

X

FOREIGN DIRECT INVESTMENT
IN
U.S. ENERGY SOURCES AND SUPPLIES

1976 and 1977

MASTER

Prepared by
The Department of Energy
Office of International Affairs

April 1978

NOTICE

This report was prepared as an account of work sponsored by the United States Government. Neither the United States nor the United States Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness or usefulness of any information, apparatus, product or process disclosed, or represents that its use would not infringe privately owned rights.

249

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

DISCLAIMER

Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.

Table of Contents

<u>Section</u>	<u>Title</u>	<u>Page</u>
	List of Tables	2
	Executive Summary	3
I.	Introduction	4
II.	The Petroleum and Natural Gas Industries	6
III.	The Coal Industry	13
IV.	The Nuclear Fuel Cycle	15
V.	Alternative Energy Sources	17
Appendix A	Foreign Activity in U.S. Petroleum and Natural Gas Industries 1976-1977	24
Appendix B	Foreign Activity in the U.S. Coal Industry 1976-1977	26
Appendix C	Foreign Activity in the U.S. Nuclear Fuel Cycle 1976-1977	27
Appendix D	Foreign Activity in U.S. Alternative Energy Sources 1976-1977	28

List of Tables

<u>Table</u>	<u>Title</u>	<u>Page</u>
I	Foreign Direct Investment (FDI) in Petroleum and all U.S. Industries and U.S. Direct Investment (DI) in Foreign Industries	18
II	Foreign Sources of Direct Investment in U.S. Petroleum: 1975 and 1976	19
III	U.S. Petroleum and Natural Gas Production: 1975-77	20
IV	U.S. Petroleum and Natural Gas Leases and Wells: 1975 and 1976	21
V	U.S. Refinery Crude Runs of Foreign Controlled Companies: 1975 and 1977	22
VI	U.S. Gasoline Sales by Foreign Controlled Companies: 1975 and 1976	23

Executive Summary

In 1976 and 1977 foreign direct investment (FDI) in the United States energy sector remained small relative to total domestic investment and significantly less than U.S. investment in the energy sources and supplies of foreign countries. Virtually all FDI in domestic energy sources and supplies was from Western European and Canadian companies, with a small but increasing volume from Latin America.

FDI in U.S. petroleum declined in 1976 to \$5.9 billion compared to \$6.2 billion in 1975. There was minimal new FDI in coal, the nuclear fuel cycle and alternative energy sources.

The preponderance of new energy FDI represented reinvestments of U.S. earnings; offsetting reductions resulted from accounting adjustments and sales of U.S. properties by foreign interests to U.S. purchasers.

Shell Oil Company, Standard Oil Company of Ohio and American Petrofina continued to maintain their position as the dominant vehicles for direct foreign investors in U.S. energy.

In 1976, these three companies accounted for 6 percent of all U.S. crude oil and natural gas liquids production, 3.6 percent of U.S. natural gas production, 12 percent of U.S. refinery runs and 9 percent of U.S. gasoline sales. In 1977, their share of U.S. crude oil and natural gas liquids production rose to 7.2 percent but their share of U.S. refinery runs declined to 11.2 percent; their share of U.S. natural gas production remained unchanged.

British Petroleum's interest in the Standard Oil Company of Ohio increased further as the latter's production of crude oil in the Alaskan North Slope rose in 1977. A further increase is expected in 1978.

In addition to their participation in the U.S. petroleum industry these three companies continued to expand investments in other energy sources. In 1976 and 1977, Shell Oil Company and the Standard Oil Company of Ohio increased their investment in U.S. coal production and Shell increased its involvement in the development of U.S. alternative energy sources.

Burmah Oil and Gas Company, included in previous reports as one of the larger foreign-owned companies active in U.S. petroleum was purchased in July 1976 by Aminoil International, Inc. a subsidiary of R.J. Reynolds. Burmah Oil and Gas Inc., renamed Aminoil U.S.A., Inc., has therefore reverted to U.S. ownership.

I. Introduction

Section 26 of the Federal Energy Administration Act of 1974 (P.L. 93-275) requires the Administrator of the Federal Energy Administration (FEA) to conduct a comprehensive review of foreign investment in domestic energy industries. Specifically Section 26 states:

"The Administrator will conduct a comprehensive review of foreign ownership of, influence on, and control of domestic energy sources and supplies. Such review shall draw upon existing information, where available, and any independent investigation necessary by the Administration. The Administrator shall, on or before the expiration of the 180-day period following the effective date of the Act, report to the Congress as to the extent and forms of such foreign ownership of, influence on, and control of domestic energy sources and supplies, and shall thereafter continue to monitor such ownership, influence and control."

In response to this statutory mandate, the FEA submitted to Congress in December 1974 a report entitled "Foreign Ownership, Control and Influence on Domestic Energy Sources and Supplies." A second report was prepared in November 1976. On October 1, 1977, the FEA and other federal energy agencies were consolidated into the Department of Energy (DOE). In pursuit of the responsibilities assumed from FEA, the DOE has prepared this report to reflect 1976 and preliminary 1977 foreign direct investment (FDI) transactions in U.S. energy sources and supplies.

This report concentrates on foreign direct investment in domestic energy sources and supplies as distinguished from foreign portfolio investment. Foreign direct investment, as used in this report, means "...the direct, indirect, or a combination of direct and indirect ownership of 10 percent or more of the voting stock of an incorporated U.S. business enterprise or the equivalent interest in an unincorporated U.S. business enterprise. This is the definition used by the Department of Commerce's Bureau of Economic Analysis (BEA). The term "foreign direct investment" will be used interchangeably with "foreign-owned," or "foreign-controlled," and is abbreviated "FDI." "Foreign investor" will be referred to as "foreign owner" or "parent."

Most companies identified in the BEA report are U.S. affiliates or subsidiaries of foreign companies. Although a number of these companies are 100-percent owned by foreign interests in many instances U.S. investors have significant, often majority, interests.

This report is divided into five sections:

- I Introduction
- II The Petroleum and Natural Gas Industries
- III The Coal Industry
- IV The Nuclear Fuel Cycle
- V Alternative Energy Sources

The Appendices list new FDI activity in U.S. petroleum, natural gas, coal, uranium and alternative energy sources in 1976 and 1977.

The major sources used in preparing this study are:

- 1976 and 1977 (where available) Annual Reports, statistical supplements to the Annual Reports, and Form 10-K's of those energy companies identified as being controlled by foreign interests.
- Survey of Current Business report entitled "Aspects of International Investment" published by the U.S. Department of Commerce, Bureau of Economic Analysis.
- Biweekly reports entitled "Foreign Direct Investment Activity in the United States" prepared by the U.S. Department of Commerce, Bureau of International Economic Policy and Research.

Information relating to 1977 foreign direct investment activity is included to the extent it is available at the time of publication.

II. The Petroleum and Natural Gas Industries

Overview

At yearend 1976, the foreign direct investment position in U.S. petroleum was \$5.9 billion, compared to \$6.2 billion at yearend 1975. FDI in U.S. petroleum declined from 22.9 percent of FDI in all U.S. industries in 1973 to 19.6 percent in 1976 (Table I).

Additions to FDI in U.S. Petroleum 1. (millions of dollars)

<u>Year</u>	<u>Total</u>	<u>Capital Inflows</u>	<u>Reinvested Earnings</u>	<u>Valuation Adjustments</u>
1975	599	79	520	0
1976	-313	394	534	-1,240

The decline in 1976 was largely attributed to the ownership transfer of a sizeable petroleum investment from a deceased U.K. resident to his U.S. estate. Another contributing factor was the July 1976 purchase of Burmah Oil and Gas Company by a U.S. company. Apart from these adjustments, the increase in 1976 was considerably larger than in 1975.

Additions to FDI in U.S. petroleum largely represent equity increases in existing U.S. affiliates by foreign parents in other oil consuming countries, primarily the European countries and Canada. Europe accounted for 84 percent of the total in 1976, a 4 percent decline from 1975 resulting from the negative adjustment previously mentioned. Canada's share

1. Source: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, "Foreign Direct Investment in the United States 1976," October 1977.

increased from 9.5 percent of the total in 1975 to 11.5 percent in 1976. The bulk of the remaining interests were held by Latin American investors. Japan accounted for a nominal 0.6 percent, while OPEC's direct investment remained insignificant.

United States direct investment in the petroleum industry of foreign countries has always been several times greater than FDI in U.S. petroleum. In 1976, it was approximately five times greater. Details are shown in Table II.

Summary of Foreign Investment Activity in U.S. Petroleum and Natural Gas

Oil and Gas Production

The seven companies which represent the major foreign interests in the United States produced 638 thousand barrels a day of crude oil and natural gas liquids and 813 billion cubic feet of natural gas in 1976, representing 6.6 percent and 4.0 percent respectively of total U.S. production. This percentage represents approximately the same share as that in 1975. Shell Oil Company alone produced 84 percent of the total foreign-owned oil and gas.

The three major foreign-owned companies for which 1977 production data are available produced 704 thousand barrels a day of oil and 730 billion cubic feet of gas. These producing rates represented an increase of 1.2 percent and 1.0 percent respectively from the previous year. The improved 1977 performance in oil production reflects the coming onstream of Sohio's Alaskan crude in June of that year.

Table III relates this information.

Lease Ownership

According to the Independent Petroleum Association of America, there were 398,990 acres under lease for petroleum production in the United States on January 1, 1977. The five foreign-owned companies for which data are available held approximately 3 percent of this acreage (Table IV), a decline from 1973 foreign ownership of 10.9 percent.

Producible Wells

Five of the foreign-owned companies held net interests in approximately 16,000 producible oil and gas wells in 1976, approximately 2.6 percent of the 640,000 U.S. total (Table IV).

Refining and Gasoline Marketing

As of January 1, 1977, there were 273 refineries operating in the U.S. with crude oil runs at 13.4 million barrels daily. The 20 refineries owned by foreign companies accounted for 12.8 percent of U.S. refinery runs, a decline from 13.2 percent in 1975. Shell, Sohio and American Petrofina accounted for 15 of the 20 foreign-owned refineries and processed 1.6 million barrels of crude oil daily or 90 percent of foreign-controlled refinery crude runs. One U.S. refinery was transferred to foreign ownership in 1977 with the purchase by Total Petroleum (N.A.) from Apco Oil of a 46,000 barrels per day refinery in Kansas.

The foreign-owned companies sold gasoline through 30,295 branded retail outlets in 1976 compared to 31,064 in 1975. In 1976, this figure represented 16.2 percent of total U.S. outlets. These companies accounted for 10.2 percent of total U.S. gasoline sales in 1975; 1976 gasoline sales data available for two major foreign-owned companies indicates that this share has increased only slightly, to 10.7 percent. Tables V and VI present statistics on foreign ownership of U.S. refineries and service stations in 1975 and 1976.

Activities of Foreign-Controlled Companies

Shell Oil Company

Shell Oil Company (Shell), a fully integrated petroleum company is a major subsidiary (69 percent owned) of the Royal Dutch/Shell Group. With an estimated 54 percent share of the total \$5.9 billion FDI in U.S. petroleum in 1976, Shell maintained its position as the seventh largest U.S. energy corporation.

In 1977, Shell produced 5.3 percent of all U.S. crude oil and natural gas liquids compared to 5.5 percent the previous year. Its share of U.S. natural gas production remained the same for 1976 and 1977--3.4 percent. At yearend 1976, Shell estimated that it owned approximately 6.1 percent of domestic proved crude oil reserves and about 3.1 percent of net proved U.S. natural gas reserves. More than half of Shell's capital spending in 1976 was for oil and gas exploration and development; in 1977, these expenditures increased 12 percent over that recorded for 1976. Shell's 1977 U.S. refinery crude runs represented 7.2 percent of total U.S. crude runs compared to 7.7 percent in 1976. The company's branded retail gasoline outlets represented 10.3 percent of the U.S. total in both 1975 and 1976. Sales from those outlets accounted for 7.3 percent of all U.S. gasoline sales in 1976 up from 6.8 percent in 1975.

Standard Oil Company of Ohio

Standard Oil Company of Ohio (Sohio) represents the major interest of the British Petroleum Company, Ltd. (BP) in the United States. BP's investment in Sohio was initially 1,000 shares of special stock which entitled BP to the same rights as approximately a 25 percent common stock interest. The number of shares of common stock to which the 1,000 shares of special stock are equivalent will rise with increases in the sustainable net oil production from Sohio's Prudhoe Bay properties. It will reach a maximum of approximately 54 percent if such production reaches 600,000 barrels a day prior to January 1, 1984. With the opening of the Alaska pipeline, Sohio's Prudhoe Bay production rose to 212,000 barrels a day in June and 250,000 barrels a day in October. As a result BP's interest in Sohio increased from about 26 percent to over 40 percent during 1977. Sohio's share of the total \$5.9 billion FDI in U.S. petroleum was approximately 6.8 percent in 1976. In 1976, before the opening of the Alaska Pipeline, Sohio ranked twentieth in gross sales among U.S. integrated petroleum companies, producing only 0.26 percent of total U.S. crude oil and natural gas liquids and 0.14 percent of total U.S. natural gas. In 1977, Sohio produced 1.7 percent of total U.S. crude oil and natural gas liquids but its natural gas production remained relatively unchanged.

Sohio holds approximately 135,000 net acres of state oil and gas leases in Alaska, 96,396 of these in the Prudhoe Bay field. Sohio's refinery crude runs of 426,187 barrels a day in 1977 represented 2.8 percent of the U.S. total compared to 3.0 percent in 1976. The company operated 4,659 branded retail gasoline outlets by yearend 1976, accounting for 2.4 percent of the U.S. total, down from 2.6 percent in 1975. Its gasoline sales from these outlets increased, representing 1.8 percent of U.S. gasoline sales in 1976, up from 1.6 percent in 1975.

American Petrofina

American Petrofina is a U.S. subsidiary of Petrofina, S.A., a Belgian petroleum company. Petrofina, S.A. holds directly or indirectly 73 percent of the common stock of American Petrofina. The company is the twenty-fifth largest energy company in the United States and the 212 largest U.S. corporation.

In 1977, American Petrofina produced approximately 0.19 percent of total U.S. production of crude oil and condensate and 0.08 percent of total U.S. natural gas production. In 1976, American Petrofina produced 0.20 percent and 0.09 percent respectively. The company's refinery crude runs at yearend 1977 represented 1.0 percent of the U.S. total compared to 1.2 percent in 1976.

In 1975 and 1976, American Petrofina owned and operated four refineries. On February 15, 1977, the company sold to Pector Refining Co. for approximately \$32.8 million in cash and notes, its 22,500 barrel a day refinery at El Dorado, Kansas and certain marketing properties in several western states. American Petrofina's branded retail gasoline retail outlets were 2.7 percent of the U.S. total in 1975 and 1976.

Total Petroleum (North America) Ltd.

Total Petroleum (North America) Ltd. (Topna) is an affiliate of the Compagnie Francaise des Petroles (CFP) 35 percent of whose shares are owned by the French Government. CFP and its wholly owned subsidiary, Total American Inc., together own 49 percent of Topna's voting shares.

Topna is engaged in exploration and production of crude oil in Canada and the United States. Topna's U.S. oil and gas production, which was negligible in 1973, rose to 3,309 barrels a day in 1976.

Topna completed a merger with Hanover Petroleum Corporation, an independent U.S. petroleum company, on April 30, 1976. Acquisition of Hanover added 3,079 barrels per day to Topna's U.S. oil production and 18,210 million cubic feet per day to natural gas sales. Excluding Hanover, Topna's U.S. crude oil production increased 70 percent and its U.S. natural gas sales by 14 percent in 1976.

Topna operated one U.S. refinery in 1976 with a capacity of 41,000 barrels a day (0.2 percent of the U.S. total). As noted earlier, the company acquired for \$65 million a second U.S. refinery in 1977, adding 46,000 barrels a day to its operating capacity.

Topna estimates that its gasoline sales during 1976 accounted for less than 0.5 percent of the gasoline sold in the United States.

Husky Oil Company

Husky Oil Company is the U.S. subsidiary of Husky Oil Ltd. of Canada.

In 1976, Husky produced 0.14 percent of all U.S. crude oil and natural gas liquids and 0.04 percent of U.S. natural gas production, maintaining its 1975 shares. Husky's 1975 and 1976 U.S. refinery crude runs comprised 0.4 percent of the U.S. total. The company's branded retail gasoline outlets were 0.3 percent of the United States total.

Aquitaine Oil Corporation

Aquitaine Oil Corporation is a wholly owned subsidiary of the Societe Nationale Elf Aquitaine. Effective in 1976, the assets of the Elf Aquitaine group were amalgamated into SNPA, changing the former's name to Societe Nationale Elf Aquitaine. The company produced less than 1.0 percent of U.S. crude and natural gas.

Texas Pacific Oil Company Inc.

Texas Pacific Oil Company Inc. is a subsidiary of the Canadian Company Distillers Corporation/Seagrams Ltd. Texas Pacific produces approximately 0.4 percent of U.S. petroleum production.

Other Foreign Activity in U.S. Petroleum and Natural Gas

Appendix A lists new foreign activities in the U.S. petroleum and natural gas sector in 1976 and 1977. None of these activities significantly affect foreign investment in these U.S. sectors, the bulk of which is accounted for by the major foreign-controlled companies on which this report has focused. Activities of other companies noted in Appendix A entail several acquisitions including:

- United Canso Oil and Gas acquisition of Pantepec International Inc.

United Canso Oil and Gas Ltd. is a Canadian company with two wholly owned subsidiaries, including Canso Oil and Gas, Inc., U.S.A. In 1976, United Canso merged with Pantepec, a U.S. domiciled company involved in petroleum exploration in Australia, the Philippines and Canada.

- Asamera Oil Corp. Ltd., acquisition of The Refinery Corporation.

Asamera is incorporated in Canada and conducts whole-sale marketing and exploration/production operations in the United States through wholly-owned Asamera Oil U.S.A. Inc. Effective July 1, 1976, Asamera Oil U.S.A., Inc. acquired for \$9,000,000 the petroleum refinery properties, assets and inventories of The Refinery Corporation. The acquired refinery, located in Denver, has a capacity of 21,500 barrels a day.

III. The Coal Industry

The November 1976 FEA report identified 16 foreign interests participating in the domestic coal industry. Fourteen of these were foreign-owned companies; the remaining interests were the Canadian Hydroelectric Power Commission and the Romanian Government. The present report has identified five additional foreign investments for 1976 and 1977. Appendix B summarizes the information available regarding the five additional investments.

Of the 1976-77 investments, the Coalarbed transaction is the most significant. Beginning its U.S. operations in 1975 with the acquisition of the Red Ash Sales Co. in West Virginia, the ARBED Steel Company of Luxembourg now holds more than 14,000 acres in West Virginia with coal resources in excess of 36 million short tons. In addition to the ongoing development of its Red Ash properties, Coalarbed is projecting the acquisition of substantial coal reserves through the purchase of mineral rights, the purchase of operating companies and joint venture projects with existing coal operating companies.

The 1976 FEA report noted that Shell Oil Company, a foreign-owned company, had not yet begun coal production. Following a favorable environmental decision by the U.S. Supreme Court in June 1976 which cleared the way for the development of coal reserves in five western states, Shell has accelerated its plans to develop its Wyoming acreage. Although production on this project is not expected to begin until after 1980, which incidentally marks the production date of many of Shell's other major U.S. coal projects, Shell continues to acquire coal properties, including Seaway Coal Company in 1977 (see Appendix B). Shell maintains that it currently holds under lease some 2.3 billion tons of proved and potential coal reserves.

Similarly, the Standard Oil Company of Ohio, through its wholly-owned subsidiary, the Old Ben Coal Corporation (Old Ben), is working to expand its investment in U.S. coal production. The company is committing approximately \$90 million to the development of two new deep mines in Illinois and to their associated coal preparation plant. The two mines are expected to reach combined productive capacity of 4.5 million tons per year by 1981.

Old Ben continues to retain its position as a leading producer of U.S. bituminous coal, although it ranked 12 in 1976 compared to 11 in 1975. 2. Old Ben's production in 1976 reached 9,715,406--a 4.9 percent increase over its 1975 production rate of 9,257,715. Old Ben produced 1.4 percent of the estimated 1976 U.S. tonnage.

2. Keystone Coal Industry Manual, 1977.

IV. The Nuclear Fuel Cycle

Fifteen U.S. companies reported that foreign interests provided full or partial funding of their 1976 exploration activities. 3. The total foreign increment amounted to \$13.18 million or about 8 percent of the \$171 million total 1976 domestic exploration expenditure. In 1976, foreign interests produced approximately 560 tons of uranium which represented 4 percent of total U.S. production of 14,000 tons compared to 600 tons or 5 percent of U.S. 1975 production of 12,300 tons.

Uranium Exploration, Mining and Milling

Of particular interest during 1976-1977 was the acquisition of a permit by the French-American Metals Corporation (FRANCO), a wholly-owned subsidiary of COGEMA Corporation of Paris, to prospect for uranium in North Carolina's Pisgah National Forest. Uranium oxide in the permit area has been estimated at 11,000 tons. If the estimated deposits are found, they would represent the first significant uranium discovery east of the Mississippi River. In addition, FRANCO has obtained mineral leases on land in the Texas Panhandle.

The Standard Oil Company of Ohio and its partner, Reserve Oil and Minerals Corporation, own uranium properties consisting of approximately 120,000 acres in New Mexico. Sohio is a 50 percent owner of the property from which production began in December 1976 and the operating manager of the mine and mill complex. Although scheduled production levels have not yet been achieved, the annual rate of production from this mine is expected to reach approximately 500 short tons of uranium ore concentrates.

Sohio's uranium reserves, estimated in 1975 at approximately 4.2 million tons, are expected to be sufficient to maintain production for approximately 12 to 15 years.

3. U.S. Energy Research and Development Administration, Uranium Exploration Expenditures in 1976 and Plans for 1977-78, May 1977.

Nuclear Reactors

The General Atomic Company, a 50/50 partnership between the Royal Dutch/Shell Group and the Gulf Oil Corporation, has been in the process of developing and marketing a high temperature gas-cooled reactor (HTGR) and its associated nuclear fuel. By the end of 1976, General Atomic's 300 megawatt demonstration plant began generating electricity, but due to technical problems, the plant is currently not in commercial operation. In addition to the development of the HTGR, General Atomic is also involved in the design and development of a gas-cooled fast-breeder reactor, a closed-cycle gas-turbine HTGR and a process-heat HTGR.

V. Alternative Energy Sources

Financial and technological risks associated with the development of alternative energy sources continued to inhibit foreign direct investment in U.S. companies engaged in the development of other energy sources.

Some investment did occur in 1976 and 1977. In 1976, Shell Oil Company invested an additional \$3.6 million in S.E.S., Inc., a Delaware company involved in the development of cadmium sulfide photovoltaic devices (solar cells) which convert sunlight directly into electricity. At yearend 1976, Shell had an 80 percent equity interest in the U.S. company and a total investment of \$6.6 million. During 1977, Shell invested an additional \$2 million in S.E.S. bringing Shell's total investment in the company to \$8.6 million.

The Compagnie Francaise des Petroles acquired a majority holding in Photon Power Inc., another U.S. manufacturer of solar cells.

In the field of geothermal energy, Shell signed in 1977 its first contract for the sale of geothermal steam produced in the Geysers field located in northern California. Under this contract, Shell will supply to an electrical power generation plant 2 million pounds per hour of dry steam for 25 years. Shell's acquisition of two new geothermal tracts brings the company's total geothermal holdings to 19,865 acres in the Geysers area.

Table I

Foreign Direct Investment (FDI) in Petroleum
and All U.S. Industries and U.S. Direct Investment (DI) in Foreign Industries 1.
(billions of dollars)

<u>Year</u>	<u>FDI in U.S. Petroleum</u> 2.	<u>Total FDI in U.S.</u> 3.	<u>Percent Petroleum of Total</u>	<u>U.S. DI in Foreign Petroleum</u>	<u>Total U.S. DI Abroad</u> 4.	<u>Percent Petroleum of Total</u>
1973	4.7	20.5	22.9	24.9	101.3	24.5
1974	5.6	25.1	22.3	21.5	110.1	19.5
1975	6.2	27.6	22.4	26.2	124.2	21.0
1976	5.9	30.1	19.6	29.7	137.2	21.6

1. Source: U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, "U.S. Direct Investment Abroad in 1976, August 1977 and "The International Investment Position of the United States: Developments in 1976," October 1977.

2. Petroleum Industry--includes all phases of petroleum exploration, production, refining, transport and marketing.

3. The FDI position is the value of foreign parents' net equity in, and outstanding loans to, U.S. affiliates at year end.

4. The value of U.S. parents' net equity in and loans to foreign affiliates.

Table II

Foreign Sources of
Direct Investment in U.S. Petroleum

1975 and 1976
(millions of dollars)

	<u>Position</u> <u>Year End 1975</u>	<u>Percent</u> <u>of Total</u>	<u>Position</u> <u>Year End 1976</u>	<u>Percent</u> <u>of Total</u>
All areas	6,213	100	5,901	100
Canada	596	9.5	679	11.5
Europe	5,478	88.2	4,985	84.5
EEC	5,398	86.9	4,904	83.1
Other	80	1.3	81	1.4
Japan	*	-	38	0.6
Australia, New Zealand and South Africa	**	-	4	0.1
Latin America	101	1.6	173	2.9
OPEC	-2	-	2	0.03
Total of Undisclosed Sources***	40	0.6	20	0.3

* Suppressed to avoid disclosure of data of individual companies.

** Less than \$500,000.

*** Includes * items as well as Middle East, Africa, Asia and the Pacific.

Table III

U.S. Petroleum and Natural Gas Production: 1975-77
(by foreign controlled companies)

<u>Company</u>	<u>Petroleum and Natural Gas Liquids</u> (barrels per day)			<u>Natural Gas</u> (millions of cubic feet)		
	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Shell Oil Company	555,000	535,000	518,000	678,535 ^{3.}	681,090	682,550
Standard Oil of Ohio	27,617	25,479	167,278 ^{1.}	32,685	28,969	31,370
Texas Pacific	38,365	38,356 ^{2.}	N.A.	59,600	59,600 ^{2.}	N.A.
American Petrofina	20,315	19,775	19,367	18,220	17,334	16,483
Husky Oil Ltd.	14,359	14,084	N.A.	7,177	7,121	N.A.
Elf/Aquitaine	2,000	2,000	N.A.	11,786	11,786 ^{2.}	N.A.
CFP/Total Petroleum (NA)	496	3,309	N.A.	2,565 ^{4.}	7,379 ^{4.}	N.A.
Total of Above	658,152	638,003	704,645 ^{6.}	810,568	813,279	730,403 ^{6.}
Total for U.S. ^{5.}	10,108,000	9,723,000	9,798,000	20,108,661	19,952,438	19,974,000
Percent Foreign of Total	6.5%	6.6%		4.0%	4.1%	
N.A.--Not Available						

1. Includes 143,831 B/D Alaskan production (average daily production of Alaskan Prudhoe Bay Oil since June 19, 1977 was 267,848 barrels)
2. 1975 data used; 1976 not available.
3. Shell has revised this figure downward since publication of its 1975 Annual Report, used in the 1976 FEA report.
4. Natural gas sales.
5. Source: Department of Energy, Energy Information Administration, Monthly Energy Review, February 1978.
6. Total of three companies for which 1977 data is available.

Sources: Company Annual Reports and statistical supplements for individual company data.

Table IV

U.S. Petroleum and Natural Gas Leases and Wells

1975 and 1976

<u>Company</u>	<u>Leases</u> (thousands of net acres)		<u>Producible Wells</u> (Thousands of net wells)	
	<u>1975</u>	<u>1976</u>	<u>1975</u>	<u>1976</u>
Shell Oil Company	8,663	9,671 1.	9.5	9.5 3.
Standard Oil of Ohio	446	442	1.9	1.7
American Petrofina 2.	301	322	2.6	2.6
Husky Oil Company	1,173	996	0.2	N.A.
Aquitaine Oil Company	881	N.A.	N.A.	N.A.
Total Petroleum (NA)	508	792	N.A.	0.2
Texas Pacific Oil Co.	N.A.	N.A.	2.9	2.9 3.
2 Total of Above	11,972	12,223	17.1	16.9
Total for the U.S. 4.	396,173	398,990	639.0	640.8
Percent Foreign of Total	3.0%	3.1%	2.7%	2.6%

N.A.--Not Available

1. Undeveloped net acreage for the U.S. plus total producing acreage.
2. Provided by American Petrofina.
3. 1975 data: 1976 not available.
4. Source: Independent Petroleum Association of America.
5. Net acres is defined as gross acreage adjusted to reflect the percentage of ownership in the working interest. Gross acreage is any acreage covered by a working interest, regardless of the percentage ownership in the interest.
6. Net wells is defined as the company interest share for all wells in which it has interests.

Source: Annual Reports and Statistical Supplements to the Annual Reports of the companies listed unless otherwise noted. The companies appearing in this table have been identified in this report as representing the significant investment.

Table V

U.S. Refinery Crude Runs of Foreign Controlled Companies

1975-1977 ^{1.}

<u>Company</u>	<u>Operating Refineries</u>		<u>Refinery Crude Runs (barrels per day)</u>		
	<u>1975</u>	<u>1976</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Shell Oil Co.	8	8	992,000	1,042,000	1,086,000
BP-Sohio	3	3	364,436	405,197	426,187
American Petrofina	4	4	162,871	161,655	152,136
Husky Oil Co.	3	3	57,000	57,400	N.A.
Total Petroleum Inc.	1	1	42,182	42,182	N.A.
Canadian Hydro- carbons: Thunder- bird Petroleum Inc.	3	N.A.	14,439	N.A.	N.A.
Ultramar (Golden Eagle Refining Co.)	1	1	13,000	13,000	N.A.
Total of above	23	20	1,645,928	1,721,434	1,664,323
Total for the U.S.	265	273	12,487,000 ^{2.}	13,417,000 ^{2.}	14,900,000 ^{2.}
Percent Foreign of total	8.7%	6.9%	13.2%	12.8%	11.1%

N.A.—Not Available

1. Source: U.S. Department of the Interior, Bureau of the Mines, Mineral Industry Surveys, Petroleum Refineries in the United States and Puerto Rico, January 1, 1976 and 1977.

2. Source: Federal Energy Administration, Trends in Refinery Capacity and Utilization, June 1977.

3. Total of three companies for which 1977 data is available.

Table VI

U.S. Gasoline Sales by Foreign Controlled Companies ^{1.}

1975 and 1976

<u>Company</u>	<u>Branded</u> <u>Retail Outlets</u> ^{2.}		<u>Gasoline Sales</u> (millions of gallons)	
	<u>1975</u>	<u>1976</u>	<u>1975</u>	<u>1976</u>
Shell Oil Company	19,656	19,236	7,091	7,911
BP-Sohio	4,906	4,659	1,696	1,915
American Petrofina	5,158	5,046	1,027	N.A.
Husky Oil Company	573	606	230	N.A.
Total Petroleum Inc.	647	639	130	N.A.
Canadian Hydrocarbons:	124	109	55	N.A.
Thunderbird Petroleum Inc.				
Ultramar (Golden Eagle Refining Co.)	N.A.	N.A.	208	N.A.
Burmah	N.A.	N.A.	136	N.A.
Total of Above	31,064	30,295	10,573	9,826 ^{4.}
Total of the U.S.	189,480 ^{3.}	186,579 ^{3.}	103,580	108,953
Percent Foreign of Total	16.7%	16.2%	10.2%	10.7%

N.A.--Not Available

1. Source: National Petroleum News Factbook Issue, mid-May 1976 and 1977.
2. Includes garages, motel, grocery stores, and service stations.
3. U.S. Department of Commerce, Bureau of Domestic Commerce; estimate of total U.S. service stations based on 1972 Census data and trade association data. By Census definition only establishments earning 50 percent or more of their income from the sales or service of petroleum products are service stations. Reported in National Petroleum News Factbook Issue, mid-May 1977.
4. Total of two companies for which 1976 data is available.

Appendix A

Foreign Activity in U.S. Petroleum and Natural Gas Industries

1976

<u>Country, Parent Company/ Affiliate Which Holds Interest in U.S.</u>	<u>U.S. Investment</u>	<u>Type of Interest</u>	<u>Type of Activity</u>
Belgium, Empain Family	Newton Refining Corp. and Northeast Oil Service Inc.	Acquisition	Wholesale petroleum production
Canada, Asamera Oil Inc.	The Refinery Corp.	Acquisition-100%	Petroleum refining
Canada, United Canso Oil and Gas Ltd.	Pantepec International Inc.	Acquisition	Crude petroleum and natural gas
Canada, Canada Development Corp.	Texasgulf Inc.	Equity increase	Crude petroleum and natural gas
Federal Republic of Germany, Friedrich Flick Group	Oil Resources Inc.	Acquisition	Oil and gas wells
Saudi Arabia, Group of Saudi Arabian Investors	Arabian Shield Development Co.	Acquisition-36%	Crude Petroleum and Natural Gas
South Africa, Anglo American Holding Corp. of South Africa, Ltd.	Norris Oil Corp.	Purchase of drilling rights	Crude petroleum and natural gas

Foreign Activity in U.S. Petroleum and Natural Gas Industries

1977

<u>Country, Parent Company/ Affiliate Which Holds Interest in U.S.</u>	<u>U.S. Investment</u>	<u>Type of Interest</u>	<u>Type of Activity</u>
Canada, Canadian Pacific, Ltd.	Ametel, Inc.	Equity increase	Petroleum product distribution
Canada, Bow Valley Industries Ltd.	Flying Diamond Oil Corp.	Acquisition	Crude petroleum
Canada, Total Petroleum North America Ltd.	APCO Oil Co.	Acquisition	Produces oil and natural gas, markets petroleum products, oil and gas exploration
Federal Republic of Germany, Friedrick Flick Group		Joint venture	Oil and gas exploration
Federal Republic of Germany, Friedrick Flick Group	Glosscock Drilling Inc.	Acquisition	Oil well drilling
Japan, Mitsubishi Corp.	Amorient Petroleum Co.	Joint venture	Expansion of terminal capacity, markets fuel oil and distillates
Netherlands, Royal Dutch Shell Group	Amoco Petroleum Co.	Joint venture	Oil and Gas exploration in Gulf of Mexico

Appendix B
Foreign Activity in the U.S. Coal Industry

Country, Parent Company/
 Affiliate Which Holds
 Interest in U.S.

U.S. Investment

Type of
 Interest

1976

Federal Republic of Germany,
 Friedrich Flick Group

Colowyo Coal Co.

Joint venture

1977

Austria, Voest-Alpine AG

Virginia Crews Coal, Co.
 Rose Branch Development Co. .
 Blue Sales and Processing Co.
 Blueco

Acquisition

France, Charbonnages de France; Soc.
 Lorraine and Meridionale de Laminage
 Continu, S.A.; Soc. Metallurgique de
 Normandie S.A.; and US Inor, S.A.

Hawley Coal Mining Corp.

Equity increase

Netherlands, Shell Oil Co.

Seaway Coal Co.

Acquisition

Luxembourg, Acieries Reunies de
 Burbach-Eich-Dudelange S.A. (ARBED)

Coalarbed

New subsidiary

Appendix C

Foreign Activity in the U.S. Nuclear Fuel Cycle

1976-1977

<u>Country, Parent Company/ Affiliate Which Holds Interest in U.S.</u>	<u>U.S. Investment</u>	<u>U.S. Interest</u>	<u>Type of Activity</u>
France, Cie. Francaise des Petroles and Soc. Pechiney Ugine Kuhlman/Minatome Corp.	Mineral Energy, Inc.	Joint venture	Exploration and development of uranium properties
France, COGEMA	French-American Metals Corp. (FRANCO)	Equity 100%	Uranium mining

Other Companies Reported to be involved in exploration/production.

Canada -- American Copper and Nickel, Canpet, Canso, Cominco, Consolidated Monarch,
Denison Host Ventures, Keradamex, Magellan, Mineral Resources, Noranda,
Rio Algom, Robertson, Sioux Mountain and Cobre Exploration, Voyager

France -- Aquitaine Oil, CFC, Mokta, Urania

U.K. -- CEGB, Consolidated Goldfields, Triad

Germany - Uranerz, Urangesellschaft

Japan -- Dowa, Kyodo, Nissho-IWAI

Italy -- AGIP

Appendix D
Foreign Activity in U.S. Alternative Energy Sources
1976-1977

<u>Country, Parent Company/ Affiliate Which Holds Interest in U.S.</u>	<u>U.S. Investment</u>	<u>Type of Interest</u>	<u>Type of Activity</u>
France, Cie. Francaise des Petroles	Photon Power Inc.	Equity interest	Manufactures solar cells
Netherlands, Shell Oil Co.	S.E.S. Inc.	Equity increase	Manufactures solar cells
Sweden, Alfa-Laval	Delaval Separator Co.		Develops equipment to produce electricity by tapping solar ener; in ocean water