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The Potential of the Port of New York in the Export/Domestic Coal Trade

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THE POTENTIAL OF THE PORT OF NEW YORK IN THE EXPORT/DOMESTIC COAL TRADE

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ABSTRACT

This paper researches the potential of the Port of New York in the Export/Domestic coal trade markets. The Port is faced with short-term and long-term proposals in order to enter these markets. On a short-term basis, the Port will be able to offer an advantage to export markets because of the backlog at the traditional coal ports of Hampton Roads, Baltimore, and Philadelphia. A modest export trade can develop this way. In the domestic trade, substantial inroads can be made due to the conversion of power plants in New England to coal-fired. In the long-term, the Port is faced with the primary issues of dredging, establishing a competitive freight rate, and environmental constraints. These particular issues must be resolved in order for the Port to effectively compete in the export markets. In the domestic markets, the Port must be able to provide a portion of the terminal for the coastal trade exclusively.

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CHAPTER ONE

TITLE The Potential of the Port of New York in the Domestic/Export Coal Trade

NATURE OF THE PROBLEM

Coal has recently emerged as a major energy commodity in the world energy picture. Its rapid climb to the top of the alternative fuel list has largely occurred because of escalating fuel prices and the uncertainty of foreign oil imports. Coal usage worldwide is expected to triple by the year 2000. 1/ With its vast and varied reserves of high quality coal, the United States will become a critical factor in the balance of world supply and demand.

Presently, U.S. East Coast ports equipped to handle large amounts of coal include Philadelphia, Baltimore, and Hampton Roads. These ports handle over 75% of all U.S. exports of bituminous coal. 2/ The projections for the amount of export coal needed by the year 2000 is substantially less than what U.S. port capacity can presently handle without immediate upgrading or construction of new facilities. 3/

OBJECTIVE OF THE STUDY

The Port of New York is among the many East Coast ports considering entry into the export coal market. The long dormant coastwise trade with the Northeast is also showing signs of revival. This paper will consider the feasibility of short-term and long-term proposals for the Port of New York to capture both domestic and export coal trade.

It will consider the overall benefits and advantages that these trades could provide for the port.

HYPOTHESIS

The Port of New York has the potential to attract a substantial portion of the domestic coal trade by expanding its present facilities. Its ability to capture a substantial portion of the export trade, on a long term basis, is highly dependent on the ability of the port to provide competitive freight rates and adequate handling facilities. It faces fierce competition from other East Coast ports with existing or potential coal facilities. In the short-term, it can provide an outlet for the backlog of ships presently in East Coast ports awaiting coal shipments.

Upgrading of coal facilities including the construction of a new coal terminal will serve a wide range of needs:

1. It will encourage the redevelopment of the domestic market
2. It can revitalize areas of urban decay or low usage.
3. It will stimulate a brand new export market.

METHODOLOGY

The primary analysis was accomplished using data from the U.S. Census Bureau for the current shipment of export coal from major East Coast ports. This will be compared with coal data from the World Coal Study (WOCOL). A second analysis assessed the regional demand for coal in the Northeast based on historical data from the U.S. Army Corps of Engineers (USACE), the U.S. Interagency Coal Export Taskforce (ICE), the U.S. Census Bureau,

and the New England Energy Congress (NEEC).

The proposals of the Port Authority of New York and New Jersey, and the New York City Department of Ports and Terminals were examined and incorporated in these analyses. A review of the present facilities of the Port of New York was included, and a final determination was made on how effectively the port will be able to handle the domestic/ export coal markets.

FOOTNOTES

CHAPTER ONE

1. Coal-Bridge to the Future. A Report by the World Coal Study. MIT, Cambridge, MA. Ballinger Publishing Co., May 1980. 247 pp. (Hereafter referred to as WOCOL). p. 3.

2. U.S. Census Bureau figures, 1979.; Journal of Commerce, March 25, 1981, p. 1.

3. Interim Report of the Interagency Coal Export Taskforce, U.S. Dept. of Energy. Draft, January 1981. (Hereafter referred to as ICE), pp. 7, 82.; WOCOL, p. 180.

CHAPTER TWO

WORLD COAL DEMAND

Additional energy needs over the next twenty years can be provided for with a massive effort to expand present facilities worldwide for the production, transport, and use of coal. Industrial nations at the turn of the century depended upon coal as the dominant energy source. The discovery and exploration of large reserves of petroleum and natural gas during the early part of the 20th century contributed to the decline of coal as the dominant fuel source.

The modest increases in coal prices, the threat of oil embargoes, and the policy changes by nations dependent upon foreign oil imports has heralded the return to coal, in particular steam coal.

WORLD COAL STUDY

The World Coal Study (WOCOL) presents the world picture in an analysis of the world's energy needs, and ways in which coal can meet and support economic growth. Some of the major conclusions of this study are:

1. Coal can meet greater than 25 percent of the world's energy needs, even under moderate energy growth.
2. World coal production will need to triple in order to meet this demand.

3. Coal is cost-competitive with fossil fuels in industrial and and other consumption areas.
4. The need for capital investment to expand the production and transportation facilities in order to triple coal production and use, is within the capabilities of domestic and international markets. 1/

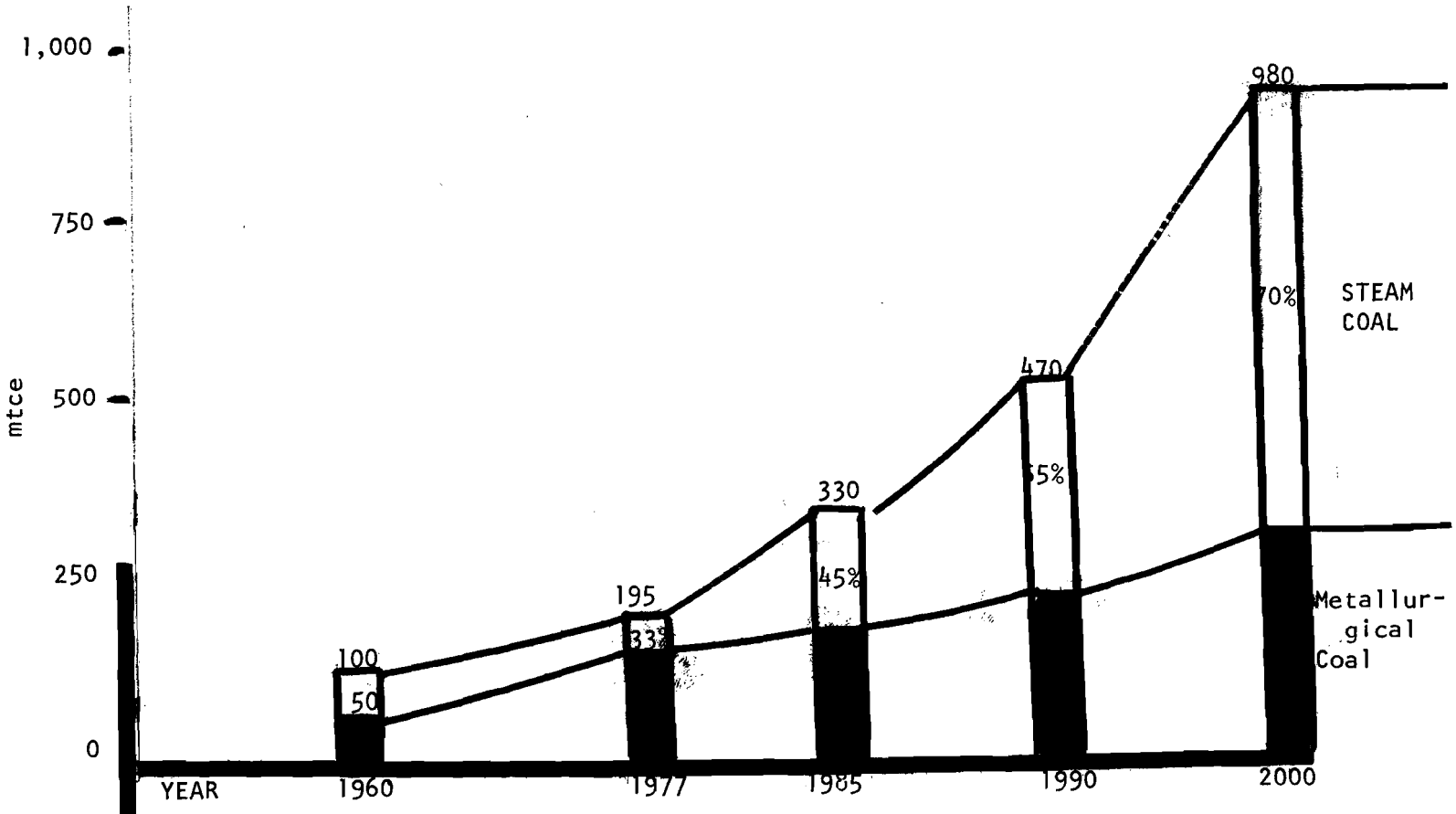
The emphasis of world coal demand has traditionally centered on metallurgical coal for use in steel and industrial sectors. Japan imports 25 percent of her total coal needs for coke needed in steelmaking from the United States. 2/ The shift in world coal markets has earmarked steam coal for use in utility power generation and other industrial purposes. Figure 2-1 illustrates this change. In 1960 the market demand was evenly divided between steam coal and metallurgical coal, each with about 50 percent of the total imports. Steam coal demand decreased to 33 percent of the import market due to conversions of many utilities to oil-fired stations. The steam coal demand begins a return to equal demand with metallurgical coal in the early 1980s and by the year 2000 is the dominant import market, with 70 percent of the total imports.

WORLD COAL RESERVES

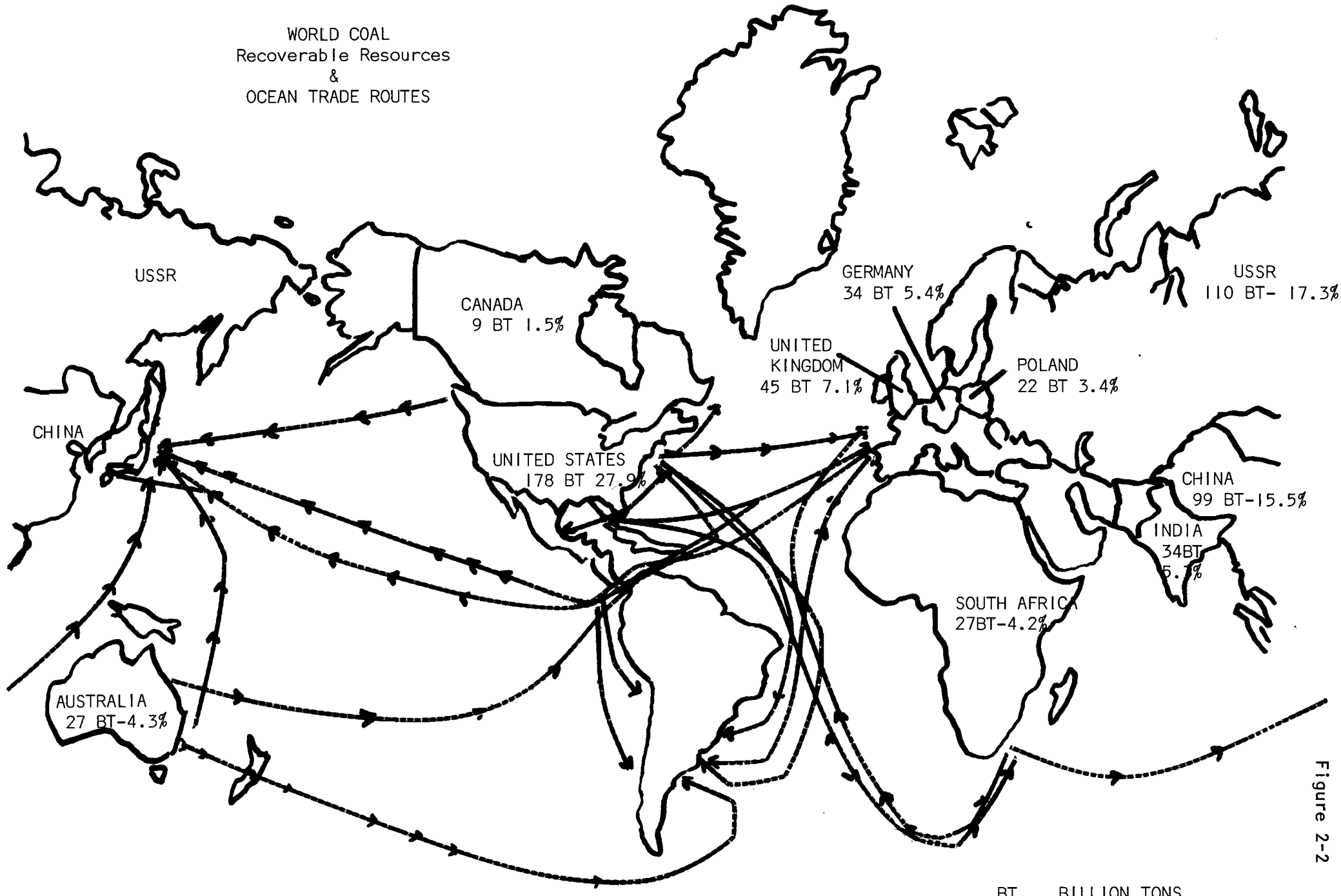
There is a more than substantial resource base on which to make the projections of import tonnage requirements noted in Figure 2-1. According to the World Coal Study, about ten countries account for 98 percent of total estimated production, and 90 percent of the total world reserves. Figure 2-2 depicts the total world coal recoverable reserves and major ocean trade routes.

FIGURE 2-1

WORLD COAL IMPORT REQUIREMENTS (1960-2000)
million ton coal equivalents (mtce)



Source: World Coal Study (WOCOL) Coal — Bridge to the Future. 1980



Source: Journal of Commerce
Coal Symposium Issue, American Association of Port Authorities
Mobile, Al Februare 22-25, 1981

Figure 2-2

The United States heads the list with 178 billion tons, or 27 percent of the total reserves. It amounts to over one-third of the world reserves. [3/] The Soviet Union is second with 110 billion tons, or 17.3 percent, and the People's Republic of China is third with 99 billion tons, or 15.5 percent. The most important fact to consider is that the Soviet Union and other satellite East European countries, particularly Poland, have recently restricted exports of coal to conserve their own supplies for domestic use. [4/] The People's Republic of China has also traditionally followed this policy. This leaves the United States in a satisfying position to supply much of the world's import requirements.

WORLD COAL DEMAND

The surge in coal exports worldwide by major exporting nations is demonstrated in Table 2-1. A statistical survey summarizes coal exports from nine major exporters from 1960 to 1979. The United States again leads with her major contribution being metallurgical coal. The shift in demand to steam coal has previously been noted and discussed. Poland, a major competitor to the U.S. was second based on these figures. In world export tonnage of coal for 1980, Poland has fallen behind in production levels to Australia, due to internal labor unrest and political difficulties with the Soviet Union. [5/]

The Republic of South Africa and Canada both show significant increases in coal exports over the 1960-1979 period. South Africa increased production from 1.7 million tons in 1970, less than one percent of the world total, to 25.8 million in 1979, or ten percent of the world

Table 2-1

WORLD COAL TRADE BY EXPORTER: 1960 TO 1979 *

Country	1960	1970	1975	1979
United States	38.0	71.7	66.4	66.0
Poland	19.3	31.8	42.4	45.6
Australia	1.7	20.2	33.5	44.4
U.S.S.R.	13.6	27.6	28.8	26.3
South Africa	1.0	1.7	3.0	25.8
Federal Republic of Germany	19.8	17.5	16.2	17.2
Canada	0.9	4.4	12.9	15.3
Czechoslovakia	2.4	3.1	4.0	4.1
United Kingdom	6.1	3.5	2.4	2.6
Subtotal	102.8	181.5	209.6	247.3
Other	10.5	4.9	2.9	5.1
TOTAL	113.3	186.4	212.5	252.4

*millions of short tons

Source: Interagency Coal Export Taskforce, January 1981

total. Canada increased exports from 4.4 million tons in 1970, less than one percent of the world total, to 15.3 million tons in 1979, or 7 percent of the world total. 6/

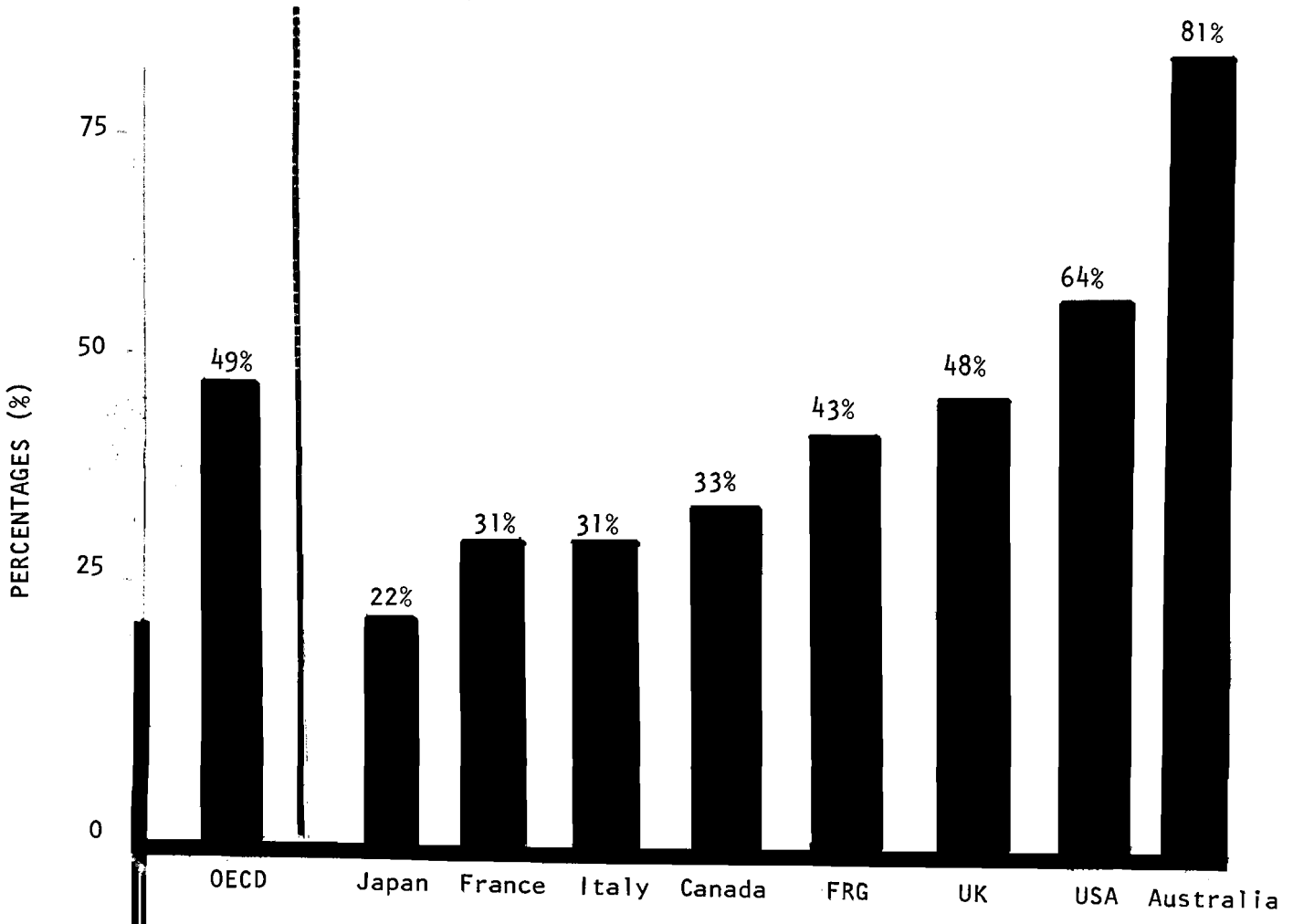
EXPORT POTENTIAL

The percentage of energy needs that is met by an increased use of coal can be illustrated in Figure 2-3. Australia, with 27 billion tons of coal reserves, or 4.3 percent of the world total, can meet 81 percent of her energy needs. The United States is second, meeting 64 percent of her energy needs. The United Kingdom is third, meeting 48 percent of her energy needs, having 45 billion tons of coal reserves, or 7 percent of the world's total. The United Kingdom is the only one of this group of three that is also meeting all of her own oil requirements and is exporting oil as well. 7/ The Organization for Economic Cooperation and Development (OECD) which is mainly composed of West European nations and the United States and Japan, will be able to meet 49 percent of that region's energy needs with coal. This is particularly important because of the region's dependence upon foreign oil imports. 8/

In order for coal to meet this demand, countries with large coal reserves and high production levels will need to expand their export capacities. The World Coal Study estimated this potential to the year 2000 (Figure 2-4). As expected, the U.S. could supply the greatest portion, with an export potential from 125-350 million ton coal equivalents (MTCE). Australia is second with an export potential from 160-200 MTCE; the Republic of South Africa from 55-100 MTCE; Canada from 22-67 MTCE; Poland 50 MTCE; the Soviet Union also 50 MTCE; and the People's Republic

Figure 2-3

COAL'S SHARE IN MEETING THE INCREASE IN ENERGY NEEDS-
Total OECD and Selected Countries (1978-2000)



Source: Coal—Bridge to the Future, World Coal Study 1980

of China 30 MTCE. [9] The bulk of growth in coal exports is expected to come from the United States, Australia, and the Republic of South Africa. Within these three countries is 75 percent of the total world export potential. The supplies of coal for international trade to the year 2000 will be dominated by the developed countries in contrast to world oil trade, which will be dominated instead by the Organization of Petroleum Exporting Countries (OPEC), or developing nations.

Under present export capacities, world coal demand is only being satisfied. [10] With higher world market needs, heavy pressures will fall on the major coal exporters, particularly Australia and the United States. Figure 2-5 shows excess requirements in the year 2000, and importer preferences. The preference for U.S. imports is less than the preference for Australian imports, although U.S. potential is much greater than Australia's. Reasons for importer preferences for Australian coal exports will be discussed further in Chapter Three.

FOOTNOTES

CHAPTER TWO

1. WOCOL, p. xvi

2. U.S. Census Bureau figures, 1980

3. WOCOL, p. 161.

4. ICE, p. 54.

5. ibid.

6. For the years 1960, 1975, 1979: Coal International, 2:7 p. 16.
For 1970: International Coal Trade, 44:11 p. 18.

7. Journal of Commerce, February 17, 1981 p. 15B.

8. WOCOL, p. 103-104.

9. ibid. p. 110.

10. ibid. p. 115.

CHAPTER THREE

THE ROLE OF THE UNITED STATES IN WORLD COAL DEMAND

INTRODUCTION

In the same manner as the World Coal Study, the Interagency Coal Export Taskforce (ICE) has reviewed the capacity of the United States to participate in the expanding world export coal trade. The purpose of the taskforce was to provide and report on possible courses of action to the President. A brief summary of their conclusions include:

1. The United States has ample coal reserves and the technology to meet increasing export coal demands.
2. Increasing U.S. steam coal exports are not expected to have an effect on coal prices.
3. Inland transportation facilities, rail, and barge networks can be expanded to meet increasing demands.
4. Coal slurry pipelines appear technologically and economically feasible.
5. Existing U.S. coal port terminals are currently strained because of an increase in U.S. coal exports.
6. All bulk carriers shipping U.S. coal overseas are foreign owned, built, and manned. 1/

ROLE OF THE U.S. MARITIME INDUSTRY

The U.S. maritime industry views the increase in coal exports as a a key to the rejuvenation of U.S. shipbuilding, shipping markets, port

development, and the inland and coastal waterway system. [2/] Enormous problems face the U.S. port industry in its attempt to cash in on the burgeoning demand for steam coal. [3/] These problems include restrictive channel depths, inadequate or antiquated cargo loading and handling facilities, and a slow delivery system that was meant to handle metallurgical coal. [4/] These factors have created a bottleneck at the nation's major coal ports on the East Coast. [5/]

Additional problems include: 1. the competition from other major exporting nations such as Australia, Poland, the Republic of South Africa, and Canada seeking to provide service while the United States battles with with current situation at its own ports; and 2. the reliability of the United States as a foreign export market. U.S. coal miners have consistently struck every three years over contract settlements. [6/] Concerns over oil cartels have strengthened the resolve of many nations to end dependence on foreign oil. The uncertainty of reliable U.S. coal markets could shift world demand to other markets. [7/]

Figure 2-2 in Chapter Two showed the major ocean trade routes. The North Atlantic trade route is considered to be one of the essential trade routes for the U.S. [8/] United States East Coast ports presently face heavy competition in the European import market from Canada and South Africa. [9/] Asian buyers have preferred South African coal due to lower rates available, with Australian coal second choice. [10/]

UNITED STATES ROLE

The United States has been projected, by the World Coal Study, to provide a substantial portion of the export coal market. This is also

substantiated in the ICE report:

1. Europe represents the largest market
2. The United States can provide competitive pricing with Australia although South African rates would be lower. 11/

PRESENT UNITED STATES COAL TRAFFIC

Table 3-1 is a statistical survey of U.S. bituminous coal importers from 1978 to 1980 (January to September figures). The total tonnage expected for 1980 was estimated to be approximately 75 million metric tons 12/ This is quite a substantial tonnage change from 10.61 million metric tons in 1978, and 55.7 million metric tons in 1979. 13/ The major importers were the developed nations, with Japan importing 25 percent in both 1979 and 1980. Canada is the second largest importer, mainly importing steam coal. The only members of OPEC importing coal from the U.S. is Saudia Arabia and the United Arab Emirates.

The percentage of steam coal exported by the U.S. in 1979 was 2.5 million metric tons. Figure 3-1 shows recent U.S. steam coal exports and projections to the year 2000. The increase in tonnage from 1980 to 2000 phenomenal. This coincides with the earlier projections in Figure 2-1 for the percent change in imports of steam coal vs metallurgical coal.

Valid concerns by the U.S. port industry point to overexpansion, which may result due to increasing world demands. 14/ The following chapters will discuss the role of U.S. ports with a regional analysis, a look at the coastwise movement of coal, and the role of the Port of New York.

Table 3-1

IMPORTER of US Bituminous Coal *

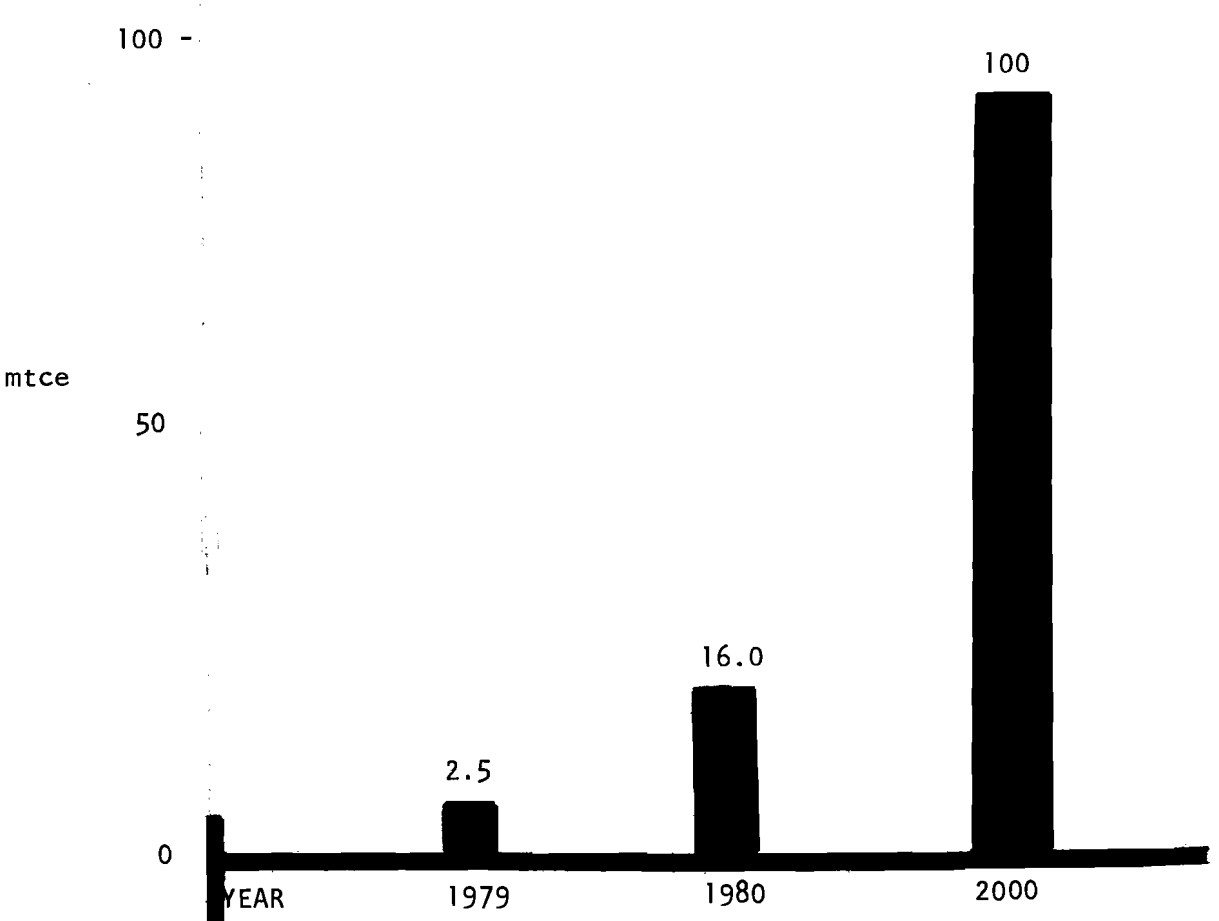
Importing Country	1978		1979		1980 Jan-Sept	
Japan	.19	1.7	13.4	24	14.3	25
Canada	10.3	97.0	16.8	30	10.8	19
France	.03	.2	3.2	5	5.5	9
Italy			4.3	7	4.4	7
United Kingdom	.05	.4	1.0	1	3.1	5
Netherlands	.04	.3	1.7	3	2.9	5
Belgium			2.9	5	2.8	5
Spain			1.2	2	2.1	3
Brazil			2.6	4	2.0	3
West Germany			2.1	3	1.4	2
Romania			.56	1	.97	1.6
Denmark			.11	1	.88	1.5
Sweden			.67	1	.71	1.2
Yugoslavia			.51	1	.70	1.2
Turkey			.76	1	.69	1.1
South Korea			.71	1	.59	1.0
Argentina			.61	1	.55	1
Egypt			.56	1	.53	1
Mexico			.45	1	.47	1
Algeria			.09	1	.43	1
Chile			.09	1	.38	1
Taiwan			.28	1	.32	1
Portugal			.28	1	.23	1
Norway			.17	1	.21	1
Ireland			.22	1	.19	1
Albania			.18	1	.11	1
Finland			00		.08	1
Greece			00		.04	1
Switzerland			00		.03	1
Peru			.05	1	.03	1
East Germany			.04	1	.008	1
Venezuela			00		.003	1
United Arab Emirates			00		.001	1
Saudi Arabia			.0004	1	.00006	1
Dominican Republic			00		.00002	1
South Africa			00		.00001	1
Guatemala			00		.00001	1
Netherland Antilles			00		.000003	1
Iceland			00		.000002	1
Panama			00		.000002	1
TOTALS	10.61		55.7		57.5	

* Million Metric Tons (rounded numbers)

Source: U.S. Census Bureau, 1979, 1980
Journal of Commerce Monthly coal export summary figures: February, March 1981

Figure 3-1

United States Steam Coal Exports
(mtce)



Source: 1979, 1980 Figures from U.S. Census Bureau
2000 from WOCOL

FOOTNOTES

CHAPTER THREE

1. ICE, p. 63.

2. Sherman, R.B., 1980. The Future of U.S. Energy Ports, American Assoc. of Port Authorities. July 1980.

3. Fairplay International Shipping Weekly, Port Management. 18th/25th December, 1980. p. 14. (Hereafter referred to as Fairplay).

4. ICE, p. 82.

5. ICE, p. 7.; Fairplay 5th March 1981, p. 15; Journal of Commerce March 4, 1980. p. 11B.

6. ibid, Journal of Commerce.

7. Coal Outlook, February 25, 1981, p. 3.; Journal of Commerce May 15, 1980, p. 9; Journal of Commerce June 30, 1980, p. 8A.

8. Kendall, L.C., The Business of Shipping, 3rd edition., Cornell Maritime Press, Inc.,MD, 1972. p. 3.

9. WOCOL, p. 179.

10. ibid, p. 174.

11. ICE, p. 93.

12. At the time of this writing, the U.S. Census Bureau had only raw data available for up to October, 1980. The Journal of Commerce will be publishing complete data on 1980 coal tonnage by June, 1981.

13. U.S. Census Bureau, 1979, 1980.

14. supra, note 3., p. 15.

CHAPTER FOUR

UNITED STATES EAST COAST PORTS: THEIR PRESENT ROLE AND FUTURE REQUIREMENTS

INTRODUCTION

For thirty years the United States has been the world's leading coal exporter. Under current projections by the World Coal Study for the doubling of coal use by 1990 and a tripling by the year 2000, U.S. ports will need to upgrade, expand, or construct new facilities to handle and retain the lead in coal exports. 1/ East Coast ports are in many instances served by obsolete facilities and are generally unsuited for modern transoceanic coal trade. Their facilities, built to handle coking coal for metallurgical purposes are quite inadequate for the new surge in steam coal exports. 2/ East Coast ports, as well as other ports in the United States will need to accomodate larger vessels with deeper drafts. Draft restrictions are the most limiting factor in determining ship size. Ship characteristics for the coal trade, as in other services, are directly related to the requirements and constraints of the total transport system, particularly port and terminal characteristics. 3/

Other problems hindering port expansion include the need for capital investment. 4/ Investors waiting for demand to materialize are not supportive of port requests for speed in the planning process. 5/ Ports however are preparing in characteristic American fashion and many have prepared or completed feasibilities studies. 6/

EAST COAST PORT CAPACITY

Table 4-1 outlines current capacities and potential of U.S. ports, in terms of export coal. On the East coast the primary export port is Hampton Roads, with a 45-foot water depth, corresponding to a maximum deadweight capacity of conventional bulk carriers of about 80,000 tons. [7/] Coal export terminals are also highly developed at Baltimore, and the ports which serve the U.S. Great Lakes: Ashtabula Conneaut, and Toledo. [8/] Existing ports that may eventually serve as major coal export terminals are New Orleans and Houston on the Gulf Coast, where maximum water depths are approximately 40 feet, corresponding to a maximum deadweight capacity of about 60,000 tons. [9/] Terminals in Californian ports will probably be able to accomodate conventional bulk carriers in excess of 100,000 dead-weight tons (dwt) capacity, corresponding to drafts of about 50 feet. [10/]

Potential coal terminal sites include the Port of New York with a maximum water depth of 45 feet corresponding to a maximum dwt capacity of about 80,000 tons, on the East Coast. The East Coast region contributes the greatest amount of tonnage moved in the present coal export market. Table 4-2 indicates coal movement by region. The East Coast will continue to remain a lucrative export market primarily due to the European market demand discussed earlier.

PORT EXPANSION PROJECTS

Table 4-3 is a statistical survey of U.S. bituminous coal exports by individual port for 1979 and 1980 (January to October figures). [11/] Seventy-five percent of total export traffic is handled by the East

Table 4-1

EXISTING AND POTENTIAL EFFECTIVE CAPACITY FOR HANDLING EXPORT COAL AT U.S. PORTS

(millions of short tons)

Port/Terminal	Vessel Size (DWT) Existing	Vessel Size (DWT) Proposed	Existing Capacity (10^6 tons) Designed	Existing Capacity (10^6 tons) Effective	Capacity Expansion (10^6 tons) Planned	Capacity Expansion (10^6 tons) Underway	Total Mid to Long-Term* Effective Capacity, 1985 (10^6 tons)
East Coast							
New York, New York (P)	80,000				5.0		5.0
Philadelphia-Pier 124 (E)	60,000		5.0	2.5		6.5	9.0
Camden, New Jersey (P)	35,000				2.0		2.0
Wilmington, Delaware (P)	30,000				7.5		7.5
Lower Delaware Bay (P)	100,000+				10.0		10.0
Baltimore (E)	70,000	100,000+	27.2	16.6	11.0	6.5	34.1
Norfolk-Pier-6-North (E)	80,000	100,000+	58.0	29.0	7.3		36.3
Pier-5-South (E)			8.0	4.0	1.0		5.0
Newport News-Pier 14 (E)	80,000	100,000+	33.0	16.5			16.5
Pier 15 (E)			14.6	5.3		5.0	10.3
Pier 9 (E)					5.0		5.0
Portsmouth (P)	50,000	100,000+			10.0		10.0
Morehead City (P)	50,000	100,000+			5.0		5.0
Charleston (P)	40,000	50,000			5.0		5.0
Savannah (P)	50,000	70,000			7.5		7.5
Brunswick (P)	30,000	43,000			5.0		5.0
Total East Coast			145.8	73.9	81.3	18.0	173.2
Gulf Coast							
Mobile (E)	60,000	100,000+	11.0	5.5		5.0	10.5
New Orleans-Davant (E)	60,000	100,000+	14.0	7.0	3.0		10.0
Myrtle Grove (E)	60,000	100,000+	6.0	3.0	9.0		12.0
Mile 118 (P)	60,000	100,000+			4.0		4.0
Baton Rouge (Burnside) (E)	60,000	100,000+	5.0	2.0	4.0		6.0
Port Arthur (P)	60,000	100,000+			2.0		2.0
Galveston (P)	55,000	100,000+			10.0		10.0
Corpus Christi (P)	75,000	100,000+			0.5		0.5
Total Gulf Coast			36.0	17.5	32.5	5.0	55.0
West Coast							
Los Angeles (E)	100,000+		4.0	1.5	7.5		9.0
Long Beach (E)	100,000+		4.0	1.5	5.0		6.5
Sacramento (P)	30,000	40,000			1.2		1.2
Stockton (P)	35,000	40,000			1.2		1.2
Astoria (P)	50,000				5.0		5.0
Portland (P)	55,000				3.0		3.0
Coos Bay (P)	35,000				3.0		3.0
Kalama (P)	50,000				7.5		7.5
Bellingham (Cherry Point) (P)	100,000+				1.2		1.2
Dupont, Washington (P)	100,000+				3.0		3.0
Grays Harbor (P)	40,000	60,000			3.0		3.0
Anchorage (P)	100,000+				3.0		3.0
Trading Bay (P)	100,000+				3.0		3.0
Total West Coast			8.0	3.0	46.6		49.6
Total United States			189.8	94.4	160.4	23.0	277.8

(E) Existing Facility
(P) Potential Facility

Source: Maritime Administration. The columns showing capacity expansion and effective capacity are not dependent upon the deepening of channels at the respective ports; however, the column showing proposed vessel size is dependent upon the completion of dredging projects.

* Based on survey of U.S. ports, using 1985 as nominal date for mid- to long term coal port development plans.

Table 4-2

US REGIONAL PORT BITUMINOUS COAL EXPORTS *

Region	1979	% of total	1980 (Jan-Oct)	% of total
East Coast	36,891,977	66.2	54,004,108	73.1
Gulf Coast	2,054,471	3.7	5,048,981	6.8
Great Lakes	16,776,324	30.1	14,090,857	19.2
West Coast	00	-	708,805	.9
TOTAL	55,722,770		73,862,258	

*metric tons

Source: U.S. Census Bureau, 1980

Table 4-3

UNITED STATES BITUMINOUS COAL EXPORTS *

U.S. Port	1979	%	1980 Jan-Oct	%
Ashtabula Conneaut	10,738,833	19	8,286,369	11
Baltimore	7,269,373	13	10,063,733	14
Chicago	00	0	6,743	1
Corpus Christi	00	0	53,436	1
Galveston	00	0	3,513	1
Gramercy	00	0	117,254	1
Gulfport	00	0	05	1
Houston	268	1	94	1
Long Beach	00	0	172,201	1
Los Angeles	00	0	536,604	1
Miami	00	0	408	1
Mobile	861,475	1.5	1,993,663	2.6
New Orleans	1,192,728	2.1	2,664,494	3.6
NEW YORK	207	1	2,843	1
Newport News	7,378,044	13	14,629,401	20
Norfolk	22,194,779	40	28,154,316	38
Oakland	00	0	23	1
Pensacola	00	0	138	1
Philadelphia	49,572	1	1,153,815	1.5
Port Huron	1,222	1	5,573	1
Richmond/Petersburg	00	0	47,474	1
San Juan	00	0	00	0
Sandusky	2,674,228	5	2,873,203	3.8
Savannah	00	0	272	1
Seattle	00	0	61	1
St. Rose	00	0	168,910	1
Toledo	3,362,041	6	2,925,712	3.9
*Totals	55,722,770		73,862,258	

*Metric tons

Source: U.S. Census Bureau, 1980

Coast ports of Newport News and Norfolk (together, known as Hampton Roads), Baltimore, and Philadelphia. These three ports along with the Port of New York are considering new or expanded coal facilities.[12/] Gulf Coast ports considering expansion include Mobile and New Orleans. [13/] Table 4-4 details current expansion projects in terms of dredging requirements, and disposal constraints. The particulars of the Port of New York will be discussed in Chapter Six.

The dredging of navigable channels and rivers has been the task of the U.S. Army Corps of Engineers since the passage of the 1889 Rivers and Harbors Act. Under current proposed budget cuts, this task may fall to individual states or ports; and user fees at individual ports may result. [14/]

CHANGES IN U.S. POLICY

While there is no national port policy, the recent bill introduced to Congress by Warner (D-VA) is designed to pinpoint certain ports for priority dredging to meet expansion requirements. These ports are Hampton Roads, Mobile, and New Orleans. [15/] Factors leading to the formulaton of this bill include the substantial delays in the permitting process under current U.S. Army Corps regulations. The controversial Donnelly amendment recently passed allows U.S. flag vessels to move ahead of foreign-flag vessels in bulk ports. It cuts down on the costly demurrage fees that are estimated between $10-20 dollars per ton in Hampton Roads. [16/] This bill was passed to encourage the buildup of the U.S. merchant fleet.

PRIORITIES

The role of the federal government in promoting and even financing the expansion of U.S. ports in the export coal trade is a critical one. Ports are becoming more aware that the role of promotion and investment, which was traditionally left to the shippers and the carriers, needs to be developed by the port itself. The ultimate goal requires increased dialogue between all interests involved: 1. the Federal government; 2. the coal operators; 3. labor; 4. the carriers; and 5. the public port authorities. These measures should insure that the needs of foreign buyers are met in the United States and not elsewhere.

FOOTNOTES

CHAPTER FOUR

1. WOCOL, p. 3.

2. ICE, p. 83.

3. Critical Issues in Coal Transportation Systems. Proceedings of Symposium Maritime Transportation Board, National Academy of Science, Washington, DC, 1979. (Hereafter referred to as Coal Symposium), p. 105.

4. Fairplay, 18th/25th December 1980. p. 15; WOCOL, p. 180,; Journal of Commerce February 18, 1981. p. 15B.

5. Fairplay, ibid, p. 15.

6. ICE, pp. 7,9.

7. Coal Symposium, p. 105.

8. ibid, p. 105.

9. Fairplay, supra, note 4, p. 13.

10. supra, note 3.; Journal of Commerce, February 19, 1981, p. 1.

11. U.S. Census Bureau,1979, 1980.; Journal of Commerce, March 25, 1981, p. 1.

12. Journal of Commerce, May 13, 1980, p. 12; June 30, 1980, p. 9A.

13. supra, note 5.

14. Journal of Commerce, Special Coal Sumposium Issue, February 17, 1981.

15. Journal of Commerce, February 19, 1981, p. 15; New York Times, April 10, 1981, p. 22.

16. Journal of Commerce, February 19, 1981, pp. 35, 36.

CHAPTER FIVE

COASTWISE COAL MOVEMENT: NORTHEAST REGIONAL DEMAND

INTRODUCTION

Transportation by water is the least expensive way to ship coal. The Interstate Commerce Commission (ICC) reports that the waterways industry is about the smallest of all the transportation modes, receiving about 1.3 percent of all transportation revenues nationwide, yet carrying about 16 percent of all the nation's ton-miles of transportation. 1/ The inland waterway system is a network of over 25,000 miles of navigable waters. Added to this network are the Great Lakes and the coastal waterways. This chapter focuses on coastwise movements of coal to New England.

HISTORICAL MOVEMENT OF COAL

More than any other region, the well being of the Northeast has been influenced by its relationship with the sea. The coastwise trade of anthracite and bituminous coal has declined since the early 1960s. 2/ A historical summary of the domestic receipts of coal by New England ports from 1935-1978 is presented in Table 5-1. The decline of receipts to zero tonnage in 1978 was due in part to the conversion of railroads from steam to diesel, and the surge in industrial and domestic fuel use. The number of ports receiving coal shipments totaled 47 in 1935. This declined to 19 in 1953, and 11 in 1975. Commercially active ports

Table 5-1

HISTORICAL DATA

COASTWISE RECEIPTS OF COAL AT NEW ENGLAND PORTS 1935-1978
(Short Tons)

DATE	ANTHRACITE	BITUMINOUS	TOTAL
1935	820,799	11,065,829	11,886,628
1946	376,647	12,430,552	12,807,199
1950	169,670	7,531,795	7,701,465
1955	32,955	7,226,271	7,259,226
1960	---	5,320,369	5,320,369
1965	---	6,842,137	6,842,137
1970	---	1,478,392	1,478,392
1975	---	319,624	319,624
1976	---	73	73
1977	---	15	15
1978	---	---	---

Source: U.S. Army Corps of Engineers, 1979

today in New England are Bucksport, Searsport, Portland, Portsmouth, Salem, Boston, Fall River, Providence, New London, Bridgeport, and New Haven. 3/

POWER PLANT CONVERSION

In 1978, Congress created a program for the expanded use of coal and other alternative fuels as primary energy sources for electric and non-electric power plants, and major fuel-burning installations, in the Power Plant and Industrial Fuel Use Act. 4/ The provisions in this act are designed to curtail the use of petroleum and natural gas to promote other fuel sources.

A most important feature in the increase and rejuvenation of the coastwise trade is that a number of New England power stations are located on navigation channels, receive fuel by water, and have previously burned coal. 5/ Table 5-2 indicates the location and physical features of these ports. A projection of regional coal demand by the New England Energy Congress (NEEC), in Table 5-3, indicates the amount of coal that could be moved to New England by water if a number of these power stations were converted to coal. 6/

The Brayton Point Power Plant, in Somerset, MA is the largest electric generating facility in the region. It began burning coal as of March 1980, and expects to convert three of four generators to coal-fired. 7/ Future plans include the construction of a coal burning, coal collier that will carry 36,000 tons of coal for use by the facility. It is expected to be ready in 1983. 8/

Table 5-2

NEW ENGLAND POWER STATIONS LOCATED AT TIDEWATER

Company and Plants	Location	Fuel Burned	Method of Delivery
Connecticut Light and Power Co.			
Devon Plant	Devon, CT	Oil	Housatonic River
Montville Plant	Uncasville, CT	Oil	Thames River
Norwalk Harbor Plant	Norwalk, CT	Oil	Tidewater
Hartford Electric Light Co.			
Middletown Station	Middletown, CT	Oil	Connecticut River
United Illuminating Co.			
English Plant	New Haven, CT	Oil	Pipeline
Steel Point Plant	Bridgeport, CT	Oil	Barge
Bridgeport Harbor #1	Bridgeport, CT	Oil	Barge & Tankship
New Haven Harbor Plant	New Haven, CT	Oil	Barge
Boston Edison Co.			
Mystic Plant	Everett, MA	Oil	Tidewater
New Boston Plant	South Boston, MA	Oil	Tidewater
New England Power Co.			
Salem Harbor Station	Salem, MA	Oil	Tidewater
Brayton Point Plant	Somerset, MA	Oil/Coal	Barge & Bulkship
Montaup Electric Co.			
Somerset Plant	Somerset, MA	Oil	Taunton River
Canal Electric Co.			
Canal Plant	Sandwich, MA	Oil	Tidewater
New Bedford Gas & Edison Light Co.			
Cannon Street Plant	New Bedford, MA	Oil	Tidewater
Narragansett Electric Co.			
Manchester Plant	Providence, RI	Oil	Tankship
South Street Plant	Providence, RI	Oil	Tankship
Public Service Co. of NH			
Schiller Station	Portsmouth, NH	Oil	Tankship
Newington Plant	Portsmouth, NJ	Oil	Tankship
Central Maine Power Co.			
Mason Plants #1,2,3,&4	Wiscasset, ME	Oil	Tidewater
Yarmouth # 4	Yarmouth, ME	Oil	Tidewater

Source: American Association of Port Authorities, Research Report, 1980

Table 5-3

NEW ENGLAND REGIONAL COAL DEMAND *

YEAR	MILLION TONS	% of TOTAL ENERGY
1980 **	1.0	1.0
1985 [a]	8.4	6.7
2000 [b]	10.0	8.0 [b]

* short tons
** projected

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a includes reconversion of 11 utility boilers under DOE prohibition orders and 7 boilers with notices of intent

b projected - does not include the potential reserves in the Narragansett Basin of Massachusetts and Rhode Island

Source: New England Energy Congress, Executive Summary. 1979

PROBLEMS AND PRIORITIES

Waterways carry about 125 million tons of coal, roughly 20 percent of the nation's production. This share is increasing, and substantial growth needs to take place in the next decade. 9/ Long-distance coal movements heighten the importance of reliable, low-cost water carriers. Barging is a very competitive industry. 10/ Because of the inherent cost advantage of barging over other transportation modes, the shipper or the electricity user gets the benefit. To use low-cost barge transportation, it will be necessary for all future plant facilities to locate on navigable waterways. This provides savings in transportation costs and flexibility in inland sources of coal. 11/

The future development of coal movement by barges is limited unless workable quidelines are instituted. Current congestion at ports that have traditionally catered to the domestic trade, such as Hampton Roads limit the number of callings that can be made. Port expansions underway throughout the U.S. are targeted towards the export trade, not the coastal trade. The solution to this problem is the provision of loading terminals devoted exclusively to coastal movements. This is one of the many options open to the Port of New York.

FOOTNOTES

CHAPTER FIVE

1. Coal Symposium, p. 189.

2. Sherman, R.B., 1980. The Coastwise Movement of Coal to New England, American Association of Port Authorities, May 1980. p. 4.

3. ibid, p. 8.

4. ibid, p. 2.

5. supra, note 1. p. 193.

6. Executive Summary and Recommendations, Final Report of the New England Energy Congress. May, 1979. (Hereafter referred to as NEEC), p. xxii.

7. Providence Journal, April, 10, 1981 p. 13.

9. Providence Journal, March 3, 1981; April 10, 1981. p. 13.

8. Personal communication, Ken Stanley, Providence and Worcester Railroad, May 5, 1981.

10. supra, note 1. p. 189.

11. ibid, p. 189.

12. ibid.

CHAPTER SIX

THE POTENTIAL OF THE PORT OF NEW YORK IN THE DOMESTIC/EXPORT COAL TRADE

INTRODUCTION

The previous chapters have highlighted the shift in world demand to steam coal, the role of U.S. Ports, regional demand, and the coastwise trade. New York is faced with possible entry into two markets; domestic and export, both of which have various short-term and long-term measures. The administrative agency for the entire Port is the Port Authority of New York-New Jersey, created in 1921 under a bi-state compact. [1/] It comprises a radius of over 25 miles. The New York City Department of Ports and Terminals is responsible for a large portion of New York City's urban waterfront. Investment and urban waterfront renewal projects are a few of the many concerns of this agency. These two agencies each have important roles in the promotion of the steam coal trade in New York.

COAL MOVEMENT THROUGH NEW YORK

In the early 1960s, nine million tons of coal were moved mostly in domestic trade, through four railroad owned piers in New York Harbor. [2/] In 1980, less than one million tons moved through the one active coal terminal in the Harbor, Port Reading. [3/] Port Reading was constructed in 1917, and partially rebuilt in 1951. [4/] It is located on the Arthur Kill, a narrow waterway dividing Staten Island and New Jersey (Figure 6-1).

KEY

a Greenville, New Jersey

b Jersey City, New Jersey

c Stapleton area - preferred site

* Midstream transloading area

—— Channel

Approximately 800,000 tons of coal were transported to Public Service Gas and Electric (PSE & G) in Kearney,NJ, in 1980. [5/] Another 250,000 tons of coal tailings were moved through a bulk facility in Newark for shipment to Korea. [6/] Port Reading is owned and operated by Conrail. [7/] The rail facilities connect New York with Appalachian coal supplies. Conrail has spent the last four years upgrading its services in preparation for increased coal transportation. [8/]

SHORT-TERM PROPOSALS

Proposals for domestic and export coal movements involve the use of the only active coal terminal presently in operation, Port Reading, NJ, or the reactivation of old Penn Central coal docks in South Amboy. These coal docks last shipped tonnage in 1970. [9/]

COASTWISE TRADE

New York can presently move bulk vessels with drafts of less than 35 feet, or use shallow coal barges to load from rail cars at Port Reading. Barge traffic could also move from the docks in South Amboy. [10/] Barging is competitive with other modes of transportation over long distances. [11/] The domestic trade is currently sluggish, but should expand as oil-fired utilities in New England begin overall conversion to coal-fired. New York could capitalize on the domestic trade with New England. The most important limiting factor is a competitive freight rate with the traditional coal port for domestic trade, Hampton Roads. This will be discussed further in this Chapter.

EXPORT TRADE

In the same manner as the domestic trade, Port Reading and South Amboy could be used to attract export coal buyers in the short-term. Vessels for transoceanic trade would need to be topped off in a mid-stream handling-transfer operation with clamshell bucket cranes from shallow water barges loaded at Port Reading or South Amboy. This transfer operation could conceivably occur in Newark or Pier 12 in Brooklyn (Figure 6-1). 12/ New York's primary advantage in the short-term is as an alternative to the delays which have occurred at the traditional coal ports, particularly Hampton Roads. Additional costs for the transfer from rail to barge to ship is estimated at approxiamtely $5/ton. 13/ This charge is cost-effective since demurrage charges add $10-20/dollars per ton as mentioned in Chapter Four. An additional alternative terminal area could be the McCormack Terminals also in South Amboy, utilizing similiar operations to those proposed for the short-term export coal trade. 14/

LONG-TERM PROPOSALS: DOMESTIC AND EXPORT MARKETS

Significant coal movements in any long-term proposals for the Port of New York are faced with several constraints. The primary issue is dredging. 15/ Ancilliary concerns include the competitive freight rate structure and environmental impacts. 16/

DREDGING

Vessels larger than 80,000 dwt need to be utilitzed for the Port of New York to effectively enter the long-term coal export markets. These larger vessels could carry coal to the European markets for $6/ton less

than vessels half the size. [17] The main channel (Ambrose Channel), and other access channels would have to be dredged to 60 feet to achieve these economies of scale. The current channel depth is 45 feet. [18] New York is currently conducting a feasibility study on this project. Processing of permits and federal financial aid to the project are two immediate concerns. Recent legislation introduced by Senator Moynihan (D-NY) to expedite dredging along with companion legislation in the House should benefit and promote a fairer dredging policy, rather than the current trend which favors the Southern ports. [19]

New York has another advantage over the ports of Baltimore, Philadelphia, Mobile, New Orleans, and Hampton Road because the New York dredging project is:

1. less expensive for initial dredging costs and maintenance,
2. able to find a suitable dredge disposal site [20]

The dredging of the Ambrose channel is crucial to the Port of New York for expansion. Most of the long-term proposals currently under study for the Port of New York call for a new terminal facility and deep water coal transfer area, in order to achieve economies of scale and more efficient throughput. [21]

PORT AUTHORITY OF NEW YORK-NEW JERSEY

The Port Authority of New York-New Jersey has examined the markets for steam coal, the transportation infrastructure from mine to harbor, channel deepening, site-selection processes, and environmental and economic impacts. [22] Their early conclusions indicate that a new coal transloading

facility is cost effective, if main and access channels are deepened in New Yord Harbor. [23] A recent study underway is determining preference citing of such a facility. Figure 6-1 indicated three sites out of a possible five that are being considered. The accompanying Key describes the areas. The preferred site is the Stapleton area of Staten Island, north of the Verrazano-Narrows Bridge. [24] This site would utilize part of the Chessie Rail system which moves across northern Staten Island. Rail cars carrying coal would move through the Arlington Rail year in northwestern Staten Island, or a link could be made through Port Reading. [25]

NEW YORK CITY DEPARTMENT OF PORTS AND TERMINALS

The New York City Department of Ports and Terminals is also examining the feasibility of a new transshipment terminal in Staten Island. Their study utilizes a new and different technology presently available: a coal slurry pipeline system. This system would move coal from rail cars brought either to the Arlington yards or Port Reading via a water slurry system, to a new trans-loading facility located in Stapleton. [26] The majority of the waterfront pier structures still in existence in the Stapleton area in Staten Island are owned by the City of New York. The water source for the slurry pipeline is the effluent from the sewage treatment plant, located in north central Staten Island. Using the effluent from the plant as the primary water source would alleviate demands on the industrial water supply of the area. [27] Coal slurry pipelines would add between $0.15 and $0.50 to the cost per ton of coal shipped from the new facility, using this type of technology. [28]

ANCILLIARY ISSUES:

1. Competitive Freight Rates

The market for steam coal is determined by the delivered cost per ton of the coal at its destination point. This final cost is in turn determined by a combination of the production costs. Production costs include among other things, inland transportation costs. Steam coal markets were geographically limited in comparison with metallurgical coal markets because of low demand relative to production capacity, and a widely distributed resource base. 29/ Steam coal users in the United States purchase 25 percent or more of their supplies on the spot market or on short-term (1-2 years) contracts. 30/ This market will begin to change in the next five years.

Transportation costs, both inland and maritime, play a large role in determining the geographic extent of coal markets, and coal's competitiveness with other fuels. In domestic markets, coal is bought at the mine and contracted by independents for rail, barge, or truck transport. Coal mine operators had little to no control over inland transportation costs. Rail system rates are regulated by the government. Of particular concern now is the capacity of rail lines to handle the increased coal production for export and the increased freight rates for hauling coal as the demand increases.

Short-term prices for coal can vary substantially from long-term prices. Spot market prices vary with the rise and fall of short-term supply and demand elasticities. This eventually causes increased production by suppliers, and leads to the elimination of the short-term advantage. Long-term coal costs will increase due to:

1. Development of new modern coal mining facilities;
2. New health and safety requirements;

3. Rising costs of labor. 31/

These costs will be balanced by economies of scale in the use of larger coal colliers, and increased productivity.

New York's advantage in the short-term due to the delay at other coal ports will not cause severe price increases per ton. In the long-term New York will need to load at least 10,000 to 50,000 tons of coal/day and offer a competitive freight rate. 32/ The extra milage in the hauling of coal will be a factor along with a dumping fee as the coal is transferred from barge to ship. Table 6-1 shows estimated rail line haul rates from various coal production sites to North Atlantic ports. As noted in this Table, New York prices are higher than other coal ports by several dollars. This price increase can be offset by the use of larger vessels which cannot be accomodated at the other coal ports in the Northeast without dredging. 33/

II. Environmental Concerns

There are many uncertainties about environmental impacts from the emmissions from coal combustion. The WOCOL Study lists four observations:

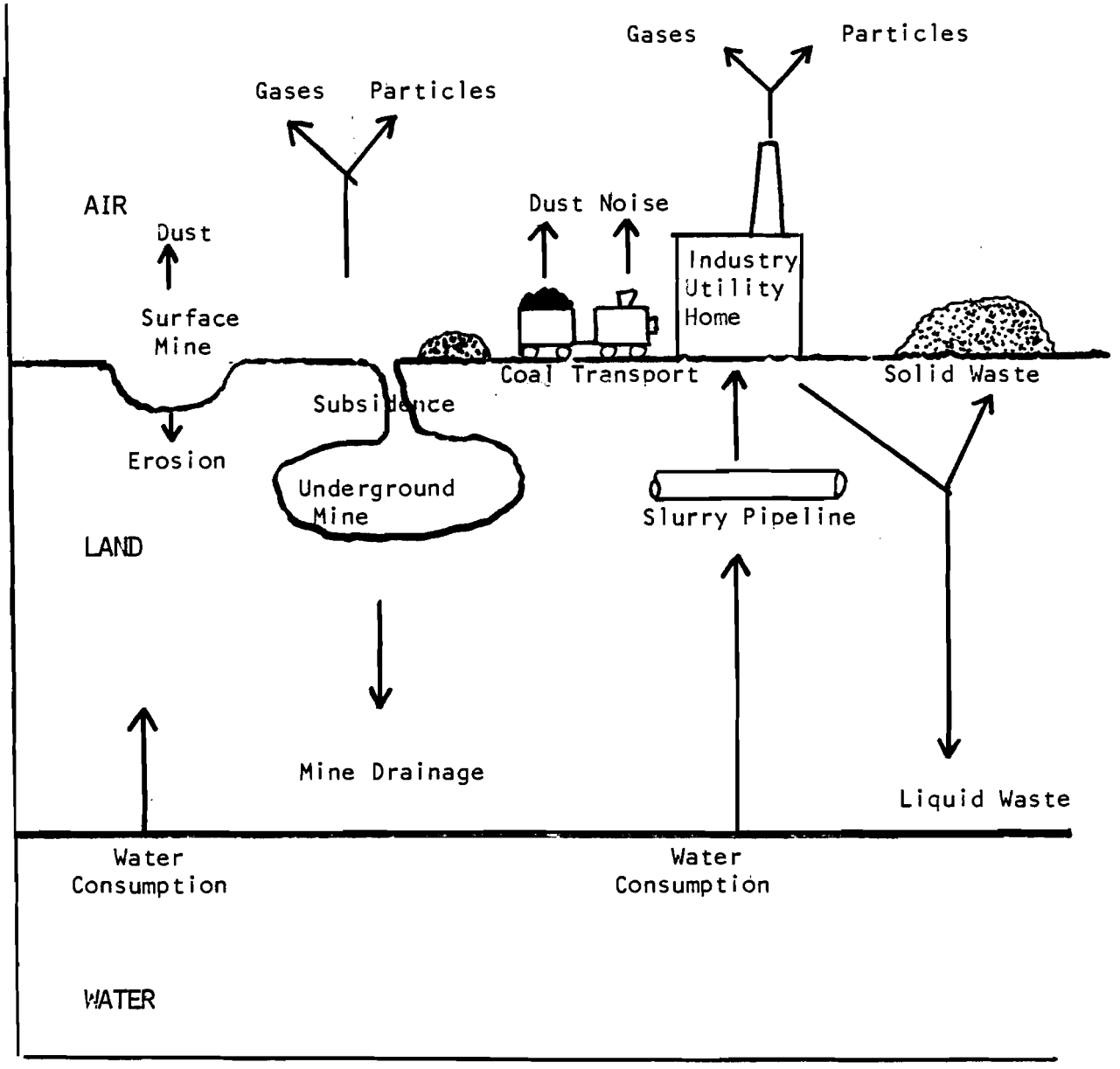
1. Most of the environmental risks are amenable to technological control.
2. Environmental impacts differ because of regional characteristics.
3. Joint issues need to be considered: long range transport of emmissions and the deposition of acid rain.
4. There is concern about carbon dioxide climate modification. 34/

Figure 6-2 illustrates some environmental disturbances from coal-related activities.

Controlling dust problems and water pollution from leaching at coal

Figure 6-2

ENVIRONMENTAL DISTURBANCES FROM COAL-RELATED ACTIVITIES



Source: Adapted from the Direct Use of Coal, Prospects and Problems of Production and Combustion; Washington, DC, Office of Technology Assessment, 1979, p. 184

storage piles at ports, and handling facilities can be done, with the use of better technologies in planning the terminals. [35] Additional costs would not be more than $0.05/ton of coal. Enclosed storage areas where needed could also be used more extensively. [36] Coal slurry pipelines eliminate dust, railroad noise and congestion, but require large quantities of water. Land requirements for either alternative in coal storage areas, or holding tanks in the slurry pipeline compete with the use of land for other purposes.

Con Edison has recently applied to the New York State Department of Environmental Conservation for permits to use coal at three generating stations in New York City. [37] This would require a change in present City laws. Savings for customers would be greater than $350 million annually.

The Port Authority of New York-New Jersey and the New York City Department of Ports and Terminals would be required to have permits issued for increased movements of coal through the harbor, and also for any new facilities. The amount of coal that has been projected to be handled by the port is between 10 to 20 million tons of coal by 1985 (Table 6-2). [38]

Chapter Seven will summarize the information presented in the previous Chapters, and discuss the conclusions reached in this research study.

Table 6-2

NEW YORK COAL EXPORT *

TYPE	1979	1980 Jan-Oct	1985 (projected)
Anthracite	55	198,260	-
Bituminous	207	2,842	10-20 million
Lignite	00	58	
TOTAL	262	203,141	

*metric tons

Source: Journal of Commerce, February 17, 1981

FOOTNOTES

CHAPTER SIX

1. The Port of New York Yearbook 1980-1981 p.
2. Journal of Commerce, January 22, 1981, p. 1.
3. ibid.
4. Journal of Commerce, February 17, 1981, p. 7B.
5. ibid.
6. ibid.
7. supra, note 1, p.
8. supra, note 2, p. 1; supra, note 4.
9. supra, note 4, p. 17B.
10. supra, note 4, p. 7B.
11. Coal Symposium, p. 191.
12. supra, note 4, p. 17B.
13. ibid.
14. Journal of Commerce, March 31, 1981, p. 15B.
15. supra, note 4, p. 17B.
16. ibid.
17. supra, note 2.
18. supra, note 1.
19. New York Times, April 19, 1981, p. 14.
20. supra, note 4. p. 17B.
21. ibid.
22. Personal Communication, Maria Malone, New York Port Authority, April 10, 1981.
23. ibid.

24. ibid.; supra, note 4.

25. supra, note 22.

26. For more information on slurry pipelines, see: Coal Symposium, pp. 129-140.; WOCOL, p. 141; ICE, pp. 80-81.; Personal Communication, New York City Department of Ports and Terminals, Jean Betuille, April 10, 1981.

27. supra, note 26, Personal communication.

28. ibid.

29. WOCOL, p. 119.

30. ibid., p. 123.

31. ibid., p. 130.

32. supra, note 4.

33. ibid.

34. WOCOL, pp. 134-135.

35. ibid, p. 141.

36. International Energy Agency, Steam Coal: Prospects to 2000 (OECD) 1978. p. 93.

37. supra, note 4.

38. ibid.

CHAPTER SEVEN

MAJOR CONCLUSIONS OF THE STUDY

INTRODUCTION

Research for this study has proved to be most interesting because of the growing importance of coal in the world energy markets. The major difficulty in analyses of available data has been the constant flood of information, which increases and changes daily. Recent bottlenecks at existing coal ports, coal miner and dock worker strikes, and the present increase in port consulting studies have all contributed to the general chaotic climate of this commodity in the world shipping markets. Coal most certainly deserves its recent characterization: "Black Gold of the Eighties."

WORLD PICTURE

As highlighted in earlier Chapters, a predicted shift in world energy markets to increased demands for steam coal is becoming a definite reality. Coal represents one alternative fuel source, which industrial nations are choosing as a replacement for, or as a supplement to existing oil supplies. The United States is rapidly moving to ensure no major shift in import coal markets to other competitors, as addressed in Chapters Two, Three, and Four. This has resulted in increased port expansion plans, and project studies. The unfortunate end result may be over expansion, over capacity, and increased competition, similiar to the wave of expansion which accompanied the container revolution of the 1960s.

NATIONAL SCENE

National port planning has never been a feature of U.S. port development. It is quite common in many other countries. However, port promotion on a national basis, and aspects of financing, and also regulation of freight rates have occurred through different federal agencies and programs. Port planning on a national scale may eventually need to be considered because the real issue at stake, our own energy independence, is essential to the nation's energy planning in the next twenty years. Critical areas in national port planning have been addressed in recent Congressional actions. Criticisms of these bills are leveled at trade imbalances and cargo preferences which may result.

REGIONAL PLANNING

Regional port planning is not a new concept. Load centers, the result of container centralization, are facilities where regional ports can maximize competition with other regions of the country. Coal terminals can be so designated. The Northeast needs a modern coal terminal, able to handle export and domestic receipts of coal. Of all the regions in the United States, the New England area needs to increase its energy independence. As stated in Chapter Five, the coastal trade has to be considered as a separate market, and not as an offshoot of the export trade.

THE PORT OF NEW YORK

The Port of New York can fulfill the requirement for the coastal coal trade and also provide efficient and cost-saving facilities for the export

coal trade. Short-term proposals involving the use of present facilities in the Harbor at Port Reading and South Amboy will be effective in providing an outlet to the current market strain in coal at traditional coal ports. It can also begin a modest but growing export market. Long-term proposals are all dependent on the construction of a new coal terminal in the Harbor. This new trans-loading facility would provide faster handling and loading because it will be designed to handle steam coal and not metallugical coals. The cost of such a terminal will be less because the dredging costs are less than equivalent facilities at other coal ports. This is important to consider because federal funding of dredging projects may soon be limited.

An overall view is necessary for the complete picture. Many studies have been based on future projection of the world demand for coal until the year 2000. These figures differ in many cases. However, the important figures that will ultimately determine the amount of coal being moved from any port are the inland and ocean freight rates. The Port of New York can offer a competitive freight rate with a new facility. This new challenge can be met head on with careful planning, capital investment, and cautious optimism.

SUMMARY

- Regional energy demands in the Northeast will require a revival of the coastwise coal trade as numerous utilities convert to coal-fired
- The World demands for coal have earmarked the role that the U.S. will need to play in order to maintain her dominance in the coal markets, both on the East and West coasts.
- The past environmental constraints in port development may need to be diminished because of the need for the U.S. to achieve its energy independence of foreign oil suppliers.

— The Port of New York has the potential to capture an early portion of the domestic coal markets with New England, encourage the growth of a modest export trade, and begin to create a healthy export market with the construction of a new coal terminal.

— The Port Authority of New York-New Jersey will have a major role in the promotion of this new export trade, and the coastal trade. Capital Investment, and careful planning are important components in the construction of a new coal facility that will come under the jurisdiction of the Port Authority.

— The New York City Department of Ports and Terminals will also have an important role because the area primarily considered is owned by the City of New York. The leasing of this area or ultimate sale is an important aspect of the facilities plan.