Foreign Direct Investment In U.S. Energy 2001

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Preface

The purpose of this foreign direct investment report is to provide an assessment of the extent of foreign ownership of energy assets in the United States. Section 657, Subpart 8 of the U.S. Department of Energy Organization Act (Public Law 95-91) requires an annual report to Congress which presents: "a summary of activities in the United States by companies which are foreign owned or controlled and which own or control United States energy sources and supplies … ." The information in this report is intended for use by the U.S. Congress, Government agencies, industry analysts, and the general public.

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Executive Summary

This report presents an analysis of foreign direct investment in U.S. energy companies and resources in 2001. During that year, there was little change in the operations of the U.S. energy companies that were the recipients of foreign direct investment. Highlights underlying this result are:

- While there were small declines in the petroleum operations of U.S. energy companies that were the recipients of foreign direct investment, their shares of U.S. coal production and electricity generation changed modestly or not at all.
- While the share of U.S. uranium concentrate produced by these companies increased, their absolute amount of uranium production declined, as production of other U.S. companies declined even more.
- Although capital expenditures in oil and gas production and crude oil refining by affiliates of foreign investors fell by 50 percent, this followed a year when they were exceptionally high.
- Direct investment capital inflows to affiliates of foreign investors in the U.S. energy industry fell sharply, but so did total direct capital inflows to the U.S. economy as a whole.

More specifically, foreign direct investment (FDI) affiliates play an important role in the U.S. energy industry, even though their activities changed little in 2001 relative to the previous year. They accounted for more than 10 percent of the oil and gas produced in the United States that year. Downstream, they played a more important role, controlling 29 percent of U. S. crude oil distillation capacity and 34 percent of gasoline sales. Capital expenditures in oil and natural gas production and crude oil refining by FDI affiliates were $9 billion, a decline of 50 percent from 2000, but still 61 percent above their 1999 levels. FDI affiliates produced 27 percent of the coal and practically all (92 percent) of the shrinking uranium concentrate mining production in the United States in 2001. The FDI affiliates played the smallest role in electricity generation, producing 3 percent of the electricity generated.

Both direct investment abroad (DIA) capital outflows, and especially FDI capital inflows to the U.S. economy, fell sharply in 2001. However, FDI inflows to the U.S. petroleum and natural gas industry fell faster than inflows to the total U.S. economy, to 23 percent of their 2000 level, because there was no giant acquisition of a U.S. petroleum and natural gas company in 2001 as there had been the previous year. FDI inflows to the electric, gas, and sanitary services industry fell 32 percent in 2001, less than did total FDI inflows. As a result, the industry's share of the total increased, but only by 0.9 percentage points. In contrast, DIA capital outflows to both of these industries increased in 2001. FDI and DIA capital flows in coal and other metallic ores mining, including uranium concentrate mining production, were miniscule.

Foreign Direct Investment in U.S. Energy in 2001

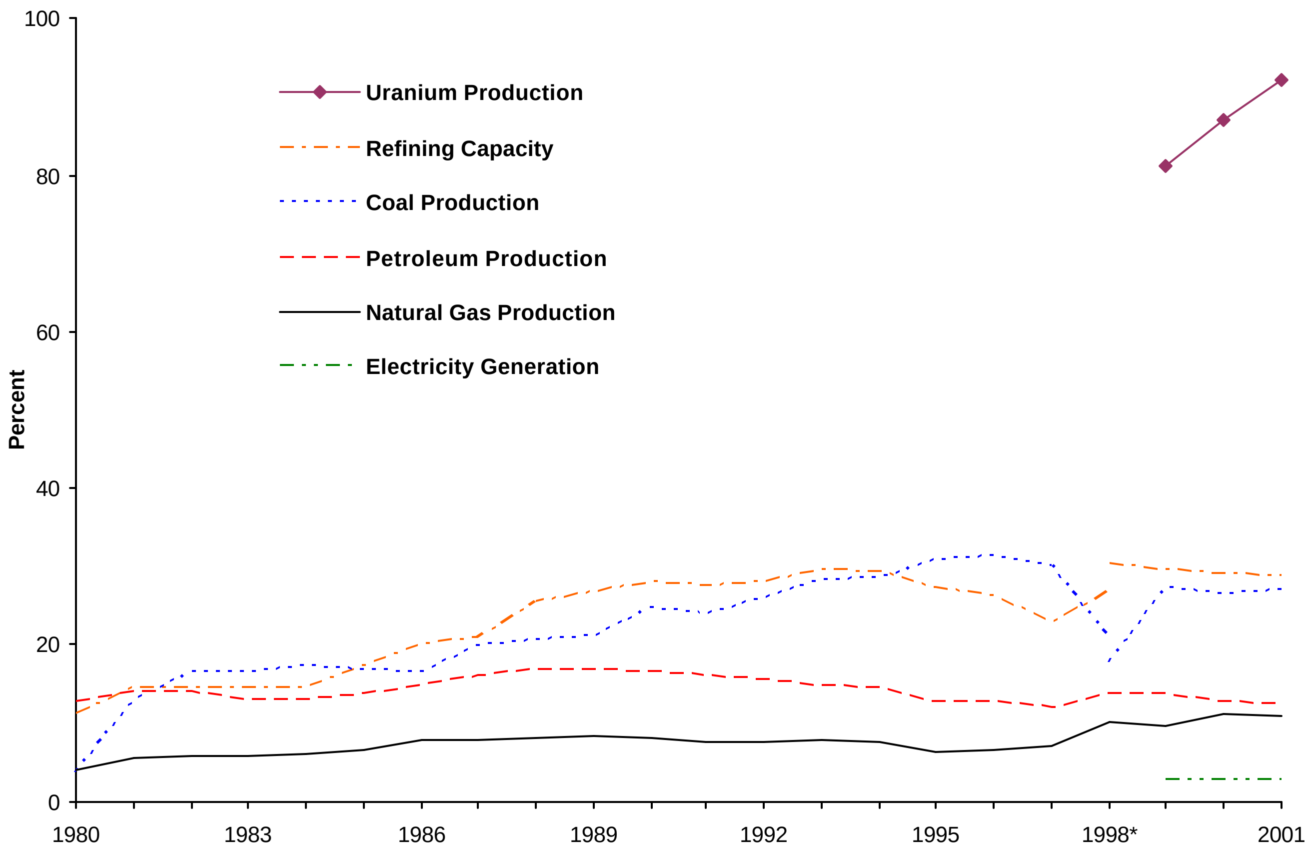
Foreign direct investment (FDI) is the ownership or control, directly or indirectly, of 10 percent or more of a U.S. business (or asset) by a foreign entity. Ownership or control of less than 10 percent of a business is not direct investment. In this report, an FDI-affiliate company or FDI affiliate is a U.S. business in which there is foreign direct investment.[1] The report describes the role of direct foreign ownership of U.S. energy enterprises with respect to their energy operations, capital investments, and net foreign investment flows (including net loans). In addition, since energy investments are made in a global context, the report examines patterns of direct investment in foreign energy enterprises by U.S.-based companies. For a discussion of acquisitions and divestitures of U.S. energy assets by foreign investors in 2001, see *Acquisitions of U.S. Energy Assets by Foreign Investors in 2001 Lowest Since 1997* http://www.eia.doe.gov/finance/fdi/advance/2001/adindex.html.

Foreign direct investment is one measure of the continuing influence or control of foreign investors, companies, or individuals over the management and disposition of U.S. assets of production in the economy.[2] However, determining influence or control over a company is a very complex and often subjective process in which many factors other than the percentage of ownership must be considered. While holding 10 percent or more of a company often may constitute control of that company, it does not necessarily do so.[3]

FDI Affiliates' Role in U.S. Energy Industry Operations

While there were substantial changes in the operations of individual FDI affiliates in 2001, their overall participation in the U.S. energy industry changed little in 2001 (Figure 1). While FDI affiliates increased their share of uranium production notably, they were already dominant in the area. In petroleum, many of the changes were the result of BP America's (U.K.-based BP plc's U.S. affiliate) planned disposals of property and operations resulting from the merger of BP and Amoco.[4] The share of oil and gas production accounted for by the FDI affiliates declined somewhat, as BP America's oil production in Alaska declined (although their natural gas production in the U.S. lower 48 increased), and U.S. companies acquired former FDI affiliates Louis Dreyfus Natural Gas and Chieftain Development International. Refining capacity owned by the FDI affiliates declined only slightly because the loss of capacity from the sale of two refineries by BP America was offset by the company's acquisition of another small refinery and the completion of a substantial upgrade and expansion at Deer Park Refining, a joint venture between Shell Oil (one of Netherlands and U.K.-based Royal Dutch Shell's U.S. affiliates) and Petróleos Mexicanos, (the state petroleum company of Mexico). The share of gasoline sales by the FDI affiliates declined as BP America divested or severed its relationship with 1,800 service stations in the United States. The share of electricity generated by FDI affiliates declined slightly, with a drop in generation by the leader, PacifiCorp (U.K.-based ScottishPower's U.S. affiliate), more than offsetting increased generation by several of the smaller affiliates as well as declines in total U.S. generation. In contrast, coal production by several FDI affiliates improved in 2001, led by a 10-percent increase by the leader Kennecott Energy (U.K. and Australia-based Rio Tinto's U.S. affiliate).

Figure 1. FDI-Affiliate Companies' Share of U.S. Production of Oil, Natural Gas, Coal, Electricity, and Uranium and Refining Capacity, 1980-2001



Notes: Data series for refining capacity and coal production changed in 1998.
Sources: 1999-2001: Tables 1-6 of this report; 1980-1998: Energy Information Administration, "Foreign Direct Investment un U.S. Energy 2000," Figure 1, http://www.eia.doe.gov/emeu/finance/fdi/advance/fig1.html.

FDI Affiliates' Oil and Gas Production Still Dominated by Two Companies

Oil (crude oil and natural gas liquids) and gas (dry natural gas) production for the FDI affiliates in 2001 continued to be dominated by two companies, BP America and Shell Oil. Together, the companies accounted for 95 percent of the oil and 90 percent of the natural gas produced in the United States in 2001 by FDI affiliates (Table 1). BP America produced more oil and more gas in the United States in 2001 than any other company, whether an FDI affiliate or not. Shell Oil, with less than half of BP America's U.S. oil and gas production, had natural gas production declines in 2000 and 2001, and, while oil production increased in 2001, it was still below its 1999 level.

The growth in production by all FDI affiliates combined lagged the growth in total U.S. production of both oil and gas in 2001, with FDI-affiliate oil production declining more and natural gas production increasing less than for the United States as a whole (Table 1). The fall in oil production was led by BP America, which experienced production declines in its principal oil producing fields in Alaska.[5] In response, the company is focusing on increasing natural gas production in the deepwater Gulf of Mexico to offset the oil production declines in Alaska. BP's acquisition of Atlantic Richfield in 2000 and to a lesser extent its success in the deepwater areas of the Gulf contributed to the 50-percent growth in BP America's natural gas production in the United States from 1999 to 2001. Without the loss of Louis Dreyfus Natural Gas from the FDI-affiliate ranks (it was purchased by Dominion Resources), the small increase in natural gas production in 2001 would have been more substantial.

The contribution of the other FDI affiliates to changes in oil and gas production in 2001 was relatively small (Table 1). The largest proportional change in the smaller companies was in oil production by BHP Petroleum (Americas) (Australia and U.K.-based BHP Billiton's U.S. affiliate). With its deepwater Typhoon project coming on stream that year, the company substantially increased its output in the Gulf of Mexico, where all of its U.S. producing activities are located.[6] Meridian Resource (another U.S. affiliate of Netherlands and U.K.-based Royal Dutch/Shell) had production declines in both oil and gas in 2001, largely as a result of property sales.[7] Other producers include Nexen Petroleum USA (Canada-based Nexen's U.S. affiliate), which concentrates its production in the shallow waters of the Gulf while focusing its exploration on the deepwater Gulf;[8] Total Fina Elf Exploration Production USA (the U.S. affiliate of France-based Total Fina Elf), which produces predominantly natural gas in the Gulf of Mexico;[9] and Consol Energy (the U.S. affiliate of Germany-based RWE AG) which produces only coalbed methane, mostly in southwestern Virginia.[10] Chieftain Development International, formerly an FDI affiliate, was acquired by Hunt Oil.[11]

Table 1. Net Production of Oil and Gas in the United States by FDI-Affiliate Companies, 1999-2001

	Oil (Crude Oil and Natural Gas Liquids) (million barrels)				Gas (Dry Natural Gas) (billion cubic feet)			
Company	**1999**	**2000**	**2001**	**2000-2001 Percent Change**	**1999**	**2000**	**2001**	**2000-2001 Percent Change**
BP America[a]	275.0	251.0	243.0	-3.2	907.0	1,174.0	1,358.0	15.7
Shell Oil	115.0	102.0	108.0	5.9	639.0	586.0	581.0	-0.9
BHP Petroleum (Americas)[b]	3.9	4.2	9.0	114.3	15.3	21.5	25.1	16.7
Nexen Petroleum USA	3.0	4.0	3.0	-25.0	35.0	34.0	36.0	5.9
Meridian Resource	4.5	4.0	2.9	-26.8	22.7	27.7	22.1	-20.2
Total Fina Elf Exploration Production USA	1.0	3.0	2.0	-33.3	33.0	88.0	81.0	-8.0
Greka Energy	NF	0.8	0.8	8.8	NF	1.8	1.8	-1.8
Consol Energy[c]	0.0	0.0	0.0	0.0	16.3	34.7	39.5	13.7
Enterprise Oil Gulf of Mexico[d]	0.4	1.6	NA	-	0.7	17.5	NA	-
Repsol YPF (formerly YPF)	0.6	0.2	NA	-	NA	NA	NA	-
Louis Dreyfus Natural Gas[e]	3.0	2.8	NF	-	108.0	119.9	NF	-
Chieftain Development International[f]	1.6	1.2	NF	-	27.5	20.9	NF	-
Total FDI-Affiliate Companies	408.0	374.8	368.8	-1.6	1,804.5	2,126.0	2,144.4	0.9
Total United States	2,959.1	2,960.2	2,939.7	-0.7	18,832.0	18,987.0	19,458.0	2.5
Percent FDI-Affiliate Companies	13.8	12.7	12.5		9.6	11.2	11.0	

[a] Includes natural gas consumed in Alaska operations.
[b] For years ending June 30, 2000-2002. Includes production in Bolivia.
[c] For years ending June 30, 2000-2002. Production for year ending June 30, 2002 estimated from half-year data.
[d] Became a subsidiary of Royal Dutch/Shell in 2002. Amounts for 2000 estimated.
[e] Purchased by Dominion Resources in 2001.
[f] Acquired by Hunt Oil in 2001.
NA = Not available. NF = Not FDI-affiliate company.
Note: Calculations performed on unrounded numbers.
Sources: Company Data: Form 10-K and 20-F reports filed with the U.S. Securities and Exchange Commission, annual reports to shareholders, and John S. Herold Financial Database. U.S. Totals: Energy Information Administration, Monthly Energy Review, DOE/EIA-0035(2003/02) (Washington, DC, February 2003), Tables 3.1a and 4.1.

FDI Affiliates' Shares of U.S. Refining and Marketing Slide

The FDI affiliates' share of refining capacity decreased slightly in 2001, to 29 percent (Table 2). The decrease was accounted for entirely by BP America, which sold its Mandan, North Dakota and Salt Lake City, Utah refineries to Tesoro Petroleum, completing planned disposals resulting from the mergers of British Petroleum (now BP), Amoco, and Atlantic Richfield (although BP America did buy a small refinery on Prudhoe Bay in Alaska from Phillips Petroleum).[12] As a result of these transactions and other changes at BP America's refineries, the company was the only FDI affiliate to experience a decline in crude oil distillation capacity in 2001.

Table 2. Refinery Operations in the United States of FDI-Affiliate Companies, 1999-2001

	Number of Refineries			Total Crude Oil Distillation Capacity (thousand barrels per day)			
Company	**1999**	**2000**	**2001**	**1999**	**2000**	**2001**	**2000-2001 Percent Change**
BP America	7	8	7	1,430	1,662	1,560	-6.2
Motiva Enterprises [a]	4	4	4	852	860	873	1.5
PDV America	5	5	5	706	703	703	0.0
Equilon Enterprises [b]	5	4	4	748	469	469	0.0
Deer Park Refining [c]	1	1	1	274	275	334	21.4
Lyondell-CITGO Refining [d]	1	1	1	263	250	275	9.6
Chalmette Refining [e]	1	1	1	190	183	183	0.0
Atofina Petrochemicals (formerly Fina Oil & Chemical)	2	1	1	237	179	179	0.0
Shell Oil	2	2	2	135	135	135	0.0
Alon USA Energy	0	1	1	0	59	59	0.0
Transworld Oil USA	1	1	1	15	21	29	37.4
Greka Energy	NF	1	1	NF	10	10	0.0
Neste Trifinery Petroleum [f]	1	1	(f)	27	27	(f)	-
Total FDI-Affiliate Companies	30	31	29	4,877	4,831	4,806	-0.5
Total United States	152	150	147	16,512	16,595	16,785	1.1
Percent FDI-Affiliate Companies	19.7	20.7	19.7	29.5	29.1	28.6	

[a] Motiva Enterprises was a joint venture of Shell Oil, Saudi Refining, and Texaco. As of March 1, 2002, Motiva became a joint venture of Shell Oil and Saudi Refining following Chevron Texaco's sale of Texaco's share to Royal/Dutch/Shell and Saudi Aramco.

[b] Equilon Enterprises was a joint venture of Shell Oil and Texaco. As of March 1, 2002, Equilon was renamed Shell Oil Products US and is now a wholly owned affiliate of Royal Dutch/Shell following Chevron Texaco's sale of Texaco's share to Royal/Dutch/Shell.

[c] Joint venture of Shell Oil and Petróleos Mexicanos.

[d] Joint venture of Lyondell Chemical and PDV America.

[e] Joint venture of Exxon Mobil and PDV America.

[f] Now Trigeant. Not included because refinery changed from atmospheric to vacuum distillation process.

NF = Not FDI-affiliate company.

Note: Calculations performed on unrounded numbers. Values are at year end.

Sources: Energy Information Administration, *Petroleum Supply Annual 2001,* vol. 1, DOE/EIA-0340(2001)/1 (Washington, DC, June 2002), Table 40, and previous issues.

Deer Park Refining had the largest absolute increase in refining capacity, the result of a major expansion and improvement project that made it the fifth-largest refinery in the United States and converted it from a refiner of light, sweet crude oil to heavy, sour crude.[13] Petróleos Mexicanos, one of the joint venture's owners) supplies the refinery with more than 200,000 barrels a day of Mexican crude oil.

In gasoline marketing, the FDI affiliates had a slightly decreased number and share of retail outlets and amount and share of total gasoline sales. The total number of stations for the FDI affiliates fell 4 percent in 2001, and their share of the number of stations fell to 31 percent. Most FDI affiliates had a decline in the number of stations, with BP America accounting for most of the decline (Table 3). BP America's gasoline stations were sold as part of a strategy to concentrate ownership of real estate in particular markets and to realign stations with the changes in BP America's refineries.[14] For gasoline sales, FDI affiliates had only a very small drop in amount sold. However, total gasoline sales in the United States increased slightly in 2001, emphasizing the effect of the decline in gasoline sales by the FDI affiliates on their share of total U.S. sales.

Table 3. Branded Retail Outlets and Total Gasoline Sales in the United States by FDI-Affiliate Companies, 1999-2001

	1999	2000	2001	2000-2001 Percent Change
Number of Outlets[a]				
BP America	16,300	17,300	15,500	-10.4
Citgo Petroleum	13,813	13,500	13,397	-0.8
Motiva Enterprises[b]	14,200	13,000	13,000	0.0
Equilon Enterprises[c]	9,400	9,000	8,800	-2.2
Alon USA	0	1,682	1,600	-4.9
Lukoil[d]	0	1,263	1,112	-12.0
Atofina Petrochemicals (formerly Fina Oil & Chemical)	1,682	-	-	-
Total FDI-Affiliate Companies	55,395	55,745	53,409	-4.2
U.S. Total	175,941	171,169	170,678	-0.3
Percent FDI-Affiliate Companies	31.5	32.6	31.3	
Total Gasoline Sales				
Total FDI-Affiliate Companies	2,737	2,971	2,954	-0.6
U.S. Total	8,550	8,426	8,612	2.2
Percent FDI-Affiliate Companies	32.0	35.3	34.3	

[a]Includes company-owned outlets and independent dealer outlets (jobbers).

[b]Motiva Enterprises was a joint venture of Shell Oil, Saudi Refining, and Texaco. On March 1, 2002, Motiva became a joint venture of Shell Oil and Saudi Refining following Chevron Texaco's sale of Texaco's share to Royal/Dutch/Shell and Saudi Aramco.

[c]Equilon Enterprises was a joint venture of Shell Oil and Texaco. On March 1, 2002, Equilon became a wholly owned affiliate of Royal Dutch/Shell following Chevron Texaco's sale of Texaco's share to Royal/Dutch/Shell and was renamed Shell Oil Products US.

[d]Lukoil sells motor gasoline in the United States under the "Getty" brandname.

Notes: The U.S. total number of outlets includes all establishments selling gasoline at retail. Total gasoline sales are sales by "Prime Suppliers." Calculations performed on unrounded numbers.

Sources: **Company station counts and total branded outlets**: *National Petroleum News,* Market Facts 2001 (Mid-July 2002), and previous issues, and company reports. **Foreign affiliates' sales**: Energy Information Administration, Form EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption." **All companies' sales:** Energy Information Administration, *Petroleum Marketing Annual 2001,* DOE/EIA-0487(2001) (Washington, DC, August 2002), Table 48, and previous issues.

FDI Affiliates Increase Prominence in Uranium Mining, Share of Coal

FDI-affiliate companies extended their prominence in uranium concentrate (U_3O_8) production in the United States in 2001, as the affiliates' share rose to 92 percent, with the U.S. subsidiaries of Cameco (Canada) becoming the dominant affiliates in uranium production (Table 4).[15] These events occurred as the production of uranium concentrate in the United States for all FDI affiliates combined and for Cameco's U.S. subsidiaries actually declined. Cameco's production from its *in situ* uranium leaching operation in Highland, Wyoming declined in 2001.[16] Cameco is the world's largest uranium concentrate producer, mostly from mines in Canada. FDI affiliates increased their share of uranium concentrate production because total U.S. production fell faster than that of the FDI affiliates. Cameco's U.S. subsidiaries became the largest FDI affiliate in uranium concentrate production because Rio Algom Mining (an affiliate of BHP Billiton, Australia and the United Kingdom) reduced its production substantially in 2001, in advance of ceasing all of its production operations in 2002.[17] Cogema Mining (an affiliate of Areva, France) stopped uranium production activities during 2000 because its operations were not competitive.[18]

Table 4. Uranium Concentrate Production in the United States by FDI-Affiliate Companies, 1999-2001
(thousand pounds U_3O_8)

FDI Affiliate (Foreign Parent)	1999	2000	2001	2000-2001 Percent Change
U.S. subsidiaries (Cameco)[a]	1,780	1,673	1,500	-10.3
Rio Algom Mining (BHP Billiton)[b]	1,800	1,770	930	-47.5
Cogema Mining (COGEMA)	165	NA	0	-
Total FDI-Affiliate Companies	3,745	3,443	2,430	-29.4
Total United States	4,611	3,958	2,639	-33.3
Percent FDI-Affiliate Companies	81.2	87.0	92.1	

[a]U.S. subsidiaries include UUS Inc, PRI Resources, and Geomex Minerals. Production in 1999 includes share owned by Korea Electric Power.

[b]Rio Algom was purchased by BHP Billiton in October 2000 and sold to Cameco in July 2002.

NA = Not available.

Notes: Calculations performed on unrounded numbers.

Sources: **Companies:** Company reports and press releases. **U.S. Totals:** Energy Information Administration, *Uranium Industry Annual 2001,* DOE/EIA-0478(2001) (Washington DC, May 2002), Table 5.

Domestic coal production by the FDI affiliates increased in 2001, advancing the FDI affiliates' share of U.S. coal production to 27 percent, largely based on production increases by the two largest affiliates, Kennecott Energy (an affiliate of Rio Tinto, United Kingdom and Australia) and Consol Energy (an affiliate of RWE, Germany) (Table 5). Kennecott Energy increased production largely in response to improved demand for coal in the United States.[19] Consol Energy's 2001 production was augmented by the acquisition of three coal companies that were formerly owned by American Electric Power.[20]

Table 5. Coal Production in the United States by FDI-Affiliate Companies, 1999-2001
(Million Short Tons)

FDI-Affiliate (Foreign Parent)	1999	2000	2001	2000 - 2001 Percent Change
Kennecott Energy (Rio Tinto)	120.1	106.4	117.5	10.4
Consol Energy (RWE)	73.1	68.0	73.7	8.4
RAG American Coal (RAG)	59.2	63.4	65.5	3.3
Interwest Mining (formerly PacifiCorp)	21.0	16.8	16.8	0.0
BHP Minerals (BHP Billiton)	15.9	15.6	15.8	1.3
Canyon Fuel (Itochu)	10.4	13.3	12.7	-4.2
Total FDI-Affiliate Companies	**299.7**	**283.5**	**302.0**	**6.5**
Total United States	**1,100.4**	**1,073.6**	**1,127.7**	**5.0**
Percent FDI-Affiliate Companies	**27.2**	**26.4**	**26.8**	

Notes: Andalex Resources not included because ownership of the privately held company not determined. Calculations performed on unrounded
Sources: National Mining Association, "2001 Coal Producer Survey," (March 2002, Washington, DC) Table 2, and previous issues. **Canyon Fuel:** Arch Coal, 2001 Report to Securities and Exchange Commission on Form 10-K, and previous years. **U.S. Totals:** Energy Information Administration, *Annual Coal Report 2001,* DOE/EIA-0584(2001) (Washington, DC, March 2003), Table ES1 and *Coal Industry Annual 2000,* DOE/EIA-0584(2000) (Washington, DC, April

Electricity Output by FDI Affiliates Declines

Domestic electricity generation by the FDI affiliates fell faster than total U.S. electricity generation in 2001, resulting in a slight decline in the affiliates' share to 2.7 percent (Table 6). However, several individual FDI-affiliate companies had substantial changes. PacifiCorp, by far the largest FDI-affiliate generator in the United States, had a decline in generation of 13 percent in 2001. One reason for the decline was the failure of a large generation unit at its Hunter, Utah power plant in November 2000, which was not brought back online until May 2001.[21] Another reason was reduced generation from its hydroelectric plants following a shortfall of rain in the region.

Three FDI affiliates compensated for PacifiCorp's decline in generation in 2001. AmerGen Energy (an joint venture of British Energy (United Kingdom) and Exelon) increased generation at its three nuclear power plants in Illinois, Pennsylvania, and New Jersey by 18 percent, in part because of improved capacity factors in 2001.[22] Generation by FDI affiliates of TransCanada Pipelines (Canada) increased in part because of two acquisitions. In October 2000, TransCanada increased its ownership of Ocean State Power, a natural-gas-fired combined-cycle facility in Rhode Island, to 100 percent, and, in July 2001, it acquired Curtis Palmer Hydroelectric and its two hydroelectric plants in upstate New York.[23] American National Power (an affiliate of International Power, United Kingdom), which had interests in seven operating natural gas-fired combined-cycle plants in Texas, Massachusetts, and Georgia in March 2002, increased its generation in part by bringing a significant amount of new capacity online in 2001.[24]

Table 6. Electricity Generation in the United States by FDI-Affiliate Companies, 1999-2001
(million kilowatthours)

	Electricity Generation			
FDI Affiliate (Foreign Parent)	1999	2000	2001	2000-2001 Percent Change
PacifiCorp (ScottishPower)	61,849	56,628	49,369	-12.8
AmerGen Energy (British Energy)	620	15,579	18,511	18.8
LG&E Energy (Powergen)	15,479	16,071	15,867	-1.3
Sithe Energies (Vivendi/Marubeni)	15,415	10,260	10,260	0.0
American National Power	4,648	4,078	4,383	7.5
U.S. subsidiaries (TransCanada Pipelines)[a]	3,419	3,299	3,806	15.4
Dynegy	2,999	NF	NF	-
Orion Power Holdings	263	NF	NF	-
Total FDI-Affiliate Companies	104,691	105,915	102,197	-3.5
Total United States	3,694,810	3,802,105	3,736,644	-1.7
Percent FDI-Affiliate Companies	2.8	2.8	2.7	

[a]U.S. subsidiaries include Ocean State Power, Curtis Palmer Hydroelectric, and TransCanada Power (Castleton).

NF = Not FDI-affiliated.

Notes: Generation at petroleum refining facilities that are FDI affiliates is not included. Generation amounts may be either net or gross generation. Calculations performed on unrounded data.

Sources: **Companies:** Company reports and press releases. **U.S. Totals:** Energy Information Administration, *Electric Power Monthly May 2003,* DOE/EIA-0226 (2003/05) (Washington DC, May 2003), Table 1.1.

Capital Spending in Petroleum and Natural Gas Falls Sharply

Capital spending (including exploration and development refining, marketing, and pipeline expenditures) by FDI affiliates in the U.S. petroleum and natural gas industry dropped sharply in 2001 (Table 7). Total FDI affiliates' expenditures in 2000 were unusually large as BP Amoco acquired Atlantic Richfield and Vastar Resources that year, while no foreign direct investor made major acquisitions in petroleum and natural gas in 2001. For other FDI affiliates for which data were available, capital expenditures increased in 2001.[25]

Upstream capital, exploration, and development expenditures by the FDI affiliates fell 50 percent, to $7.8 billion, in 2001 due to BP America's acquisitions in the previous year. Total upstream expenditures by FDI affiliates would have increased 29 percent in 2001 if BP America's expenditures for property acquisitions in the United States in 2000 were excluded from the totals. Upstream capital expenditures by Shell Oil (an affiliate of Royal Dutch/Shell, Netherlands and United Kingdom) increased 61 percent in 2001 but were still less than half of BP

America's. BP America spent $3.8 billion of its total upstream capital expenditures on development activities, in large part to expand natural gas production in the deepwater Gulf of Mexico.[26] Shell Oil, which spent $1.2 billion in the United States for development activities, is also active in the Gulf.[27] Total Fina Elf Exploration Production USA (an affiliate of Total Fina Elf, France) had all of its U.S. producing properties located in the Gulf, while

Table 7. U.S. Capital, Exploration, and Development Expenditures by FDI-Affiliate Petroleum and Natural Gas Companies, 1999-2001
(Million Dollars)

Company	Upstream[a]				Downstream[b]			
	1999	2000	2001	2000-2001 Percent Change	1999	2000	2001	2000-2001 Percent Change
BP America	1,918	12,664	4,038	-68.1	626	1,092	1,311	20.1
Shell Oil[c]	1,073	1,217	1,964	61.4	1	0	3	-
Consol Energy[d]	118	148	523	253.6	-	-	-	-
Total Fina Elf Exploration Production USA	134	334	424	26.9	NA	NA	NA	-
BHP Petroleum (Americas)[f]	162	313	400	27.8	-	-	-	-
Nexen (formerly Canadian Occidental)	63	154	279	81.7	-	-	-	-
Meridian Resource	105	101	134	32.1	-	-	-	-
PDV America[g]	-	-	-	-	248	122	253	107.4
Equilon Enterprises	-	-	-	-	582	579	NA	-
Motiva Enterprises	-	-	-	-	310	376	NA	-
Louis Dreyfus Natural Gas	184	407	NF	-	-	-	NF	-
Chieftain International	55	103	NF	-	-	-	NF	-
Total	**3,812**	**15,441**	**7,762**	-49.7	**1,767**	**2,169**	**1,567**	-27.8

[a]Includes costs incurred in oil and gas property acquisition, exploration, and development.

[b]May include capital expenditures for pipelines and marine transport.

[c]Does not include Shell Oil's share of expenditures by affiliates accounted for using the equity method or expenditures at facilities operated by its Chemical Products Division.

[d]Includes only expenditures for proved property acquisitions for the 6 months ending December 31, 2001, and the 12 months ending June 30, 2001, and 2000.

[e]Includes some expenditures in Canada.

[f]For years ending June 30, 2000, 2001, and 2002. Includes expenditures in Bolivia.

[g]Does not include PDV America's share of expenditures by affiliates accounted for using the equity method.

NA = Not available. NF = Not FDI affiliate.

Sources: Company reports and John S. Herold Financial Database.

Consol Energy (an affiliate of RWE, Germany), whose upstream capital expenditures increased substantially in 2001, produces coalbed methane in central and northern Appalachia.

The apparent decline in total downstream capital expenditures by the FDI affiliates is likely the result of the lack of 2001 information available for two FDI-affiliate refiners, Equilon Enterprises (a joint venture of Royal Dutch/Shell and ChevronTexaco) and Motiva Enterprises, (a joint venture of Royal Dutch/Shell, Saudi Arabian Oil, Saudi Arabia, and ChevronTexaco).[28, 29] If Equilon and Motiva both had the same capital expenditures in 2001 as in 2000, total downstream capital expenditures by FDI affiliates would have increased 16 percent. Downstream capital expenditures by the FDI affiliates in petroleum refining that reported in 2000 and 2001, BP America, PDV America (an affiliate of Petróleos de Venezuela, Venezuela), and Shell Oil, increased 29 percent in 2001.

Foreign Direct Investment Inflows to the United States

In the United States, the Bureau of Economic Analysis (an agency of the U.S. Department of Commerce) collects data from companies in the United States that are FDI affiliates of foreign investors.[30] One measure of foreign direct investment is FDI capital inflows, the inflows of capital to FDI affiliates in the United States from foreign investors.[31] The inflows are recorded on a net basis, that is, the gross inflow of FDI to the United States from foreign investors minus the gross return of FDI to foreign investors. Net FDI capital inflows include net capital contributions to new and existing FDI affiliates, net earnings reinvested in FDI affiliates, and net loans to FDI affiliates.[32]

Net FDI capital inflows are only one component of total international investment inflows to the United States.[33] Total international investment inflows also include purchases of stocks and bonds by investors that are not direct investors, and deposits into U.S. banks. Net FDI capital inflows from foreign investors were 17 percent of the net total international investment inflows to the United States in 2001.[34] Net purchases of corporate and other (not including U.S. Treasury securities) bonds were 38 percent of the total investment inflows, while net purchases of U.S. corporate stocks were 16 percent and net inflows to U.S. banks were 15 percent of the total.

FDI Inflows to the U.S. Economy Collapse in 2001

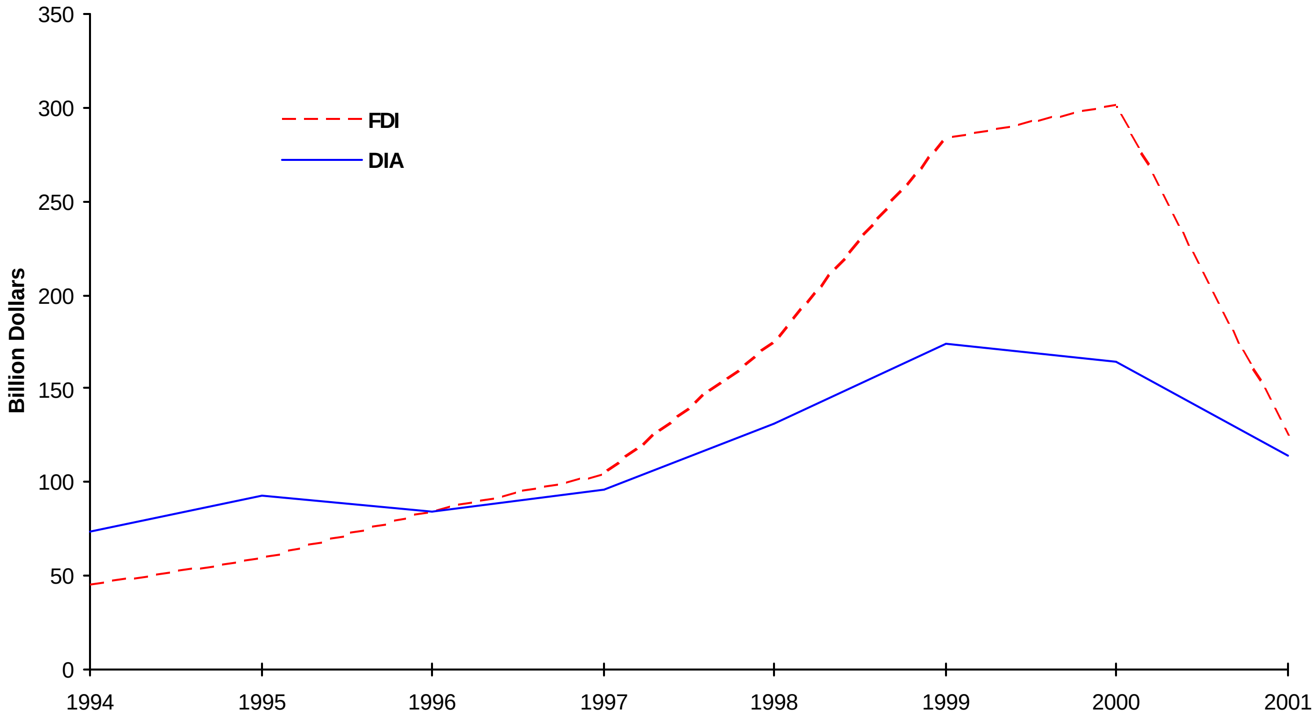
For the economy as a whole, net FDI capital inflows dropped precipitously in 2001, falling 59 percent to $124 billion, after peaking in 2000 (Figure 2). FDI inflows had made gains in each of the previous six years, but the fall in 2001 reduced FDI inflows to below the level that they had first reached in 1998. In recent years, FDI capital inflows grew most rapidly in 1998 and 1999, at an average annual rate of 66 percent per year. FDI inflows already had been growing very rapidly before 1998, at an average annual rate of 32 percent per year between 1994 and 1997.

Since much of net FDI capital inflows reflects mergers and acquisitions, the peak in FDI inflows coincided with the crest of a wave of international and U.S. mergers and acquisitions across all sectors of the economy. The value of completed mergers and acquisitions of U.S. companies by foreign investors fell 58 percent in 2001.[35] Slower rates of economic growth in the United States and many other countries that year negatively affected merger and acquisition activities.

The reduced net total FDI capital inflows in 2001 also reflected slower rates of economic growth in the United States. Slower growth diminishes the earnings of companies, including FDI affiliates, which depresses reinvested earnings by foreign investors, one of the components of net FDI inflows. In 2001, FDI affiliates actually incurred losses. In addition, FDI affiliates distributed funds to their foreign parents. As a result, net reinvested earnings were negative in 2001 and reduced net FDI inflows by $26 billion. Net reinvested earnings had little effect on net FDI inflows in 2000.[36]

By far the largest share of total net FDI capital inflows in 2001, 42 percent, came from Switzerland.[37] These inflows were largely the result of debt restructuring by multinational companies. The companies shifted loans from their affiliates in other countries, particularly Luxembourg, to their Swiss affiliates. Germany was also a large contributor to the FDI inflow, with 23 percent of the total. These FDI inflows were largely the result of acquisitions of U.S. telecommunications firms by German investors. The industries with the largest FDI inflows were telecommunications, 21 percent of the total, and miscellaneous electronic machinery manufacturing, 18 percent, much of the latter due to acquisitions of U.S. companies by companies based in Luxembourg.

Figure 2. U.S. Direct Investment Abroad and Foreign Direct Investment in the United States Total Net Capital Flows, 1994-2001



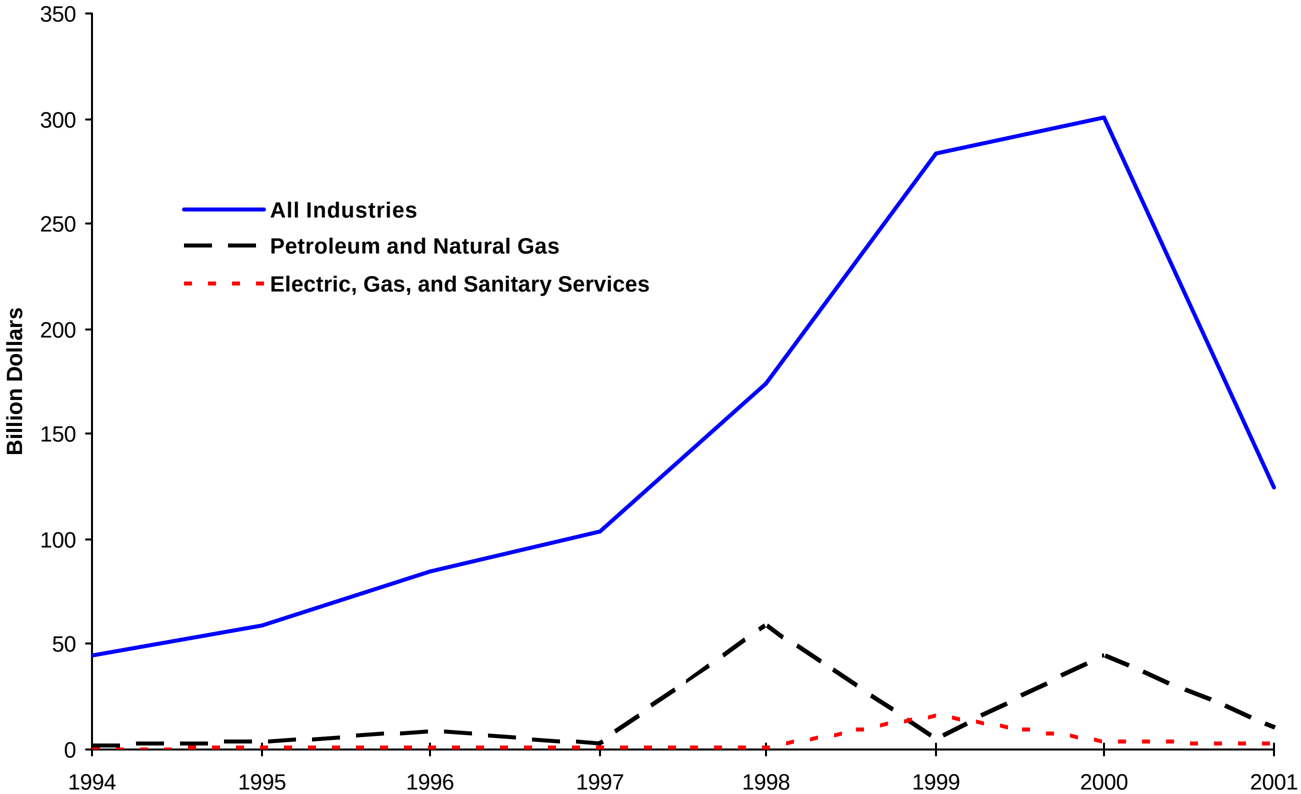
Sources: Bureau of Economic Analysis, "Foreign Direct Investment in the United States" and "U.S. Direct Investment Abroad," *Survey of Current Business* (Washington, DC, September 2002), Tables 17, and previous issues.

FDI Inflows to Petroleum and Natural Gas Plummet, Those to Electricity Fall

Net FDI capital inflows to the U.S. petroleum and natural gas industry in 2001 declined sharply, falling 77 percent to $10.3 billion. However, this amount remained above the range of inflows between 1994 and 1997 (Figure 3). FDI inflows to petroleum and natural gas had risen to extraordinary levels in 1998 and again in 2000, contributing substantially to the total inflows to the United States in those two years. These two spikes in inflows to petroleum and natural gas were undoubtedly the result of two large acquisitions of U.S. companies by British Petroleum (United Kingdom), now BP.[38] The company acquired Amoco in 1998, a deal that was at the time the largest U.S. acquisition ever by a foreign investor, and then (after renaming itself BP Amoco) acquired Atlantic Richfield in 2000.[39] The FDI inflows to U.S. petroleum and natural gas in 2001 are mostly attributable to a large merger between two oil field service companies. Transocean Sedco Forex of the Cayman Islands purchased R&B Falcon to create the largest offshore drilling contractor in the world.[40]

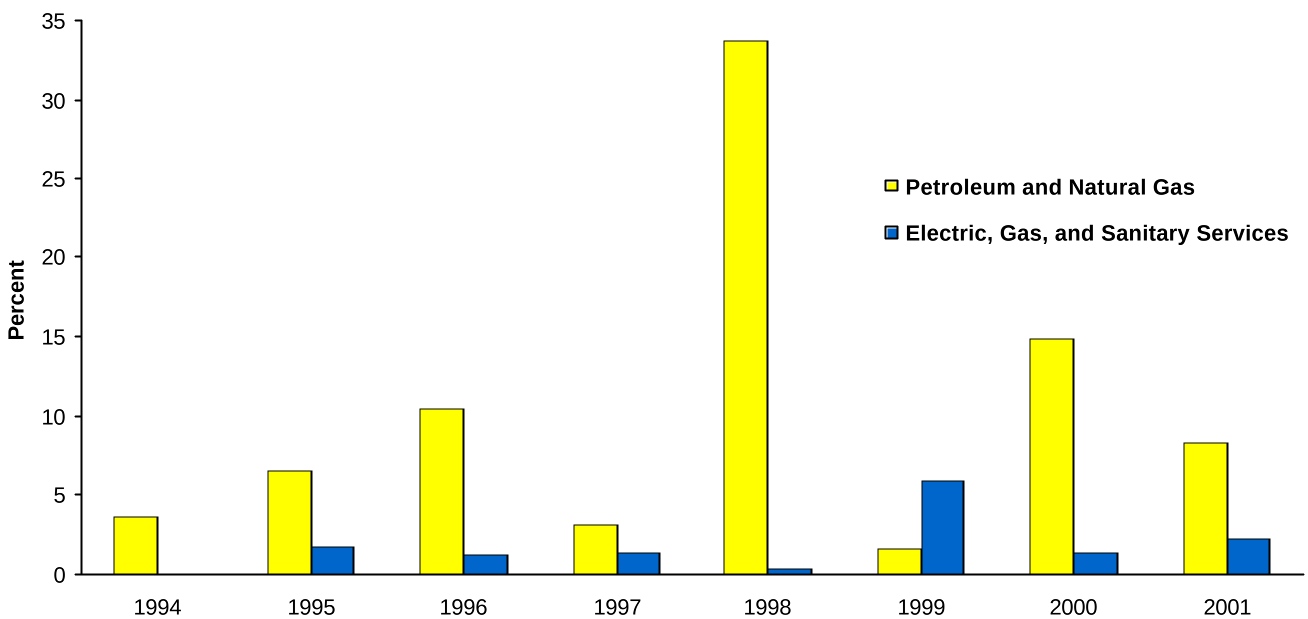
The share of total net FDI capital inflows to the United States going to the petroleum and natural gas industry in 2001 declined to 8.3 percent (Figure 4), as FDI inflows to the industry fell even faster than those to the economy as a whole. The shares going to the petroleum and natural gas industry, while higher in the 1980's, have been below 11 percent in recent years, except for 1998 and 2000, the years of BP's major acquisitions. The second of these acquisitions is evident when FDI inflows to the petroleum and natural gas industry are presented by country for the 1999 to 2001 time period (Table 8). Over this period, an average of $20 billion of FDI flowed into the U.S. petroleum and natural gas industry. The United Kingdom was by far the largest contributor of FDI inflows to the industry. In addition, the United Kingdom Islands of the Caribbean were the second largest contributor in 2001. The only other country that provided more than an average of $0.5 billion per year over the three years was Canada.[41]

Figure 3. Foreign Direct Investment in the United States Net Capital Inflows, 1994-2001



Sources: Bureau of Economic Analysis, "Foreign Direct Investment in the United States," Survey of Current Business (Washington, DC, September 2002), Table 17, and preceding issues.

Figure 4. Shares of Foreign Direct Investment Net Capital Inflows, 1994-2001



Note: Net FDI inflows to the coal and other metallic ores mining industries in all years and to the electric, gas, and sanitary services industry in 1994 were so small that they are not distinguishable at this scale.
Sources: Bureau of Economic Analysis, "Foreign Direct Investment in the United States," Survey of Current Business (Washington, DC, September 2002), Table 17, and preceding issues.

Table 8. Foreign Direct Investment Net Capital Inflows to U.S. Petroleum and Natural Gas Industry from Selected Countries, 1999-2001
(Million Dollars)

	1999	2000	2001	3-Year Average[e]
All Countries	4,778	44,869	10,308	19,985
Canada	-66	1,498	241	558
Europe	5,294	40,657	6,385	17,445
Netherlands	260	903	-980	61
Switzerland	370	713	(d)	361
United Kingdom	4,301	39,578	(d)	14,626
Latin America and OWH[a]	165	1,133	3,374	1,557
United Kingdom Islands, Caribbean	303	-552	3,094	948
Africa	18	(d)	13	10
Middle East	-8	(d)	-379	-129
Asia and Pacific	-624	-6	674	15
Japan	-582	293	307	6
Addenda				
European Union (15)[b]	4,851	39,960	1,694	15,502
OPEC[c]	339	(d)	-110	76

[a]Other Western Hemisphere.

[b]The European Union (15) comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United

[c]OPEC is the Organization of Petroleum Exporting Countries, comprising Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

(d): Data withheld by the Bureau of Economic Analysis to prevent disclosure of individual company information.

[e]Withheld amounts are considered to be zero.

Notes: Foreign direct investment capital inflows consist of equity capital, retained earnings, and intercompany debt inflows to FDI affiliates in the United States. Net amounts are obtained by netting outflows from FDI affiliates against inflows to FDI affiliates. They are recorded at transactions value without a current-cost adjustment. Data for the other energy industries are not available by country.

Source: Bureau of Economic Analysis, "Foreign Direct Investment in the United States," *Survey of Current Business* (Washington, DC, September 2002), Tables 11.1-11.3.

Net FDI capital inflows to the U.S. electric, gas, and sanitary services industry, which is used as a proxy for the electricity industry in this report, fell to $2.9 billion in 2001, although it remained above the levels of the 1994 to 1998 period (Figure 3).[42] FDI inflows to this industry jumped in 1999, when ScottishPower (United Kingdom) acquired PacifiCorp.[43] They then fell in 2000, although several acquisitions of U.S. utilities, including Powergen's (United Kingdom) (since acquired by E.ON of Germany) purchase of LG&E Energy and National Grid's (United Kingdom) (now National Grid Transco) purchase of New England Electric System occurred that year.[44] For the five-year period of 1994-1998, FDI inflows to the electric, gas, and sanitary services industry averaged just $0.8 billion per year. During the eight-year period of 1994 to 2001, inflows to the industry have exceeded those to the petroleum and natural gas industry or 5 percent of the total inflows only in 1999 (Figure 4).

Coal and uranium concentrate mining production continue to be negligible parts of the total net FDI capital inflows to the United States. Net inflows to the coal mining and coal mining services industries in the 1994 to 2001 period were -$1.1 billion; that is, there was a net withdrawal of FDI capital by foreign investors.[45] The total net FDI inflows to the other metallic ores mining industries between 1994 and 2001, which would include uranium concentrate mining production, were $0.3 billion, or 0.03 percent of the total FDI inflows to the United States over the period.

U.S. Direct Investment Abroad Outflows

The counterpart to FDI capital inflows is U.S. direct investment abroad (DIA) capital outflows, the outflows of capital from U.S. investors to their DIA affiliates overseas. In 2001, net DIA capital outflows from U.S. direct investors were a much larger part of total net international investment outflows from the United States than net FDI inflows were total part of total net international investment inflows. More specifically, DIA outflows accounted for 34 percent of the total investment outflows, double the share the FDI inflows were of total inflows. Other large components of total investment outflows were outflows from U.S. banks, 35 percent of the total, and purchases of foreign corporate stocks by U.S. investors that were not direct investors, 29 percent.

DIA Outflows to World Economy Drop Sharply in 2001

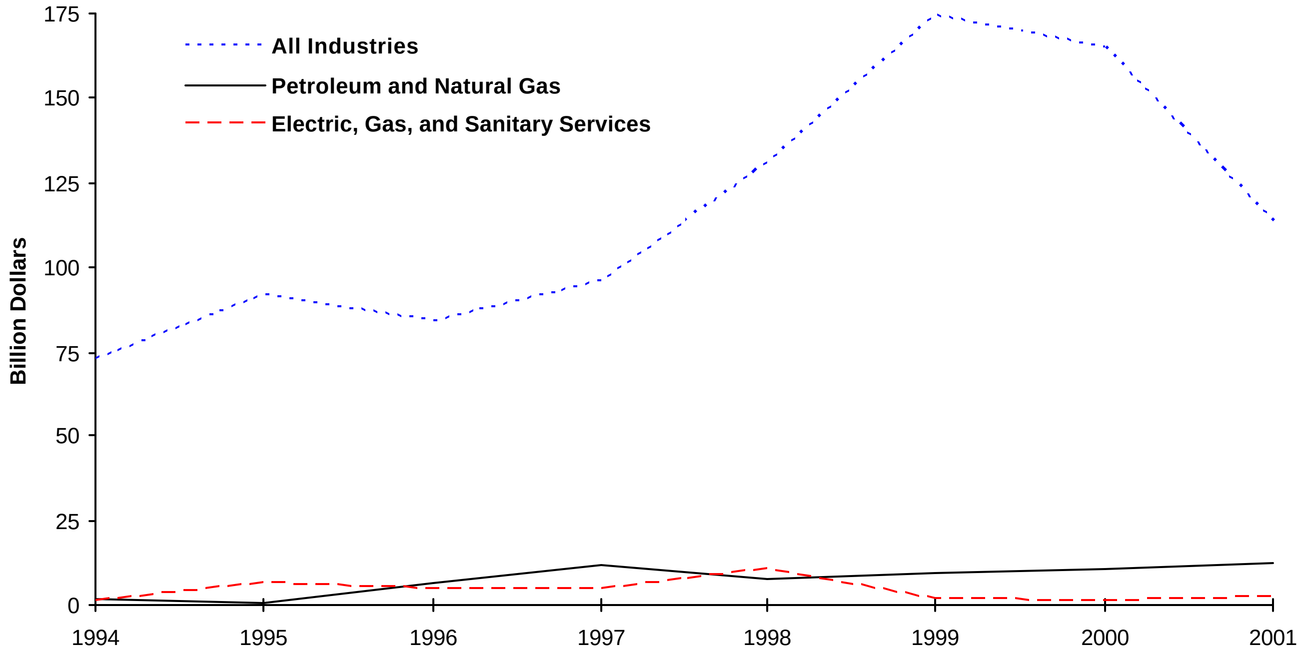
Net DIA capital outflows from the U.S. economy fell pointedly in 2001, declining 31 percent to $114 billion (Figure 2). This drop largely reflected reduced merger and acquisition activity by U.S. companies, which was the result of slower economic growth in the United States. The value of completed mergers and acquisitions of foreign companies by U.S. companies in 2001 fell 32 percent from the previous year.[46] The total DIA outflow to foreign countries had already fallen in 2000, after peaking in 1999. In recent years, DIA outflows, like FDI inflows, grew fastest in 1998 and 1999, at an average annual rate of 35 percent per year. In addition, slower economic growth abroad also lowered earnings reinvested abroad, one of the components of DIA outflows, with reinvested earnings contributing $22 billion less to DIA outflows in 2001 than in 2000.[47]

Net DIA capital outflows to foreign countries were less concentrated than were the sources of FDI inflows, with the largest contribution, 14 percent, going to the Netherlands. These outflows were largely reinvested earnings in DIA affiliates in the finance (except depository institutions), insurance, and real estate industries, especially holding companies, and chemicals, much of the latter in drug manufacturing. Holding companies, which have been the target of an increasing share of DIA outflows during the past two decades, usually have their operating affiliates located in many foreign countries and are active in numerous industries. Other countries that received more than 10 percent of DIA outflows were Canada, the United Kingdom, and Germany. In addition to holding companies and drug manufacturing, other industries that were large recipients of DIA outflows were computer and office equipment manufacturing, especially intercompany debt outflows to German affiliates, petroleum and natural gas (see below), and depository institutions in Mexico that were acquired by U.S. investors.

DIA Outflows to Petroleum and Natural Gas Rise

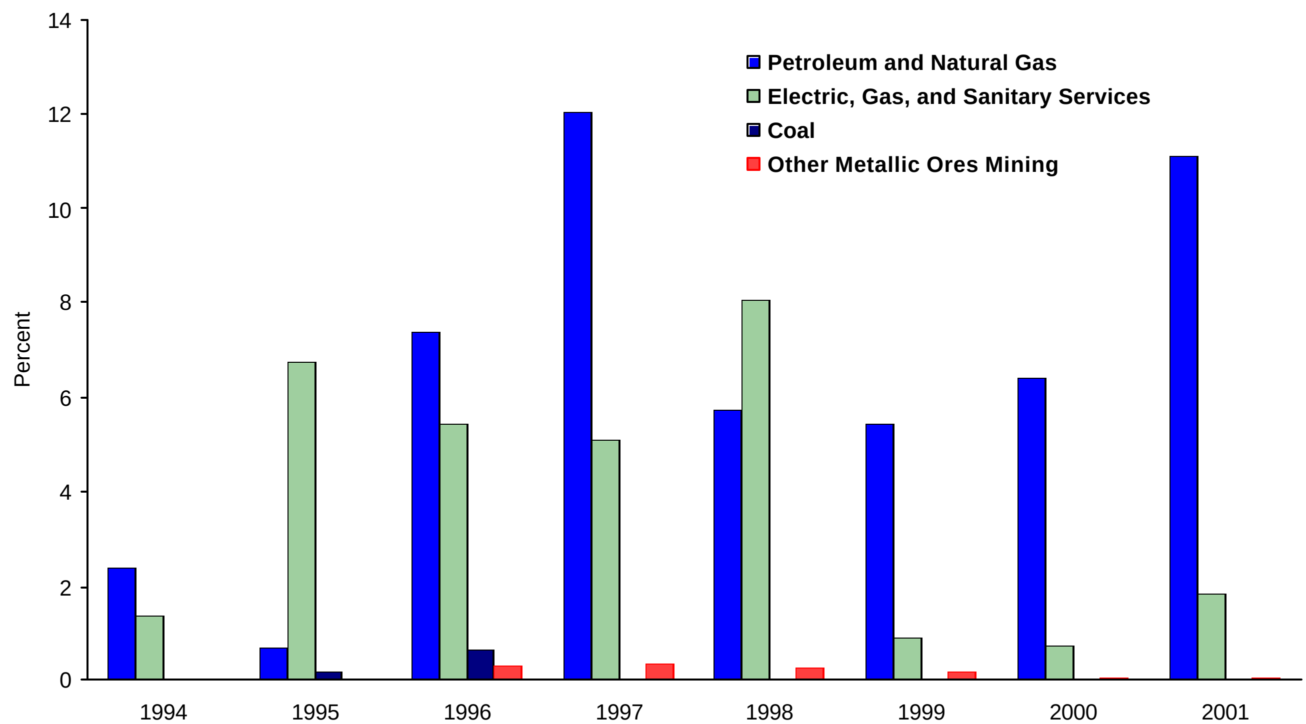
Net DIA capital outflows from the United States to foreign petroleum and natural gas industries rose to $12.7 billion in 2001, even while total DIA outflows fell (Figure 5). This increase continued the upward trend of DIA outflows to petroleum and natural gas and brought them to their highest level in recent history, as U.S. companies acquired a number of foreign petroleum and natural gas companies. The share of net total DIA capital outflows accounted for by flows to foreign petroleum and natural gas industries increased to 11 percent in 2001, largely because total DIA outflows fell substantially (Figure 6). The only recent year in which the share of DIA outflows to petroleum and natural gas was higher was 1997; when total DIA outflows were smaller.

Figure 5. U.S. Direct Investment Abroad Net Capital Outflows, 1994-2001



Sources: Bureau of Economic Analysis , "U.S. Direct Investment Abroad," Survey of Current Business (Washington, DC, September 2002), Table 17, and previous issues.

Figure 6. Shares of U.S. Direct Investment Abroad Net Capital Outflows, 1994-2001



Note: In some years, net DIA outflows to the coal and other metallic ores mining industries were either withheld by the Bureau of Economic Analysis, negative, or not distinguishable at this scale.

Source: Bureau of Economic Analysis, "U.S. Direct Investment Abroad," Survey of Current Business (Washington, DC, September 2002), Table 17, and preceding issues.

The bulk of the net DIA capital outflows to petroleum and natural gas in 2001, at least 89 percent, was for upstream oil and gas operations, historically the focus of DIA outflows to the industry. [48] Companies in the United States have particularly looked to Canada to purchase foreign oil and gas reserves in the last few years (Table 9). Several acquisitions of Canadian exploration and production companies occurred in 1999 and 2001, including Conoco's (now ConocoPhillips) purchase of Gulf Canada Resources, Devon Energy's acquisition of Anderson Exploration, and Amerada Hess's merger with Triton Energy, all in 2001, and Burlington Resources' purchase of Poco Petroleum in 1999 and Canadian Hunter Exploration in 2001. Australia was the recipient of the second highest average annual DIA outflows to petroleum and natural gas in the 1999 to 2001 period, with $4.4 billion in DIA outflows in 2000 alone. However, no major acquisitions of petroleum and natural gas assets in Australia by U.S. companies have been reported for that year.

Net DIA capital outflows to foreign electric, gas, and sanitary services industries rose to $1.8 billion in 2001 but have remained below $2 billion per year since 1998 (Figure 5). These amounts were higher in the 1995 to 1997 period than in the 1998 to 2001 period, signaling a cooling of U.S. investor's interest in electricity operations abroad. This pattern was in large part due to a reversal of DIA investments by U.S. utilities, which purchased and subsequently sold a sizeable number of electricity assets in the United Kingdom during the 1995 to 2001 period. Outflows to electric, gas, and sanitary services peaked in 1998, when Texas Utilities (now TXU) won a bidding war with PacifiCorp for the Energy Group (United Kingdom), a regional electric and gas utility, subsequently sold by TXU in 2002.[49] The share of DIA outflows to electric, gas, and sanitary services industries rose to 1.9 percent of total DIA outflows in 2001 (Figure 6).

Like net total FDI capital inflows to the U.S. coal industry, net total DIA capital outflows to foreign coal industries were negative over the 1994 to 2000 period.[50] Although net DIA outflows reached a positive $0.7 billion in 1996, U.S. investors made a net withdrawal of $0.6 billion from DIA affiliates in the industry over the entire period. Total DIA outflows between 1994 and 2001 to other metallic ores mining industries were a negligible $1.3 billion. When positive, outflows to these two industries have been below 1 percent of the total DIA outflows in every year between 1994 and 2001 (Figure 6).

Trends in FDI and DIA Flows in Petroleum and Natural Gas Differ Markedly

The trends in total net FDI and DIA capital flows to all industries fell sharply in 2001 following strong upward trends in recent years (Figure 2). So too have the trends in FDI and DIA flows to electricity, with FDI inflows surging in 1999, but falling back in 2000 and 2001, while DIA outflows surged in 1998, but were much lower in the 1999 to 2001 period (Figure 7). In contrast, FDI inflows to petroleum and natural gas surged in 1998 and 2000, with the acquisition of two major, vertically integrated U.S. petroleum and natural gas companies (Amoco and ARCO) by a single foreign buyer (BP) expanding its U.S. presence in most segments of the industry. FDI inflows in those years surged to levels an order of magnitude above those of the previous years. Less affected by singularly large acquisitions, DIA outflows to petroleum and natural gas have gradually trended upward, with several mid-sized U.S. companies, mostly upstream, expanding their portfolios of oil and gas reserves beyond the borders of the United States, especially in Canada.

Table 9. U.S. Direct Investment Abroad Net Capital Outflows to Foreign Petroleum and Natural Gas Industries by Selected Countries, 1999-2001
(Million Dollars)

	1999	2000	2001	3-Year Average[e]
All Countries	9,481	10,594	12,668	10,914
Canada	4,260	3,055	8,088	5,134
Europe	3,688	-302	1,217	1,534
Germany	307	610	191	369
Netherlands	426	-68	1,263	540
Norway	410	388	113	304
United Kingdom	1,268	-830	-1,278	-280
Latin America and OWH[a]	1,386	-3	718	700
Brazil	-247	-316	-45	-203
Panama	40	569	-23	195
Trinidad and Tobago	273	-13	397	219
Venezuela	1,147	438	100	562
Africa	-355	396	1,750	597
Egypt	94	497	1,088	560
Nigeria	-233	-495	955	76
Middle East	-366	138	501	91
Asia and Pacific	20	7,208	507	2,578
Australia	475	4,380	987	1,947
India	-562	-56	-6	-208
Indonesia	-591	1,312	-14	236
Thailand	547	155	328	343
International	848	101	-113	279
Addenda				
Eastern Europe[b]	632	-563	670	246
European Union (15)[c]	2,494	2	287	928
OPEC[d]	-798	1,782	1,790	925

[a]Other Western Hemisphere

[b]Eastern Europe comprises Albania, Armenia, Azerbaijan, Belarus, Bulgaria, Czech Republic, Estonia, Georgia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, Russia, Slovakia, Tajikistan, Turkmenistan, Ukraine, and Uzbekistan.

[c]The European Union (15) comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United

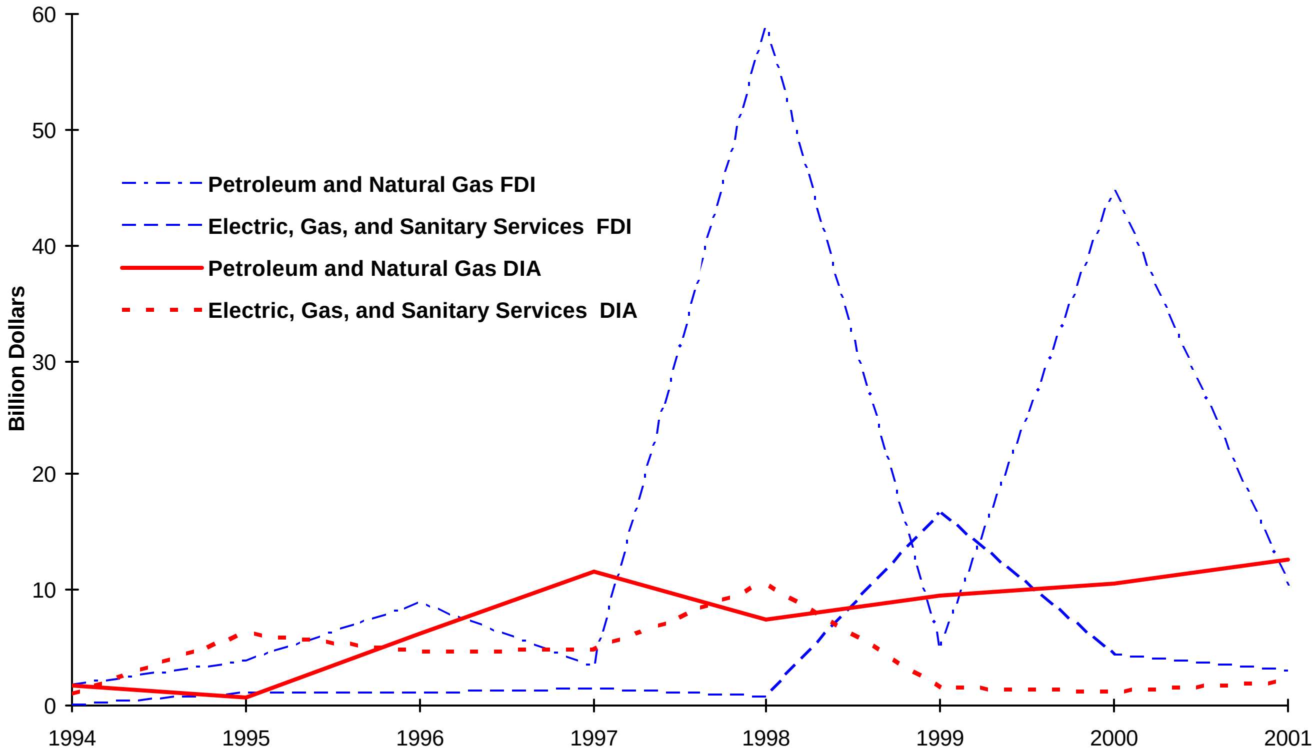
[d]OPEC is the Organization of Petroleum Exporting Countries, comprising Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.

[e]Withheld amounts are considered to be zero.

Notes: Direct investment abroad capital outflows consist of equity capital, retained earnings, and intercompany debt outflows to DIA affiliates overseas. Net amounts are obtained by netting inflows from DIA affiliates against outflows to DIA affiliates. They are recorded at transactions value without a current-cost adjustment. Data for the other energy industries are not available by country.

Source: Bureau of Economic Analysis, "U.S. Direct Investment Abroad," *Survey of Current Business* (Washington, DC, September 2002), Tables 11.1-11.3.

Figure 7. U.S. Direct Investment Abroad and Foreign Direct Investment in the United States Net Capital Flows, 1994-2001



Source: Bureau of Economic Analysis, "Foreign Direct Investment in the United States" and "U.S. Direct Investment Abroad," Survey of Current Business (Washington, DC, September 2002), Tables 17, and previous issues.

Endnotes

[1] The FDI-affiliate companies included in this report include all of the U.S. energy companies that could be determined to be FDI affiliates from publicly available information by the Energy Information Administration.
[2] The U.S. International Investment and Trade in Services Survey Act stipulates that "ownership or control of 10 percent or more of an enterprise's voting securities is considered evidence of a lasting interest in or a degree of influence over [the enterprise's] management sufficient to constitute direct investment. Thus, foreign direct investment in the United States is defined as the ownership or control, directly or indirectly, by one foreign [entity] of 10 percent or more of the voting securities of an incorporated U.S. business enterprise, or the equivalent interest in an unincorporated U.S. business enterprise." Alicia M. Quijano, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (Washington, DC, February 1990), p. 29.
[3] The percentage amount is, of necessity, arbitrary, because no exact percentage of ownership is necessary to achieve control of a company. Even ownership of greater than 50 percent of a company may be insufficient for control, because agreements among the owners may require the approval of more than a majority for some actions to be taken. For further discussion and a comprehensive analysis of FDI in the United States, see Edward M. Graham and Paul R. Krugman, *Foreign Direct Investment in the United States*, 3rd ed. (Washington, DC: Institute for International Economics, 1995).
[4] BP America is the leading FDI-affiliate in petroleum, so its changes often notably affect the totals.
[5] BP, 2001 Report to the U.S. Securities and Exchange Commission on Form 20-F, p. 27.
[6] BHP Billiton, 2002 Operations and Financial Review, p. 38.
[7] Meridian Resource, 2001 Report to the U.S. Securities and Exchange Commission on Form 10-K, p. 20.
[8] Nexen, 2001 Report to the U.S. Securities and Exchange Commission on Form 10-K, p. 6.
[9] Total Fina Elf, 2001 Factbook, p. 52.
[10] Consol Energy, 2001 Report to the U.S. Securities and Exchange Commission on Form 10-K, p. 14.
[11] Hunt Oil, http://www.huntoil.com/history.asp, March 5, 2003.
[12] BP, 2001 Annual Report, p 2., 2001 Report to the U.S. Securities and Exchange Commission on Form 20-F, p 41, and Energy Information Administration, *Petroleum Supply Annual 2001*, vol. 1, DOE/EIA-0340(2001)/1 (Washington, DC, June 2002), Table 49.
[13] Shell Deer Park, Press Release, May 2, 2001.
[14] BP, 2001 Report to the U.S. Securities and Exchange Commission on Form 20-F, p. 44.
[15] Uranium concentrate mining production does not include the production of uranium hexafluoride or enriched uranium.
[16] Cameco, 2001 Annual Information Form, p. 9.
[17] BHP Billiton, 2002 Report to the U.S. Securities and Exchange Commission on Form 20-F, p. 37.
[18] COGEMA, 2000 Annual Report, p. 12.
[19] Rio Tinto, 2001 Annual Report, p. 34.
[20] Consol Energy, 2001 Report to the U.S. Securities and Exchange Commission on Form 10-K, p. 55.
[21] ScottishPower, 2002 Report to the U.S. Securities and Exchange Commission on Form 20-F, p. 11.
[22] Exelon, 2001 Report to the U.S. Securities and Exchange Commission on Form 10-K, p. 26.
[23] TransCanada Pipelines, 2001 Report to the U.S. Securities and Exchange Commission on Form 40-F, p. 14 and 2001 Annual Report, p. 27.
[24] International Power, 2001 Annual Report, p. 8.
[25] Data for 2001 were not available for two large, FDI-affiliate refiners, Equilon Enterprises and Motiva Enterprises.
[26] BP, 2001 Report to the U.S. Securities and Exchange Commission on Form 20-F, p. F-69.
[27] Royal Dutch/Shell, 2001 Report to the U.S. Securities and Exchange Commission on Form 20-F, p. G29.
[28] The two companies are not publicly traded and thus are not required to provide public financial statements by the Securities and Exchange Commission.
[29] Texaco, one of the founding partners of Equilon and Motiva, merged with Chevron in October 2001, and the merged company divested its interests in Equilon (now Shell Oil Products US) and Motiva to its former partners in 2002.
[30] For a discussion of the methodology and data on FDI compiled by the Bureau, see Bureau of Economic Analysis, "Foreign Direct Investment in the United States, Final Results from the 1997 Benchmark Survey" (June 2001).
[31] Another is the FDI position, which is the "value of [foreign] direct investors' equity [including retained earnings] in, and net outstanding loans to, their [FDI] affiliates." See Maria Borga and Daniel R. Yorgason, "Direct Investment Positions for 2001, Country and Industry Detail," *Survey of Current Business* (July 2002), p. 26. FDI capital inflows are discussed in this report because the FDI position data that are available by industry and country are only based on book values, not transactions values. Changes in book values may not accurately represent actual FDI capital inflows.
[32] Net FDI capital inflows are annual net international capital flows. They do not include the FDI affiliate's operating expenditures, allowance for depreciation, or changes in the value of capital owned.

[33] Elena L. Nguyen, "The International Investment Position of the United States at Yearend 2001," *Survey of Current Business* (July 2002), Table 1.

[34] The net FDI capital inflows amounts used in comparison to all international investment inflows amounts differ somewhat from those presented in the remainder of this report because the FDI inflows in the international transactions accounts include a current-cost adjustment to depreciation, while those in the direct investment accounts do not. See the preceding article and Bureau of Economic Analysis, "Foreign Direct Investment in the United States, Detail for Historical-Cost Position and Related Capital and Income Flows, 2001," *Survey of Current Business* (September 2002), pp. 38-40 for further discussion.

[35] "2002 M&A Profile," *Mergers & Acquisitions, The Dealmaker's Journal*, (February 2002), p. 15.

[36] For further discussion of FDI inflows in 2001, see Maria Borga and Daniel R. Yorgason, "Direct Investment Positions for 2001, Country and Industry Detail," *Survey of Current Business* (July 2002), pp. 30-31.

[37] Bureau of Economic Analysis, "Foreign Direct Investment in the United States, Detail for Historical-Cost Position and Related Capital and Income Flows, 2001," *Survey of Current Business* (September 2002), Table 16.

[38] The Bureau of Economic Analysis does not release information on the direct investment flows in individual transactions.

[39] For more information about these mergers, see Energy Information Administration, "*Foreign Direct Investment in U.S. Energy in 1998*," http://tonto.eia.doe.gov/FTPROOT/financial/fdi98.pdf (November 2000), pp. 2-4, and "*Sharp Increase in Acquisitions by Direct Foreign Investors of U.S. Energy Assets in 2000 Due to Purchase of Integrated U.S. Petroleum Company*," http://www.eia.doe.gov/finance/fdi/advance/adindex.html (September 27, 2001).

[40] For more about this acquisition, see Energy Information Administration, "*Acquisition of U.S. Energy Assets by Foreign Investors in Lowest Since 1997*," http://www.eia.doe.gov/finance/fdi/advance/2001/adindex.html (September 10, 2002).

[41] Historically, the Netherlands, largely because Royal Dutch/Shell (Netherlands and United Kingdom) has a major U.S. subsidiary, also has been a large source of inflows.

[42] Gross property, plant, and equipment for the FDI affiliates in the United States in 1997 in the electric power generation, transmission, and distribution segments was 48 percent of the total for all utilities, while the water, sewage, and other systems segment was 27 percent, and the natural gas distribution segment was 24 percent. Bureau of Economic Analysis, "Foreign Direct Investment in the United States, Final Results from the 1997 Benchmark Survey" (June 2001), Table A-1.

[43] For more information about this purchase, see Energy Information Administration, "*U.S. Energy Assets Attract Foreign Investment in 1999*," http://www.eia.doe.gov/finance/fdi/adindex.html (March 23, 2001).

[44] For more information about these mergers, see Energy Information Administration, "*Sharp Increase in Acquisitions by Direct Foreign Investors of U.S. Energy Assets in 2000 Due to Purchase of Integrated U.S. Petroleum Company*," http://www.eia.doe.gov/finance/fdi/advance/adindex.html (September 27, 2002).

[45] Bureau of Economic Analysis, "Foreign Direct Investment in the United States, Detail for Historical-Cost Position and Related Capital and Income Flows, 2001," *Survey of Current Business* (September 2002), Table 17, and previous issues.

[46] 2002 M&A Profile," *Mergers & Acquisitions, The Dealmaker's Journal*, February 2002, p. 15.

[47] For further discussion of DIA outflows in 2001, see Maria Borga and Daniel R. Yorgason, "Direct Investment Positions for 2001, Country and Industry Detail," *Survey of Current Business* (July 2002), pp. 28-30.

[48] Because of the industry classifications used, some upstream outflows are combined with downstream outflows. Bureau of Economic Analysis, "U.S. Direct Investment Abroad," Detail for Historical-Cost Position and Related Capital and Income Flows, 2001," *Survey of Current Business* (September 2002), Table 17.

[49] For more information about this merger, see Energy Information Administration, "*Foreign Direct Investment in U.S. Energy in 1998*," http://tonto.eia.doe.gov/FTPROOT/financial/fdi98.pdf (November 2000), pp. 20-22.

[50] Bureau of Economic Analysis, "U.S. Direct Investment Abroad," Detail for Historical-Cost Position and Related Capital and Income Flows, 2001," *Survey of Current Business* (September 2002), Table 17, and previous issues.