia and South Africa, which already sell at lower prices than the United States.

Perhaps more pressing questions are raised by the second argument, as user charges are a more likely mode of cost sharing than direct contributions by States or other non-Federal units. Unfortunately, information is insufficient to make conclusions as to the potential effects of cost sharing on U.S. exports.

By enabling deeper draft vessel trade, dredging could result in savings from \$3 to \$6/tonne of coal on voyages from U.S. east coast ports to Western Europe.⁴⁵ presumably, so long as user

charges were beneath savings, foreign buyers would not be discouraged from purchasing U.S. coal solely on this basis. However, while it appears plausible that the user charges envisioned in some scenarios would not impose a sufficiently great burden to discourage foreign coal buyers, no detailed analysis is available.

A major problem in determining the effect of user charges is the difficulty in arriving at valid estimates of user charge amounts. Estimates depend on assumptions about a great number of variables: the type of user charge decided on (e.g., tonnage tax or ship draft), the costs which the charge is supposed to defray (e.g., new construction, operation and maintenance, or both, for projects at all ports or port-specific), the size of the population paying charges (e.g., the number of ship calls or amount of tonnage), the number of years to payback, and rate of interest.

Few analyses have been published containing estimates of possible user charges. Those estimates that have appeared vary from below that \$0.20 to \$1.70/tonne of cargo. The disincentives these charges would pose is dependent on such factors as the perceived equity of charges, their effect on delivered U.S. coal prices vis-a-vis those of competitors, and motivations behind foreign purchases of U.S. coal (e.g., the extent to which price considerations outweigh benefits of diversification and reliability of supply potentially offered by the United States). Another possible comparison is between economic gains to shippers resulting from dredging v. amount of user fees imposed.

The type of user charge decided on is an important variable in calculating fees. E.g., if it is based on total tonnage carried by international shipping into and out of U.S. ports, the amount of charge added would probably be minimal. As calculated by the Congressional Budget Office (CBO), the Corps of Engineers and the Coast Guard spend about \$560 million per year improving and maintaining ports and channels to accommodate oceangoing vessels and Great Lakes shipping. According to CBO, "If the Federal Government recovered all deep-draft expenditures from international shipping alone, shipping costs would increase by 30 cents/

tonne, or less than 0.2 percent. Such a level seems unlikely to harm the general economy or divert significant traffic to other ports or transportation modes."⁴ A 30-cents tonne charge would be only 5 percent of a \$6 tonne savings from dredging.

However, it is hard to tell how applicable a **30 cents/tonne** figure would be for coal export dredging projects. CBO calculations were based on tonnage figures encompassing all imports and exports from all seaports and Great Lakes ports, and include domestic traffic as well.⁴⁷ The number of users and the amount of tonnage across which charges would be spread is thus much larger in the CBO assessment than would be the case for user fees based on shipping at coal export ports alone.

Two other ways of considering the disincentives a user charge would pose are to compare user charges with other expenses shippers pay, and with the total value of cargo. One source estimated a charge of \$20,000 per use of a dredged harbor by a 125,000-tonne vessel.⁴⁸ This fee is less than the daily expense of operating a ship of this size, and is about the same as daily demurrage fees charged to vessels that must wait to load or unload.

In comparison with the total value of a cargo of coal, **\$20,000** is quite small. In 1980, the average cost of all coal at the port before shipping was \$50/tonne.⁴⁹ For a 125,000-dead-weight tonne (dwt) fully loaded vessel, the cargo would thus on average be worth \$6.25 million; \$20,000 in user fees would represent **0.32** percent of value of the cargo.

Higher fees would change the above comparisons. Depending on the assumptions made, fees could be many times the figures mentioned immediately above. One source mentioned a possible charge of \$1.70/tonne on export trade at four major coal ports.⁵⁰ For a 125,000 dwt fully loaded vessel, this would result in a charge of \$212,500, or 3.4 percent of cargo value. Another possible disincentive of a user charge applied to exports alone is that it may be seen as inequitable by foreign buyers.

Lastly, foreign motivations are important. As discussed earlier, the United States is not com-

peting entirely on the basis of price with foreign competitors. To the extent that buyers choose U.S. coal for reasons of national security (e.g., diversity of supply, perceived *reliability* of U.S. source), user charges at moderate levels should not discourage purchases.

Problems in Implementing Cost Sharing

Much work remains to be done in conceptualizing the specific mechanisms by which user charges may be calculated and collected. No cost-sharing scheme will be able to avoid perceived inequities—e.g., if user charges are tailored to specific projects at specific ports, those ports that require more expensive projects to achieve comparable harbor depths would have to impose greater fees, potentially driving shippers to use other ports. On the other hand, systemwide charges could subsidize expensive and potentially inefficient projects. Another problem is establishing equitable fees for all ports, some of which may have been dredged before the fees were implemented.

Expediting Dredging

A major concern of both foreign and domestic parties seeking increased U.S. coal exports is the length of time currently required to deepen harbors. From the time of issuance of a congressional resolution directing the Corps of Engineers to conduct a study to the time the Corps' report clears the necessary levels of administrative review has averaged 9 to 10 years. Awaiting congressional authorization and funding has averaged another 6 to 7 years. The execution of a project, including advanced planning, design, and construction has averaged an additional 8 years.⁵¹

According to a different source, on average, it takes more than 20 years, from the initiation of planning up to the beginning of construction, to proceed through the various stages required in the Corps' process, with construction taking up to an additional 10 years.⁵² Another source gave an average of over 24 years from authorization of a study to completion of construction.⁵³

Some of the reasons for this time lag involve the procedures required for Corps' projects. Once a congressional committee authorizes a project study, the proposal must wend its way through multiple stages of review before work actually begins.⁵⁴ (See app. A for a description of the 19 major steps in the Corps process, the status of each major port-dredging project under study, and the internal Corps' proposals for expediting the work under their control.)

Funds for dredging have not been appropriated by Congress for any of the major coal port dredging projects. Authorization of channel deepening has been approved for Baltimore. Completion of the Corps' studies has, in addition to the one for Baltimore, been completed and approved by the Corps for the Hampton Roads harbors of Norfolk and Newport News. Studies of Mobile harbor have been completed by the Mobile district and are under review by the Corps. A draft report has been prepared for New Orleans which has yet to undergo review.

Several proposals that would expedite aspects of Corps' procedures, or related actions by other parties have been made. Their rationale is that if the benefits of coal exports are to materialize, quick action on dredging is essential. With present depths, the United States will not be able to export as much coal as it could otherwise, and indeed may lose some market share if deepened facilities are not available in the near future.

Measures to accelerate project implementation at the major coal harbors will require wide departure from normal authorization and funding procedures for planning and construction. Several categories of action were listed by an ICE subgroup paper:⁵⁵

- Expedite the review of harbor improvement reports by all Federal and State agencies by directing concurrent reviews and urging the various reviewing agencies (both Federal and State) to use less than statutory time allowance where possible.
- Authorize funds and initiate project advance engineering and design studies before congressional authorization of construction. Because much of the delay in imple-

menting projects is associated with waiting for funds after the project is authorized, this would cut 3 to 4 years from the normal planning cycle.

- Phase construction to accelerate specific channel segment improvement and incremental deepening to achieve maximum benefits from the use of larger ships.

Another category of action is to establish priorities among dredging projects, concentrating at least initial resources on one or more selected sites.

Proposals from several sources are summarized below:

- In October 1980, President Carter announced support of legislation that would provide blanket congressional authorization for those harbor improvement projects approved in the administrative review process, thereby allowing the projects to qualify for appropriation of funds and the immediate commencement of projects for which funds were otherwise available.⁵⁶
- In September 1980, the Corps of Engineers released a proposal for the purpose of speeding up the review process needed to obtain Federal permits:

"Responding to a Presidential request in August 1980, the Secretary of the Army, acting through the Corps of Engineers and in consultation with the ICE Task Force, implemented steps to shave several months from the "preauthorization" review process, and for approved projects, to compress the advanced engineering and construction activities so as to accelerate the benefits of dredging by making a deepened outbound channel operational at the earliest possible time."⁵⁷

- At least one congressional bill would set a time limit on the process of studying the feasibility of harbor projects, reducing the study period to 2 years from the current average of 9 to 10 years to 2 years.⁵⁸

Another approach is to establish an explicit procedure to decide priorities among alternative navigation improvement projects, rather than simply establishing through case-by-case legislation which improvements are to be funded.

One congressional proposal would establish an interagency task force to act as a planning and coordinating body for proposed coal port projects, reviewing Corps feasibility studies, developing long-range harbor development plans, and advising the President on which projects are in the highest national interest. 59

A number of bills have had the following features:^{bo}

- Bills provide for “fast-track” procedures for specific navigation improvement projects at specifically named ports, although projects at other ports may also be able to qualify for the expedited handling procedures proposed.
- Eligibility for expedited handling is based on congressional judgment that the navigation improvements involved are economically justified, feasible from an engineering standpoint, and essential to the interests of the United States and its allies.
- The Corps is to submit to Congress a final environmental impact statement (EIS) demonstrating compliance with the National Environmental Policy Act of 1969, the Clean Water Act, and other environmental statutes. Unless Congress disapproves of such an EIS by concurrent resolution within 60 days of receipt, the project may go forward without any further actions under the environmental statutes mentioned above. A lack of disapproval constitutes a finding and determination by Congress that the requirements of such statutes have been

satisfied in connection with the project concerned.

- A congressional finding as defined above, and actions to carry out projects themselves, shall not be subject to judicial review unless claims are brought against them within 60 days of the finding or action concerned. Claims are to be given expedited hearing by the court in which they are filed.
- EISs are to be prepared by the Corps on an expedited basis.

ICE supported legislation with provisions for congressional review of EISs, “with the provision that through congressional hearings or otherwise, a fair opportunity be provided for the presentation of objections to any such project on environmental grounds because of particular concerns over dredge disposal.”⁶¹

Some environmentalists have raised objections to the expediting procedures proposed above. There is fear that compression of environmental review and curtailment of legal appeals will mean inadequate scrutiny of projects, possibly leading to unwarranted and environmentally damaging activities. By giving Congress a limited amount of time to act in reviewing EISs, and by requiring a high threshold of action in order to reject an EIS, such proposals, it is feared, would lead to a situation in which Congress will be unable to review EISs in-depth and unlikely to act to reject them. The limitations upon legal challenges are similarly seen as threatening. 62

Footnotes

I Some of the major comprehensive studies are:

a) *Interim Report of the Interagency Coal Export Task Force*, Jan. 20, 1981, with 14 volumes of working documents.

b) “Coal: Bridge to the Future,” by Carol Wilson, Massachusetts Institute of Technology, 1980 (sponsored by DOE), *World Coal Study*.

c) *Steam Coal: Prospects to 2000*, International Energy Agency (Paris, Organization for Economic Cooperation and Development, 1978).

d) *Report of the IEA Coal Industry Advisory Board*, IEA (Paris, OECD, December 1980).

e) *A Forecast for U.S. Coal in the 1980's*, National Coal Association, January 1981,

f) *Outlook for The Long-Term Coal Supply and Demand Trend in the Community*, Commission of the European Communities, Brussels, March 1980.

¹*Interim Report of the ICE Task Force*.

²See ch. 3 for a compilation of coal port developments now underway.

³*Steam Coal: Prospects to 2000*.

⁴*Interagency Coal Export Task Force International Cooperation-Subgroup Report*, January 1981.

⁵*Ibid.*

⁶*Report of the IEA Coal Industry Advisory Board*.

⁷*World Coal Study*.

⁸*Interim Report of the ICE Task Force*.

¹⁰Interviews with representatives of the Commission of the European Communities and other buyers of U.S. coal.
¹¹*Ibid.*

¹²*Interim Report of the ICE Task Force.*

¹³*Ibid.*

¹⁴U.S. Congress, Senate, *An Act to Amend the Merchant Marine Act Of 1936*, Public Law 96-387, 96th Cong., 2d sess., 1980, S. 1442.

¹⁵Interviews with some representatives of buyers of U.S. coal.

¹⁶*Interim Report of the ICE Task Force.*

¹⁷*"Status and Trends of U.S. Port Developments and Coal Exports*, Simat, Helliesen & Eichner, Inc., Mar. 3, 1980 (OTA contractor paper), pp. 96-97 (hereinafter called *SH&E*).

¹⁸*Report of the Interagency Coal Export Task Force*, DOE/FE-0012, January 1981, p. 5-45 (hereinafter called *ICE Report*).

¹⁹*U.S. Army Corps of Engineers*, DAEN-CWP-P, Oct. 2, 1980.

²⁰Inland waterway user charge mechanisms are listed in *Waterway User Charges*, American Enterprise Institute, Sept. 30, 1977, p. 21-30. David L. Anderson, Robert W. Schuessler, Peter A. Cardellicchio, *Deep-Draft Navigation User Charges: Recovery Options and Impacts*, U.S. Department of Transportation, Transportation Systems Center, August 1977, has the most comprehensive discussion of deep-draft oriented user fees.

²¹Reducing the Federal Budget: *Strategies and Examples*, *Fiscal Years 1982-1986*, Congressional Budget Office, February 1981, pp. 96-97.

²²Precedents for foreign cost sharing include improvements to a port in British Columbia partially underwritten by the Japanese. There is a similar offer relating to the port of Astoria, Oreg.

²³*SH&E*, op. cit., p. 93.

²⁴E.g., statement by representative of the American Association of Port Authorities, *Hearing Record*, Subcommittee on Water Resources of the Committee on Public Works and Transportation, House of Representatives, March and April 1979, pp. 1210-6 generally.

²⁵Panel discussion, Mar. 5, 1981 at OTA.

²⁶CB0, op. cit., p. 96.

²⁷See discussion in Anderson, et. al., ch. 3.

²⁸The rationale for user fees was stated in equity terms: "Most Government programs are designed to benefit the Nation as a whole, or provide special assistance to needy or vulnerable groups. Some activities, however, provide direct economic benefits to a specific and known group of individuals or enterprises. While it is often necessary or desirable for these activities to be conducted by the Federal Government, it is clearly inequitable for the general taxpayer to bear the burden of services that provide special benefits for specific users. The budget reform plan provides for shifting the cost of some such activities to those who directly benefit." *America's New Beginning: A Program for Economic Recovery*, Office of Management and Budget, February 1981, p. 19.

²⁹*Fiscal year 1982 Budget Revisions*, Office of Management and Budget, March 1981, p. 103, so.

³⁰Introduced as S. 809 by Sen. Stafford, Mar. 26, 1981.

³¹The applicable part of S. 576 reads:

Projects may proceed under two methods of financing, depending on the desirability of the project from the national perspective. For the best projects, the first method of financing provides for the initial payment of all construction cost by the Federal Government and the repayment of 23 percent of such costs within 20 years of the completion of the project. The rate of interest on repayment will be set by the Secretary of the Treasury. For projects financed in this way, the Federal Government will assume the full cost of operation and maintenance for the first 3 years after the completion of the project. In each year thereafter, the Federal share of such costs will be reduced by 5 percent until the Federal share represents 50 percent of annual operation and maintenance costs.

For the projects of lower national priority, the Federal share of the construction cost will be set as a proportion commensurate with the proportion of the most cost-effective dredging depth in the depth preferred by the non-Federal interests. The non-Federal interests shall repay the Federal Government for the portion of Federal construction costs greater than 50 percent. Under this method of financing the Federal share of the operation and maintenance costs will be the same percentage as the Federal share of construction costs for the first 5 years following construction. Thereafter, the Federal share will be reduced by 5 percent each year until the Federal share represents 25 percent of operation and maintenance costs." *Congressional Record*, Feb. 26, 1981.

S. 621 would establish "a system of grants to the States for their use in priority projects to be built by Federal agencies, using Federal designs, with 75 percent Federal money, 25 percent non-Federal." At the same time there would be a special national category of interstate projects numbering 10 at any one time that would continue to be built at Federal cost. *Congressional Record*, Mar. 5, 1981.

³²To summarize the relevant aspects of the Carter proposals (introduced with some modifications as S. 1599 in July 1979 by Senator Gravel), a State in which a new water resource project was to be constructed would assume a share of costs over and above previously existing cost-sharing arrangements. For projects having "vendible outputs"—where revenue is received from users of such projects—the State share was to be 10 percent. For projects with nonvendible outputs, the share would be 5 percent. State contributions would be paid concurrently and proportionately with the Federal contracted obligation for program construction, with a cap of one-fourth of 1 percent of the State's general revenues for each project. Navigation projects, including dredging, were originally classed as having vendible outputs, but were later reclassified as nonvendible. The manner in which States would collect funds towards their contributions, e.g., from other States which would benefit from a project, was left unspecified. For already approved projects, the cost-sharing requirement would not apply. However, such projects would be expedited if the States concerned were to voluntarily enter into a cost-sharing agreement over and above previously existing ones.

³³These categories are suggested by American Enterprise Institute, op. cit., p. 13-20. The Carter administration argued a third reason for cost sharing: involvement. "States seldom participate in project funding, and thus do not have a major role in determining project priorities" (*Hearing Record*, op. cit., 1187). Cost sharing would give

States "a greater stake in the outcome of water project authorization and budgeting decisions" (p. 5). However, States and State organizations which submitted comments on the Carter initiatives almost unanimously rejected this position, arguing that the Carter initiatives were not desired by States, and did not translate into meaningful decisionmaking power.

"Statement, Brent Blackwelder, Environmental Policy Center, *Hearing Record*, p. 276.

³⁵Supra note 24.

³⁶These arguments have been drawn primarily from discussions of the Carter water initiatives.

³⁷*Hearing Record*, p. 1212.

³⁸*Ibid.*, p. 1210. See also, e.g., *Journal of Commerce*, Oct. 17, 1980, article, "Cost Sharing: A Port Dilemma."

³⁹The Federal Government collects more than \$5 billion annually in customs revenues from seaports. *Ibid.*

⁴⁰*Hearing Record*, p. 1214

"Senator Johnston, in introducing a bill in the 96th Congress which would have expedited dredging at several harbors for coal export purposes, gave another national security rationale for increasing coal exports: "Mr. President, it is important for everyone to realize that the burning of coal anywhere in the world, insofar as it displaces oil, is just as good for the local energy crisis, as the burning of that coal in this country because, to the extent that a ton of coal is burned in Amsterdam it displaces a number of barrels of oil used there, and frees up oil for use in this and other countries around the world." *Congressional Record*, Dec. 5, 1980.

It may be noted that if present trends continue, benefits will not include greater opportunities for U.S. shipping, as deep-draft colliers are almost entirely foreign flag.

⁴¹Another set of arguments may be directed at the national benefits of dredging for coal exports.

- The necessity of dredging to realize the benefits of coal exports is not given. As analyzed elsewhere in this report, several considerations may reduce the relative importance of dredging.
 - current bottlenecks at coal export facilities are less the result of shallow-harbor bottoms than problems in shoreside handling, e.g., caused by slowdowns due to frozen coal, inefficiencies in handling metallurgical coal.
 - different technologies than those used at present could reduce dredging requirements (e. g., coal slurry loading, shallow-draft ships with increased capacity).
- The U.S. coal export market may not be large enough to justify dredging at every port which seeks it.
- Dredging entails environmental costs, the extent of which depend on such things as the presence of toxic chemicals in dredged material, type and density of marine and freshwater life in the areas in which dredging and spoil disposal take place, and the method of

disposal used. To some parties, the costs involved in dredging projects at particular harbors would exceed the benefits gained.

⁴²*Hearing Record*, pp. 1166, 1217.

⁴³*Ibid.* p. 54-56.

⁴⁴See, e.g., James A. Lisnyk, "The Ocean Shipping of Coal," presented at Coal and Ports Seminar, AAPA, New Orleans, Feb. 1981, p. 10.

Variables affecting savings include mode of propulsion, flag of vessel, and length of voyage. Deep-draft vessels would not result in savings in two cases, east coast port coal exports to Japan, and west coast export to Western Europe. The Panama Canal cannot accommodate vessels over approximately 70,000 dwt, and savings from deep draft do not equal savings from using the Canal.

⁴⁵BO, op. cit.

CBO estimates were extrapolated from table 1151, *Statistical Abstract of The United States*, 100th ed., U.S. Department of Commerce, September 1979. Telephone conversation, CBO, Mar. 17, 1981.

⁴⁶The charge, a flat fee assessed on all deep-draft ships using a hypothetical deepened channel, was calculated by dividing annual payments by a local agency to defray costs of a loan financing a project, by number of deep-draft vessel calls. SH&E, op. cit., p. 94.

⁴⁷Figure obtained by dividing total value of coal exports by total export tonnage (both metallurgical and steam coal).

⁴⁸*Wall Street Journal*, Mar. 30, 1981.

⁴⁹CE Report, p. 1-18.

⁵⁰*Moving U.S. Coal to Export Markets*, Army Corps of Engineers, Department of Commerce, Department of Energy, Department of Transportation. Draft dated June 10, 1980, p. 5-15.

⁵¹Interagency Coal Export Task Force *Report on Ports and Ocean Transportation*, draft dated Dec. 1, 1980, p. V-51.

⁵²*Ibid.* note 2, 5-16-5-17.

⁵³Interagency Coal Export Task Force Report on ports on *Ocean Transportation*, *ibid.*, p. V-60.

⁵⁴*ICE Report*, p. 1-19.

⁵⁵*Ibid.* See Federal Register, part VI, Department of Defense, Corps of Engineers, Department of the Army, "Proposal to Amend Permit Regulations for Controlling Certain Activities in Waters of the United States," Sept. 19, 1980, p. 62732.

⁵⁶S. 576 (Moynihan, Randolph), *Congressional Record*, Feb. 26, 1981.

⁵⁷*Ibid.*

⁵⁸E.g. S. 3247 (Warner, et. al.), S. 68 (Randolph), S. 202 (Hollings), H.R. 55 (Boggs).

⁵⁹CE Report, *ibid.*

⁶⁰Letter, Brent Blackwelder, Environmental Policy Center, to Senator Warner, Jan. 27, 1981.