

U.S. Natural Gas Imports and Exports –1998

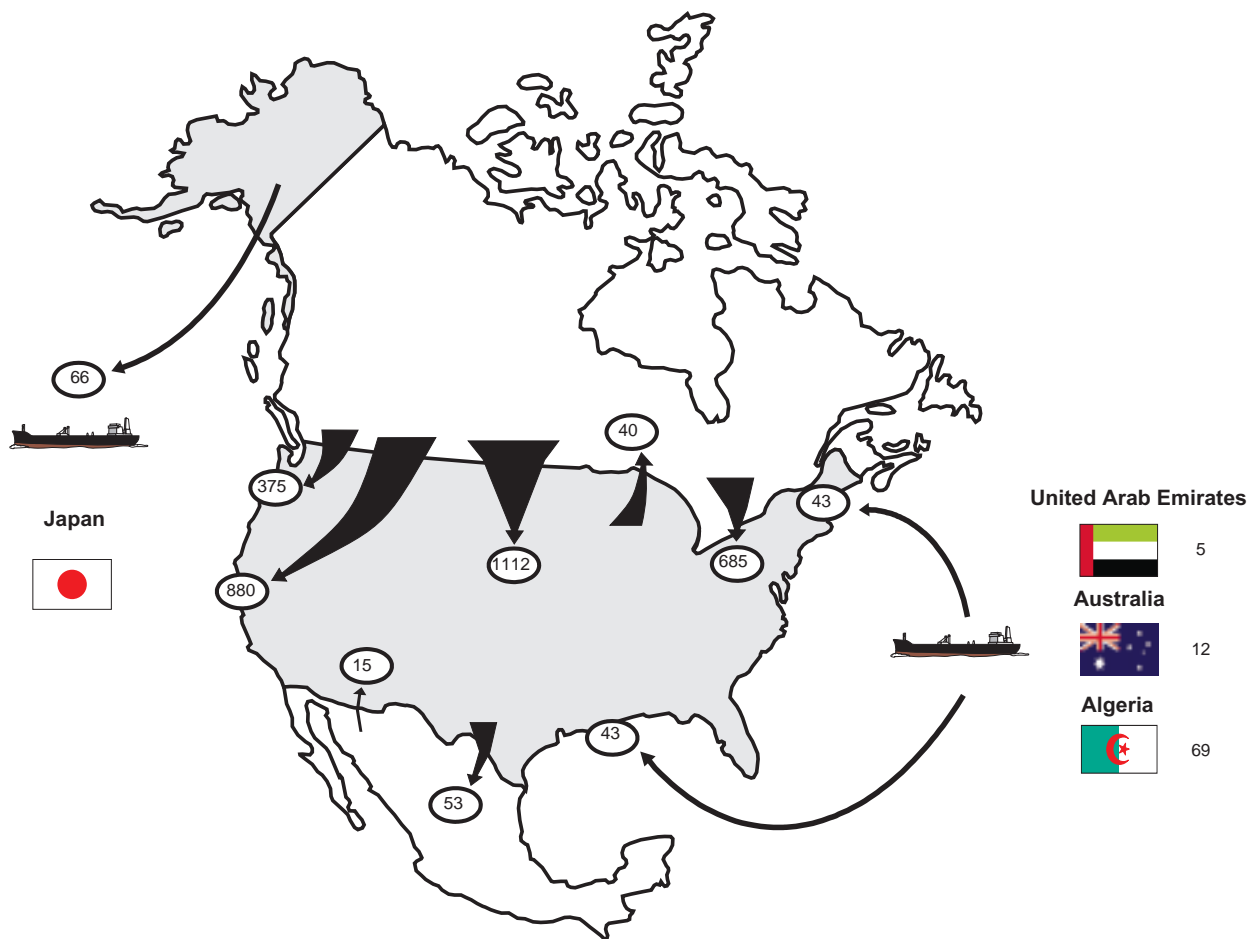
By Linda Cook, Sheila M. Darnell, and Ann M. Ducca

Net imports of natural gas increased for the twelfth consecutive year, moving up 5 percent between 1997 and 1998 to 3.0 trillion cubic feet. Net imports contributed 14 percent of 1998 U.S. gas consumption. Pipeline imports from Canada and liquefied natural gas (LNG) imports from all sources moved higher, while imports from Mexico declined. A substantial drop in exports to Canada (29 percent) was more than offset by increased exports to Mexico and LNG exports to Japan.

Some of the highlights of 1998 for U.S. natural gas imports and exports are:

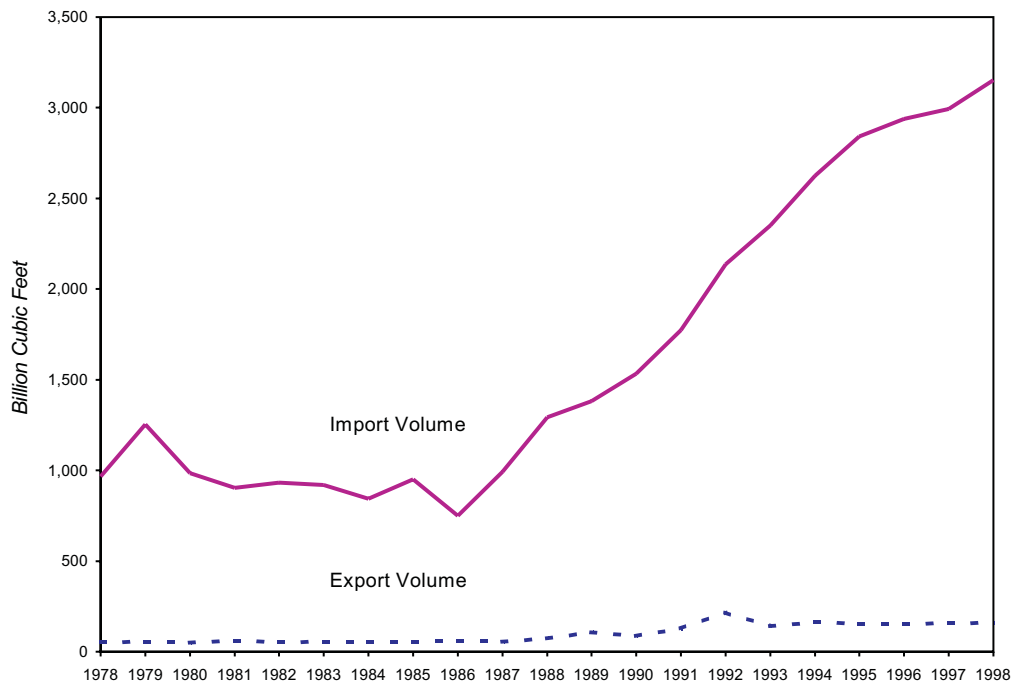
- Imports from Canada, by far the primary foreign supplier of gas, reached nearly 3.1 trillion cubic feet, a record level more than double the 1990 level. With additional crossborder pipeline capacity available, U.S. imports from Canada climbed by 153 billion cubic feet in 1998. This 5-percent increase was the highest annual growth rate since 1995.

**Figure SR1. Flow of U.S. Natural Gas Imports and Exports, 1998
(Billion Cubic Feet)**



Source: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Figure SR2. Total U.S. Natural Gas Imports and Exports, 1978-1998



Sources: 1994 and Earlier Years: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 1998: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

- LNG imports totaled 85 billion cubic feet, the highest level since 1983 and 10 percent more than the 1997 level. Spot market purchases of LNG from Australia and the United Arab Emirates (UAE) were up about 40 percent and now account for about 20 percent of the total U.S. imports of LNG.
- Mexico continued to be a net importer of U.S. natural gas. U.S. exports to Mexico were 53 billion cubic feet, an increase of 38 percent from 1997 and the highest level since 1995. Exports to Mexico rose, primarily because of increased demand for fueling the gas-fired Samalayuca Power Plants in northern Mexico. For the first time LNG was exported to Mexico, with a small amount, 33 million cubic feet, shipped by truck.
- U.S. exports of natural gas totaled 159 billion cubic feet, 1 percent higher than in 1997.

Trade with Canada

Natural gas imports from Canada continued to increase for the 12th consecutive year, reaching 3.1 trillion cubic feet and accounting for 97 percent of total U.S. imports (Table SR2). Accordingly, net imports represented a growing share of U.S. natural gas consumption, 14 percent in 1998 (Figure SR5). The average price of imports from Canada dropped to \$1.95 per thousand cubic feet, 9 percent below the 1997 price of \$2.15 per thousand cubic feet (Table SR2). The increased flow of imports occurred despite the declining prices as Canadian producers took advantage of expanded marketing opportunities posed by the opening of new crossborder capacity. Despite this 9-percent drop, the average price remained 32 percent above the low of \$1.48 per thousand cubic feet in 1995 (Table SR7). (The 1995 price was the lowest price seen from 1976 through 1998.) The decrease in Canadian import prices followed the trend in the U.S. wellhead prices. The 1998

Figure SR3. Average Price of U.S. Natural Gas Imports, 1980-1998

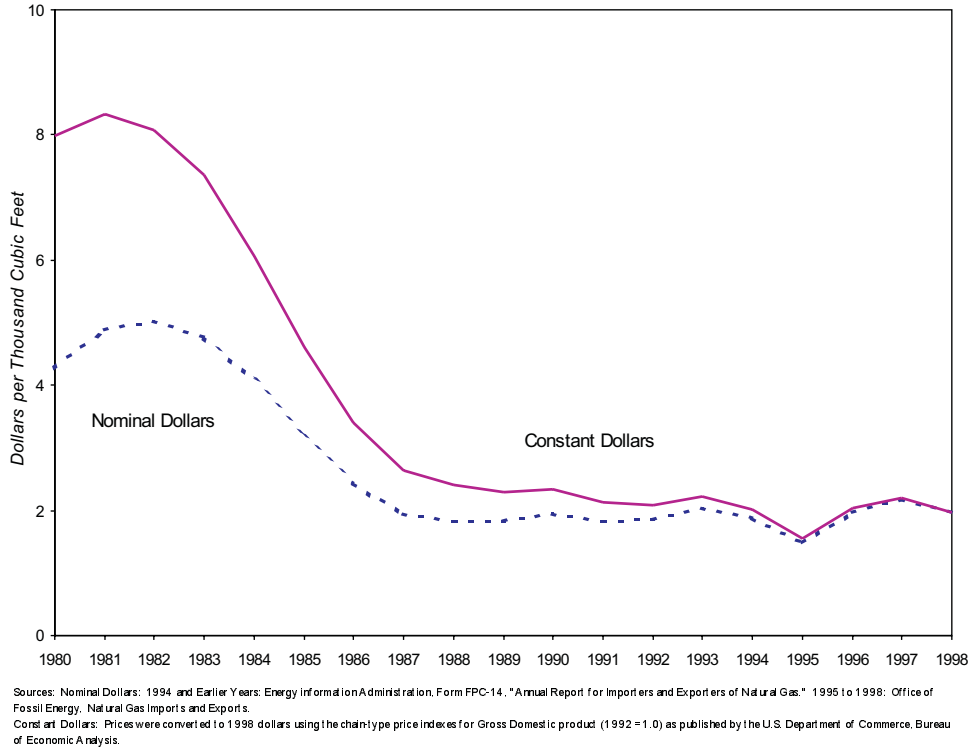


Figure SR4. Average Price of U.S. Natural Gas Exports, 1980-1998

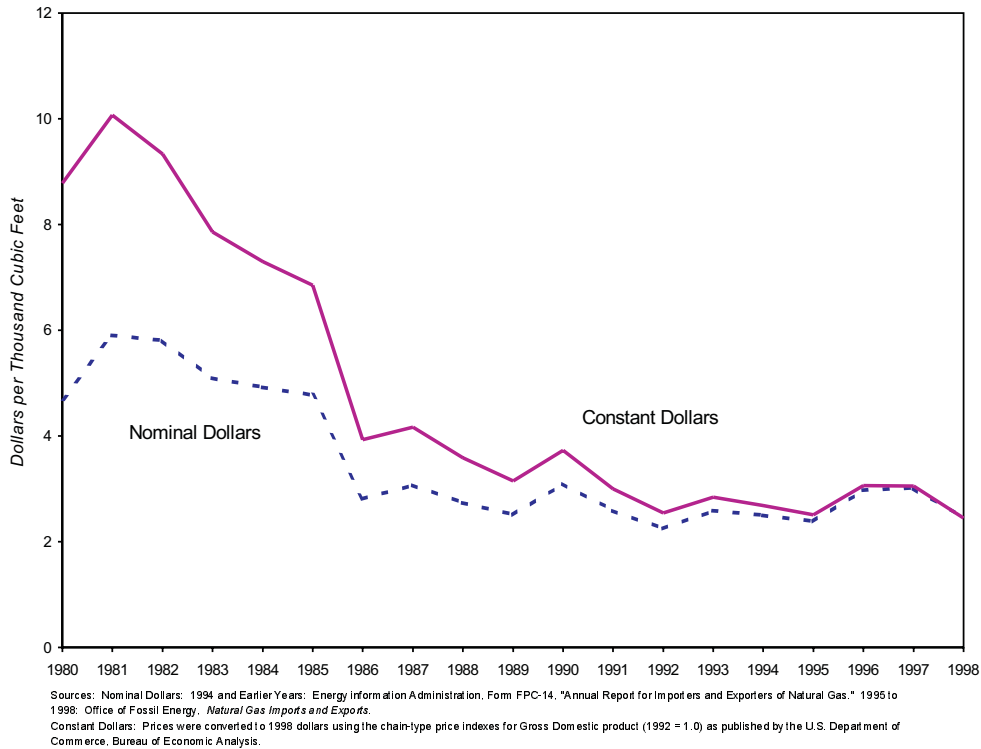
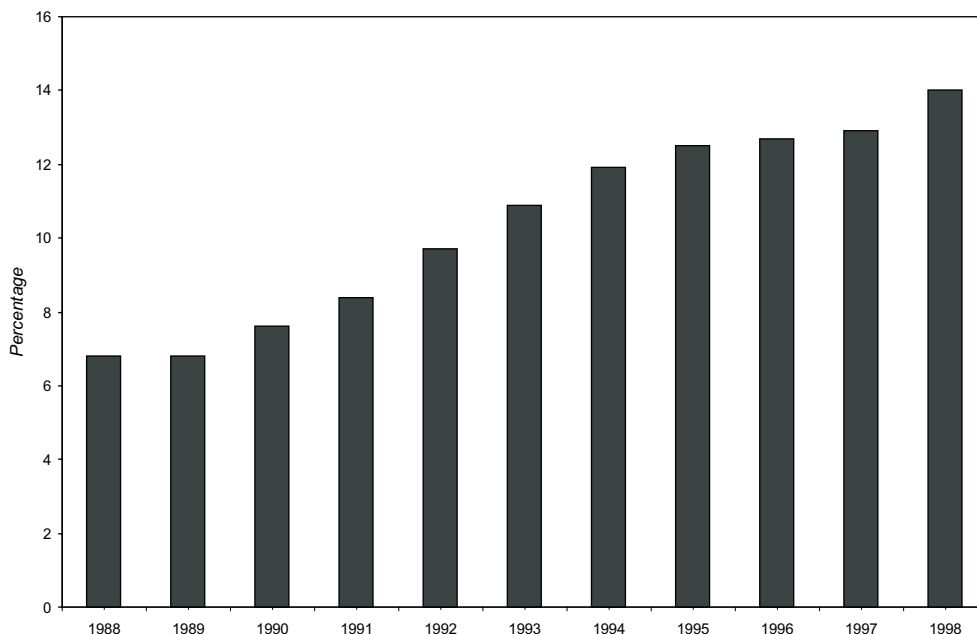


Figure SR5. U.S. Net Imports as a Percentage of Total Consumption, 1988-1998



wellhead price in the United States was 16 percent less than the 1997 price and 26 percent above the 1995 price. (See Table 4 in the *Natural Gas Monthly* for wellhead prices.)

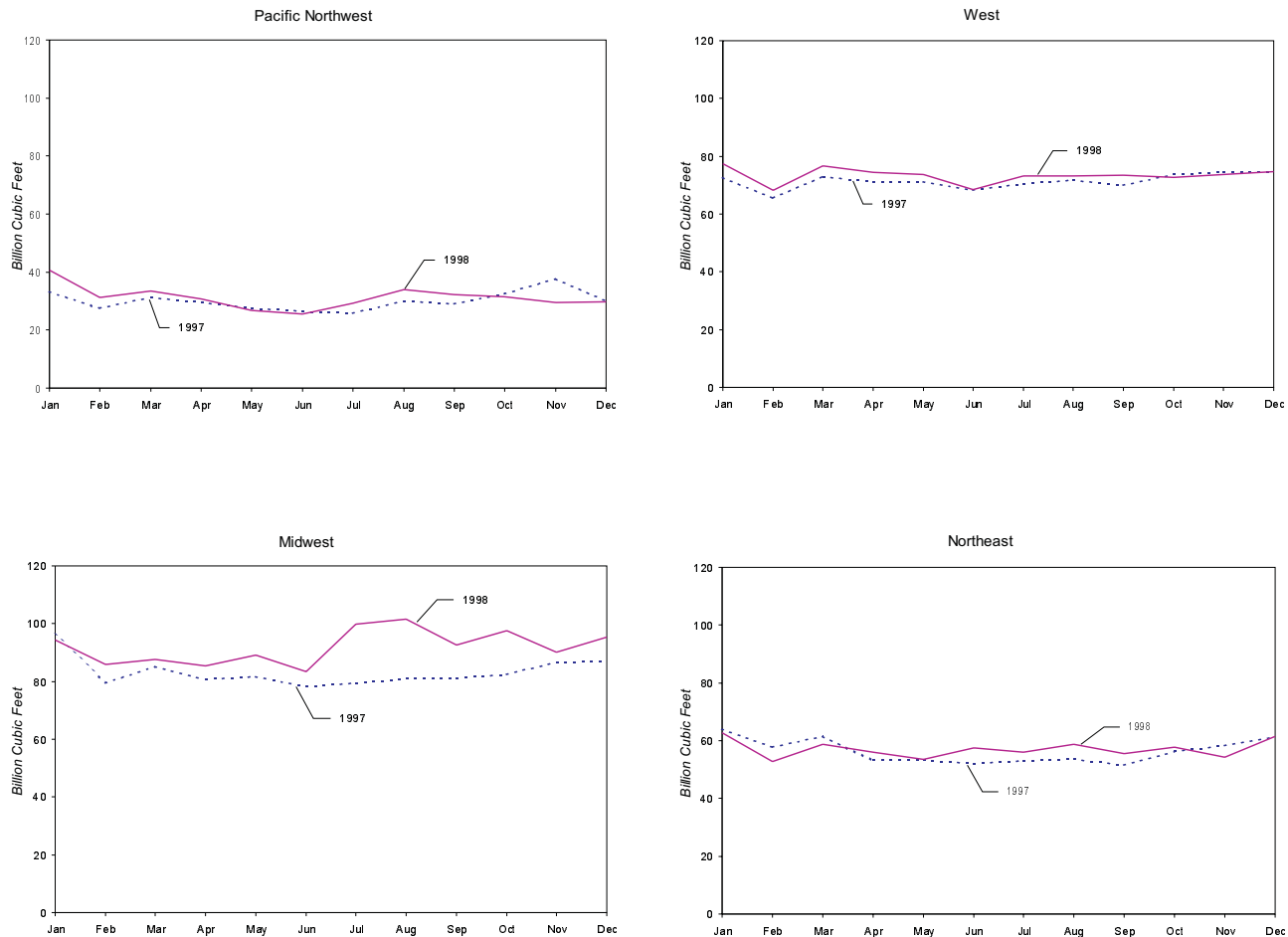
The growth rate in Canadian imports was 5 percent, much higher than the 1 and 2 percent increases seen in 1997 and 1996, respectively. This level of increase occurred principally because of pipeline expansions and high utilization rates of existing capacity of the pipelines that bring the gas across the border. Gas imports are bounded by the available crossborder capacity. Three pipeline expansion projects in 1998 added substantial amounts of new import capacity from Canada to the United States. The 71.5 mile Great Lakes Gas Transmission expansion project, completed in November 1998, added 126 million cubic feet per day of firm transportation capacity. It extends from Manitoba, Canada, to St. Clair, Michigan. Northern Border's Chicago Project was completed in December 1998 and began flowing gas into the United States in 1999. This project increased capacity from the U.S. Canadian border at Port of Morgan, Montana, into Iowa by 700 million cubic feet per day and extended the Northern Border

pipeline system from eastern Iowa into Illinois just south of Chicago. In the Northeast, the Iroquois Gas Transmission System added 35 million cubic feet per day to its 858 million cubic feet per day of import capability with the installation of a new compressor station at Athens, New York.

The Portland Natural Gas Transmission System (PNGTS) project, scheduled for late 1998 but delayed until March 1999, is capable of importing up to 178 million cubic feet per day at the border near Pittsburg, New Hampshire. The destination of the line is Westbrook, Maine, where it connects with the recently completed joint PNGTS/Maritimes and Northeast Pipeline located in southeastern Maine. The Portland project replaces the existing Portland Pipeline, a reconditioned oil pipeline that is now being converted back to oil use.

Planned expansions for 1999-2000 would add approximately 3.7 billion cubic feet per day of Canadian export capacity, principally into the U.S. Midwest and Northeast. These proposals are principally driven by ever-increasing demand in U.S. markets and by Canadian natural gas

Figure SR6. U.S. Natural Gas Pipeline Imports from Canada by Regional Point of Entry, 1997-1998



Source: Office of Fossil Energy, U.S. Department of Energy, Natural Gas Imports and Exports.

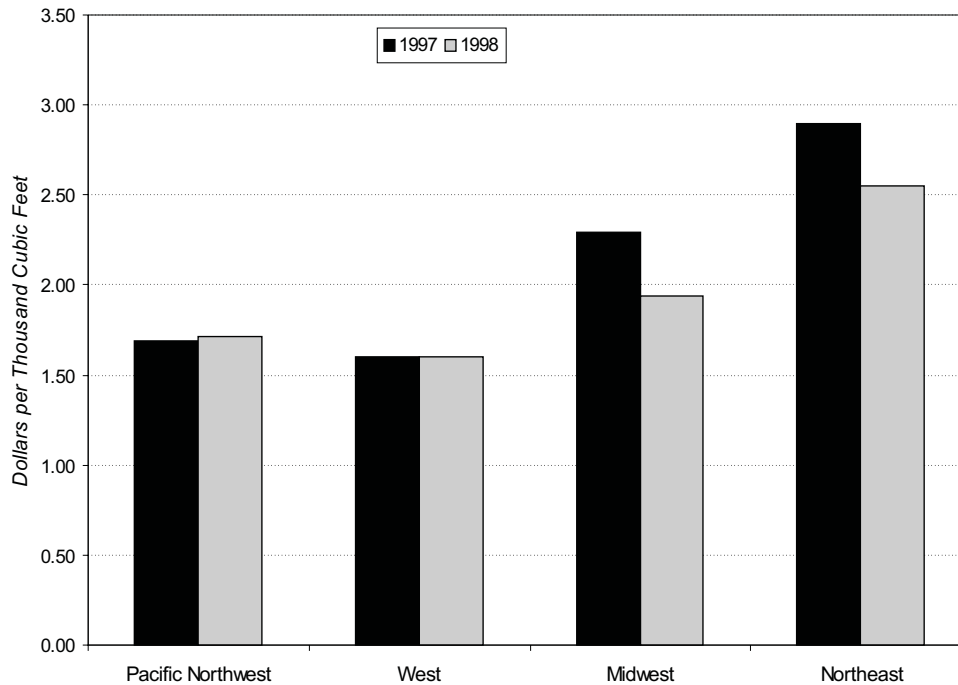
producers seeking market outlets for their expanding production capabilities. The Alliance Pipeline, designed to bring rising levels of production from western Canada into the U.S. Midwest, will add capacity of 1.3 billion cubic feet per day. The terminus of the line is south of Chicago, Illinois. This project is enhanced by its unique ability to ship “wet” natural gas, which is natural gas that has not been processed to remove hydrocarbon liquids. Capacity additions within the United States are also proposed for moving Canadian and domestic gas from the Midwest to the Northeast.

Later this year, supplies from Canada will be augmented with production from the Sable Island

offshore project in the northern Atlantic. This project is seen as a change with potentially far-reaching consequences as it will be the first commercial production of natural gas from a major Atlantic field off North America. The Maritimes and Northeast Pipeline System will bring these gas supplies to New England beginning in November 1999. It will be capable of transporting up to 440 million cubic feet per day of gas.

There are 20 principal entry points for Canadian gas imports into the United States, and these are grouped in this report into four areas: the Pacific Northwest, the West, the Midwest, and the Northeast. From 1997 to 1998, natural gas

Figure SR7. Average Price of U.S. Natural Gas Pipeline Imports from Canada by Regional Point of Entry, 1997-1998



Source: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*

imports increased into all of these areas, but not at all of the entry points. These regional increases were very moderate (4 percent or less), except in the Midwest. Reflecting the capacity increases from Great Lakes Gas Transmission at Noyes, Minnesota, and the Northern Border Chicago Project, the Midwest entry points showed the largest volumetric increase in 1998, 106 billion cubic feet, up 10 percent from the 1997 level (Table SR6). Of all the areas, the Midwest received the greatest volume of imports, 1,112 billion cubic feet. The average border price through the 11 Midwest entry points located in Michigan, Minnesota, Montana, and North Dakota fell by 15 percent, from \$2.28 to \$1.94 per thousand cubic feet. Imports to the Northeast rose by 1 percent to 685 billion cubic feet. Imports enter the Northeast through seven entry points in New York and Vermont at an average price of \$2.55 per thousand cubic feet, the highest of the regions. This was 12 percent lower than the comparable 1997 price, but 59 percent more than the price paid at Eastport,

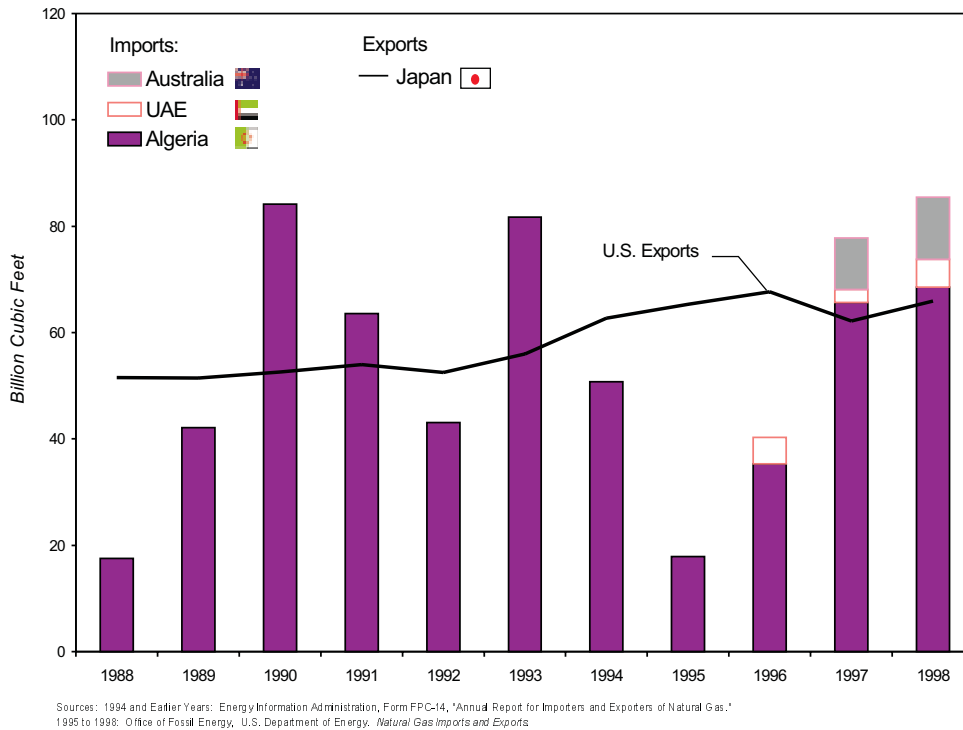
Idaho (\$1.60 per thousand cubic feet), the only entry point in the West.

Canadian gas imports into the Pacific Northwest region reached 375 billion cubic feet in 1998, 4 percent above last year's level. Sumas, Washington, is the predominant entry point for this region. The border price at Sumas showed a very modest increase of 1 percent, from \$1.69 per thousand cubic feet in 1997 to \$1.71 in 1998. The West region has only one entry point, located at Eastport, Idaho, which showed imports of 880 billion cubic feet in 1998, a 3-percent increase over the 1997 level. Most of these imports are marketed in California. The border price at Eastport remained unchanged from 1997 to 1998 at \$1.60 per thousand cubic feet, the lowest price of the four areas.

Natural gas exports to Canada fell to 40 billion cubic feet, a 29-percent decrease from the 1997 level. Over 90 percent of these exports crossed the border at two points of exit in Michigan: Detroit and St. Clair. The average price was \$2.25 per

¹ U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports, Fourth Quarter Report 1998*, DOE/FE-0388 (March 1999).

Figure SR8. U.S. Imports and Exports of Liquefied Natural Gas (LNG), 1988-1998



thousand cubic feet, 11 percent less than the 1997 price (Table SR3). Exports to Canada represented 43 percent of total U.S. natural gas pipeline exports during 1998.

Trade with Mexico

During 1998, the United States exported 53.1 billion cubic feet of natural gas to Mexico, the highest level since 1995 (Tables SR5 and SR9). The price was \$2.04 per thousand cubic feet, 17 percent lower than last year and the lowest price since 1995.

More than half of the exports to Mexico (58 percent) crossed the border at Clint, Texas, on the Samalayuca Pipeline, which began operations in December 1997. Most of the gas exported at this exit point is used to fuel the gas-fired Samalayuca Power Plants I and II (23 miles south of Ciudad Juarez), although some of the volumes are sold to Petroleos Mexicanos (PEMEX), the state-owned Mexican national energy company, for distribution in the cities of Juarez and Chihuahua¹. Power Plant II was completed in September 1998, and exports at the Clint, Texas, exit point were at least 46 percent

higher during the last quarter of the year compared with each of the first three quarters.

Also during 1998, a small amount of liquefied natural gas (LNG), 33 million cubic feet, was exported to Mexico for the first time. The LNG originated at a new liquefaction, storage, and distribution facility near Topock, Arizona. It was sent to Sonora, Mexico, by truck and sold to industrial consumers.

The United States imported 15 billion cubic feet of gas from Mexico, 16 percent less than in 1997 (Tables SR2 and SR6). This drop in imports occurred despite a decline in price of 12 percent. Energy officials from PEMEX indicated that they could have exported more but could not find shipping capacity available on the U.S. side of the border.

Although southern Mexico has substantial gas supplies, numerous markets in the northern part of the country can be served more efficiently at present from the readily available supplies on the U.S. system. Exports of U.S. gas primarily provide

supplies to manufacturing/service industries and a growing number of electric generating plants in northern Mexico. Mexican gas consumption and the related demand for U.S. gas could grow, driven by demand growth and regulatory reform that is opening up parts of the industry to foreign investment. In addition, on August 16, 1999, the Mexican government abolished the 4-percent tariff on U.S. gas exports to Mexico. The future of Mexico's gas markets and that of U.S. markets along the southern border likely will continue to become increasingly integrated.

Liquefied Natural Gas

Liquefied natural gas (LNG) imports reached 85 billion cubic feet, the highest level since 1983 and 10 percent above the 1997 level (Tables SR2, SR4 and Figure SR8). Algeria supplied 80 percent of the imports in 1998 under long-term agreements. The other 20 percent were spot purchases from Australia and the United Arab Emirates. By comparison, spot purchases represented 16 percent of total LNG imports in 1997, evidence of the growth of the spot market. The 1998 LNG imports accounted for 3 percent of all U.S. gas imports, but less than 1 percent of total U.S. gas consumption.

The price of LNG imported from Algeria declined from 1997 to 1998 by 6 percent to \$2.51 per thousand cubic feet. The price of United Arab Emirates imports also decreased to \$2.63 per thousand cubic feet. In contrast, the price of Australian imports moved up 13 percent, from \$2.92 per thousand cubic feet in 1997 to average \$3.30 in 1998. Economic difficulties in eastern Asia have resulted in reduced demand for energy in general and LNG in particular, which may explain in part the decline in LNG prices. LNG prices are reported as either "landed," the price at the point of entry, or "tailgate," the price at the point of entry plus regasification charges. (The footnotes in Tables SR2 through SR9 identify how shipment prices are categorized.)

There are two operational LNG receiving terminals in the United States: Lake Charles, Louisiana, and Everett, Massachusetts. LNG imports serve as supplemental gas supplies in the markets located near these facilities. Each of these facilities imported 43 billion cubic feet in 1998 (Table SR6). The Everett, Massachusetts terminal recently completed an expansion of its revaporization capacity in time for the first shipment of LNG from the newly opened liquefaction facility in Trinidad in May 1999. A third receiving facility located at Elba Island, Georgia, has not been in operation since 1982. In July 1999, Sonat Inc. announced plans to reactivate this facility with deliveries to begin in 2002². A fourth facility at Cove Point, Maryland, is currently operating as a peak-service storage facility using domestic gas supplies received from the transmission network, although reopening for importation is being considered.

LNG is exported from southern Alaska to Japan under long-term agreements. During 1998, 66 billion cubic feet of LNG was exported, 6 percent more than in 1997. However, the price of these exports fell by 24 percent to \$2.91 per thousand cubic feet. The sharp drop in price is directly attributed to the overall decline in world oil prices, as the price of this LNG supply is based on the weighted average cost of all crude oil imported by Japan³. In April of this year, this export authorization was extended by the Department of Energy from April 1, 2004, through March 31, 2009.

A number of key developments in 1999 are expected to result in further growth of U.S. LNG imports. The Trinidad and Tobago liquefaction facility and terminal, in construction since 1996, began shipping LNG in May 1999. This project is developing the natural gas resources off the east coast of Trinidad. It has one of the largest project-funding agreements ever to be completed in the Caribbean/Latin American region. This facility is targeting markets in the Northeastern United States, Spain, and Puerto Rico. The other project,

² On August 16, 1999, Enron Americas LNG filed a motion with the Federal Energy Regulatory Commission protesting the award by Sonat LNG to Sonat Energy Services for all of the capacity at the Elba Island terminal. One possible outcome may be that Sonat will be required to have another open season to award this capacity.

³ U.S. Department of Energy, Office of Fossil Energy, *Natural Gas Imports and Exports, Fourth Quarter Report 1998*, DOE/FE-0388 (March 1999).

the EcoElectrica Power Plant in Puerto Rico, began construction in January 1998. EcoElectrica expects to start up in the fall of 1999 and initially to fuel the facility with petroleum products. However, plans call for LNG to be the primary fuel by mid-2000, which will be supplied from Trinidad and other sources.

The presence of a spot market is a substantial development in global LNG trade, as it promotes a more dynamic element in the resolution of current trading difficulties precipitated by the Asian economic crisis. Through the first 6 months of 1999, there have been eight shipments of LNG purchased

on the spot market—two at Everett and six at Lake Charles.

Although the future for global LNG trade is uncertain, LNG imports into the United States have continued above 1998 levels thus far in 1999. The strong level of LNG purchases may be attributed at least in part to the competitive LNG import prices, especially as domestic prices have increased since the beginning of the year. Spot purchases by the United States may increase depending on international supply and demand issues, the capacity of U.S. receiving facilities, and the availability of LNG tankers.

Data Sources

Data for 1995 through 1998 are based on company filings made with the U.S. Department of Energy, Office of Fossil Energy. These filings report data on a monthly level and are received quarterly. The Office of Fossil Energy collects these data as part of its regulatory oversight responsibilities. These data are published by the Office of Fossil Energy in the quarterly report, *Natural Gas Imports and Exports* (DOE/FE-0360).

The data for 1994 and earlier years are taken from Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." The Form FPC-14 was discontinued in 1995. The data reported on Form FPC-14 represented physical movements of natural gas. The data collected by the Office of Fossil Energy are reported on an equity (sales) basis. For 1994 and earlier years, comparisons of the information in this article (physical movements) with the information reported by the Office of Fossil Energy (sales) may show differences because reporting requirements were different. Efforts were made to resolve these differences. Further information about how import and export data are collected is provided in the *Natural Gas Monthly*, Appendix B, "Data Sources."

Table SR1. Historical Summary of U.S. Natural Gas Net Imports, 1955-1998
(Million Cubic Feet)

Year	Total Imports	Total Exports	Net Imports	Total Consumption	Net Imports as Percentage of Total Consumption
1955	10,888	31,029	-	8,693,657	-
1956	10,380	35,963	-	9,288,865	-
1957	37,941	41,655	-	9,846,139	-
1958	135,797	38,719	97,078	10,302,608	0.9
1959	133,990	18,413	115,577	11,321,181	1.0
1960	155,646	11,332	144,314	11,966,537	1.2
1961	218,860	10,747	208,113	12,489,268	1.7
1962	401,534	15,814	385,720	13,266,513	2.9
1963	406,204	16,957	389,247	13,970,229	2.8
1964	443,326	19,603	423,723	14,813,808	2.9
1965	456,394	26,132	430,262	15,279,716	2.8
1966	479,780	24,639	455,141	16,452,403	2.8
1967	564,226	81,614	482,612	17,388,360	2.8
1968	651,885	93,745	558,140	18,632,062	3.0
1969	726,951	51,304	675,647	20,056,240	3.4
1970	820,780	69,813	750,967	21,139,386	3.6
1971	934,548	80,212	854,336	21,793,454	3.9
1972	1,019,496	78,013	941,483	22,101,452	4.3
1973	1,032,901	77,169	955,732	22,049,363	4.3
1974	959,284	76,789	882,495	21,223,133	4.2
1975	953,008	72,675	880,333	19,537,593	4.5
1976	963,768	64,711	899,057	19,946,496	4.5
1977	1,011,002	55,626	955,376	19,520,581	4.9
1978	965,545	52,532	913,013	19,627,478	4.7
1979	1,253,383	55,673	1,197,710	20,240,761	5.9
1980	984,767	48,731	936,036	19,877,293	4.7
1981	903,949	59,372	844,577	19,403,858	4.4
1982	933,336	51,728	881,608	18,001,055	4.9
1983	918,407	54,639	863,768	16,834,914	5.1
1984	843,060	54,753	788,307	17,950,524	4.4
1985	949,715	55,268	894,447	17,280,943	5.2
1986	750,449	61,271	689,178	16,221,296	4.2
1987	992,532	54,020	938,512	17,210,809	5.5
1988	1,293,812	73,638	1,220,174	18,029,588	6.8
1989	1,381,520	106,871	1,274,648	18,800,830	6.8
1990	1,532,259	85,565	1,446,694	18,716,269	7.6
1991	1,773,313	129,244	1,644,068	19,035,156	8.4
1992	2,137,504	216,282	1,921,222	19,544,364	9.7
1993	2,350,115	140,183	2,209,931	20,279,095	10.9
1994	2,623,839	161,738	2,462,101	20,707,717	11.9
1995	2,841,048	154,119	2,686,929	21,580,665	12.5
1996	2,937,413	153,393	2,784,020	21,966,991	12.7
1997	2,994,173	157,006	2,837,167	21,972,770	12.9
1998	3,152,058	159,007	2,993,051	^a 21,354,000	14.0

^a Preliminary data.

- = Not Applicable.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska.

Sources: Total Consumption: *Natural Gas Annual 1990 Volume 2*

for 1955 through 1989; *Natural Gas Monthly* July 1995 for 1989 and 1990, August 1999 for 1991 through 1998. **All Other Data:** 1955-1971: Federal Power Commission, informally collected by letter. 1972-1994: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 1998: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR2. Summary of U.S. Natural Gas Imports, 1997-1998

Source	Volume		Average Btu (Cubic Foot)	Revenue		Average Price							
	(million cubic feet)			Percent Change	(thousand dollars)		(dollars/ thousand cubic feet)		Percent Change	(dollars/ million Btu)		Percent Change	
	1997	1998	1997		1998	1997	1998	1997		1998	1997		1998
Pipeline													
Canada	2,899,152	3,052,073	5.3	1,021	1,021	6,243,102	5,954,906	2.15	1.95	-9.3	2.11	1.91	-9.5
Mexico	17,243	14,532	-15.7	1,013	1,013	39,893	29,554	2.31	2.03	-12.1	2.28	2.01	-11.8
Total	2,916,394	3,066,605	5.2	1,021	1,021	6,282,994	5,984,460	2.15	1.95	-9.3	2.11	1.91	-9.5
LNG													
Algeria	65,675	68,567	4.4	1,100	1,088	175,618	172,260	2.67	2.51	-6.0	2.43	2.31	-4.9
Australia	9,686	11,634	20.1	1,141	1,162	28,315	38,381	2.92	3.30	13.0	2.56	2.84	10.9
Un. Arab Emirates ..	2,417	5,252	117.3	1,115	1,164	9,028	13,806	3.74	2.63	-29.7	3.35	2.26	-32.5
Total	77,778	85,453	9.9	1,106	1,102	212,961	224,447	2.74	2.63	-4.0	2.48	2.38	-4.0
Grand Total	2,994,173	3,152,058	5.3	1,023	1,023	6,495,955	6,208,908	2.17	1.97	-9.2	2.12	1.93	-9.0

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. Prices for LNG imports are reported as "landed," defined as received at the terminal or "tailgate," defined as after regasification at the terminal. Generally, prices for shipments received at Everett, MA are reported as landed and at Lake Charles, LA as tailgate. For 1997 and 1998, the percentages of volumes associated with the type of price are: **Algeria**-1997,

57 percent landed, 43 percent tailgate; 1998, 55 percent landed, 45 percent tailgate. **Australia**-1997, 74 percent landed, 26 percent tailgate; 1998, 39 percent landed, 61 percent tailgate. **United Arab Emirates**-1997, 100 percent landed; 1998, nearly 100 percent tailgate.

Sources: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR3. Summary of U.S. Natural Gas Exports, 1997-1998

Source	Volume		Average Btu (Cubic Foot)	Revenue		Average Price							
	(million cubic feet)			Percent Change	(thousand dollars)		(dollars/ thousand cubic feet)		Percent Change	(dollars/ million Btu)		Percent Change	
	1997	1998	1997		1998	1997	1998	1997		1998	1997		1998
Pipeline													
Canada	56,447	39,891	-29.3	1,013	1,013	142,153	89,714	2.52	2.25	-10.7	2.49	2.22	-10.8
Mexico	38,372	53,133	38.5	1,011	1,011	94,287	108,264	2.46	2.04	-17.1	2.43	2.02	-16.9
Total	94,818	93,023	-1.9	1,012	1,012	236,440	197,978	2.49	2.13	-14.5	2.46	2.10	-14.6
LNG													
Japan	62,187	65,951	6.1	1,010	1,010	238,404	191,609	3.83	2.91	-24.0	3.80	2.88	-24.2
Mexico	0	33	100.0	0	1,011	0	185	-	5.69	100.0	-	5.63	100.0
Total	62,187	65,984	6.1	1,010	1,010	238,404	191,794	3.83	2.91	-24.0	3.80	2.88	-24.2
Grand Total	157,006	159,007	1.3	1,011	1,011	474,844	389,772	3.02	2.45	-18.9	2.99	2.42	-19.1

- Not Applicable.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. The price of LNG exports to Japan is the "landed" price, defined as

received at the terminal in Japan.

Sources: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR4. Historical Summary of U.S. Natural Gas Imports, 1955-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet)

Year	Imports From						Total Imports ^a	Average Price
	Pipeline		LNG					
	Canada	Mexico	Algeria	Australia	United Arab Emirates	Others		
1955	10,881	7	0	0	0	0	10,888	NA
1956	10,374	6	0	0	0	0	10,380	NA
1957	20,971	16,970	0	0	0	0	37,941	NA
1958	89,586	46,211	0	0	0	0	135,797	NA
1959	83,061	50,929	0	0	0	0	133,990	NA
1960	108,657	46,989	0	0	0	0	155,646	NA
1961	167,104	51,756	0	0	0	0	218,860	NA
1962	350,438	51,096	0	0	0	0	401,534	NA
1963	356,455	49,749	0	0	0	0	406,204	NA
1964	390,721	52,605	0	0	0	0	443,326	NA
1965	404,686	51,708	0	0	0	0	456,394	NA
1966	430,189	49,591	0	0	0	0	479,780	NA
1967	513,255	50,971	0	0	0	0	564,226	NA
1968	604,462	47,423	0	0	0	0	651,885	NA
1969	680,106	46,845	0	0	0	0	726,951	NA
1970	778,687	41,336	757	0	0	0	820,780	NA
1971	910,926	20,689	1,433	0	0	b1,500	934,548	NA
1972	1,009,093	8,140	2,032	0	0	b230	1,019,496	0.31
1973	1,027,216	1,632	3,388	0	0	b667	1,032,901	0.35
1974	959,063	222	0	0	0	0	959,284	0.55
1975	948,115	0	4,893	0	0	0	953,008	1.21
1976	953,613	0	10,155	0	0	0	963,768	1.72
1977	996,723	2,384	11,324	0	0	b572	1,011,002	1.98
1978	881,123	0	84,422	0	0	0	965,545	2.13
1979	1,000,775	0	252,608	0	0	0	1,253,383	2.49
1980	796,507	102,410	85,850	0	0	0	984,767	4.28
1981	762,107	105,013	36,824	0	0	b6	903,949	4.88
1982	783,407	94,794	55,136	0	0	0	933,336	5.03
1983	711,923	75,361	131,124	0	0	0	918,407	4.78
1984	755,368	51,502	36,191	0	0	0	843,060	4.08
1985	926,056	0	23,659	0	0	0	949,715	3.21
1986	748,780	0	0	0	0	c1,669	750,449	2.43
1987	992,532	0	0	0	0	0	992,532	1.95
1988	1,276,322	0	17,490	0	0	0	1,293,812	1.84
1989	1,339,357	0	42,163	0	0	0	1,381,520	1.82
1990	1,448,065	0	84,193	0	0	0	1,532,259	1.94
1991	1,709,716	0	63,596	0	0	0	1,773,313	1.83
1992	2,094,387	0	43,116	0	0	0	2,137,504	1.85
1993	2,266,751	1,678	81,685	0	0	0	2,350,115	2.03
1994	2,566,049	7,013	50,778	0	0	0	2,623,839	1.87
1995	2,816,408	6,722	17,918	0	0	0	2,841,048	1.49
1996	2,883,277	13,862	35,325	0	4,949	0	2,937,413	1.97
1997	2,899,152	17,243	65,675	9,685	2,417	0	2,994,173	2.17
1998	3,052,073	14,532	68,567	11,634	5,252	0	3,152,058	1.97

^a Volumes reported for 1966 through 1997 are on a pressure base of 14.73 pounds per square inch absolute and 60 degrees Fahrenheit. Volumes for 1955 through 1965 are as reported.

^b Received from Canada.

^c Received from Indonesia.

^{NA} Not Available.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. Prices for LNG imports are reported as "landed," defined as received at the terminal or "tailgate," defined as after regasification at the terminal. Generally, prices for shipments received at Everett, MA are reported as landed and at Lake Charles,

LA as tailgate. For 1997 and 1998, the percentages of volumes associated with the type of price are: **Algeria**-1997, 57 percent landed, 43 percent tailgate; 1998, 55 percent landed, 45 percent tailgate. **Australia**-1997, 74 percent landed, 26 percent tailgate; 1998, 39 percent landed, 61 percent tailgate. **United Arab Emirates**-1997, 100 percent landed; 1998, nearly 100 percent tailgate.

Sources: 1955-1971 Federal Power Commission, informally collected by letter. 1972-1994: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 1998: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR5. Historical Summary of U.S. Natural Gas Exports, 1955-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet)

Year	Exports to			Total Exports	Average Price
	Pipeline		LNG		
	Canada	Mexico	Japan		
1955	11,467	19,562	0	31,029	NA
1956	16,819	19,144	0	35,963	NA
1957	30,867	10,788	0	41,655	NA
1958	32,129	6,590	0	38,719	NA
1959	11,739	6,674	0	18,413	NA
1960	5,759	5,573	0	11,332	NA
1961	5,577	5,170	0	10,747	NA
1962	5,574	10,240	0	15,814	NA
1963	6,879	10,078	0	16,957	NA
1964	9,763	9,840	0	19,603	NA
1965	17,979	8,153	0	26,132	NA
1966	20,281	4,358	0	24,639	NA
1967	70,456	11,158	0	81,614	NA
1968	81,647	12,098	0	93,745	NA
1969	34,931	13,391	2,982	51,304	NA
1970	10,878	14,678	44,257	69,813	NA
1971	14,349	15,632	50,231	80,212	NA
1972	15,553	14,579	47,882	78,013	0.51
1973	14,824	13,999	48,346	77,169	0.54
1974	13,263	13,268	50,258	76,789	0.72
1975	10,219	9,454	53,002	72,675	1.25
1976	7,506	7,425	49,779	64,711	1.55
1977	31	3,940	51,655	55,626	1.92
1978	66	4,033	48,434	52,532	2.13
1979	76	4,308	51,289	55,673	2.29
1980	113	3,886	44,732	48,731	4.70
1981	106	3,337	55,929	59,372	5.90
1982	162	1,705	49,861	51,728	5.81
1983	136	1,646	52,857	54,639	5.10
1984	127	1,786	52,840	54,753	4.92
1985	178	2,207	52,883	55,268	4.77
1986	9,203	1,896	50,172	61,271	2.81
1987	3,297	2,125	48,599	54,020	3.07
1988	19,738	2,327	51,573	73,638	2.74
1989	38,443	17,004	51,424	106,871	2.51
1990	17,359	15,659	52,546	85,565	3.10
1991	14,791	60,448	54,005	129,244	2.59
1992	67,777	95,973	52,532	216,282	2.25
1993	44,518	39,676	55,989	140,183	2.59
1994	52,556	46,500	62,682	161,738	2.50
1995	27,554	61,283	65,283	154,119	2.39
1996	51,905	33,840	67,648	153,393	2.97
1997	56,447	38,372	62,187	157,006	3.02
1998	39,891	53,133	65,951	^a 159,007	2.45

^a Includes 33 million cubic feet of LNG exports to Mexico by truck.

NA Not Available.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. The price of LNG exports to Japan is the "landed" price, defined as received at the terminal in Japan.

Sources: Federal Power Commission, informally collected by letter. 1972-1994: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 1998: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet)

Year and Month	Canada (Pipeline)									
	Pacific Northwest		West		Midwest					
	Sumas, WA		Eastport, ID		Babb, MT		Detroit, MI		International Falls, MN	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1997										
January	33,173	3.18	72,616	2.46	1,895	1.61	1,390	3.70	681	2.56
February	27,443	2.06	65,440	1.93	1,721	1.26	1,174	3.04	594	2.75
March	31,209	1.14	73,033	1.31	2,018	1.22	921	2.41	658	1.81
April	29,521	1.18	71,320	1.28	973	1.29	1,195	2.04	520	1.67
May	27,455	1.41	71,307	1.40	1,038	1.40	883	2.10	510	1.92
June	26,557	1.38	68,206	1.37	2,009	1.35	712	2.19	478	1.85
July	25,801	1.29	70,432	1.35	1,743	1.35	920	2.09	496	1.76
August	30,095	1.22	71,778	1.33	1,507	1.29	824	2.16	420	1.65
September	29,121	1.33	69,963	1.43	1,901	1.29	657	2.36	408	1.72
October	32,391	1.59	73,598	1.69	844	1.41	1,086	2.26	512	2.02
November	37,581	2.39	74,465	2.08	1,322	1.78	829	2.54	616	2.27
December	29,916	1.73	74,344	1.61	1,506	1.70	909	2.52	652	1.99
Total	360,261	1.69	856,503	1.60	18,477	1.40	11,501	2.51	6,544	2.03
1998										
January	40,595	1.88	77,439	1.54	1,803	1.63	1,076	2.66	651	1.88
February	31,310	1.53	68,272	1.44	1,744	1.58	758	2.50	583	1.76
March	33,587	1.40	76,659	1.54	1,623	1.63	921	2.36	634	2.00
April	30,712	1.59	74,345	1.61	1,082	1.80	956	2.29	427	2.03
May	26,860	1.71	73,672	1.68	1,635	1.91	868	2.44	417	2.17
June	25,448	1.43	68,583	1.45	1,614	1.70	1,218	2.24	401	1.92
July	29,365	1.53	73,154	1.51	1,450	1.43	1,292	2.39	475	2.02
August	34,036	1.65	73,253	1.58	1,773	1.44	884	2.37	496	1.97
September	32,158	1.56	73,457	1.40	1,599	1.32	536	2.46	469	1.67
October	31,364	1.83	72,653	1.59	1,123	1.66	1,032	2.40	522	2.14
November	29,459	2.15	73,781	1.88	1,069	1.93	626	2.54	493	2.26
December	29,771	2.27	74,573	1.94	1,261	1.94	759	2.67	537	2.25
Total	374,666	1.71	879,840	1.60	17,776	1.65	10,925	2.43	6,103	2.00

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)									
	Midwest									
	Marysville, MI		Noyes, MN		Port of del Bonita, MT		Port of Morgan, MT		Portal, ND	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1997										
January	0	-	41,437	3.69	5	1.05	47,779	3.53	358	3.75
February	0	-	31,710	2.82	5	1.05	42,209	2.39	282	2.41
March	0	-	33,867	1.93	5	1.05	46,923	1.34	625	1.31
April	0	-	32,291	1.91	5	1.05	44,456	1.51	633	1.22
May	0	-	32,819	2.08	5	1.05	45,438	1.63	652	1.30
June	0	-	30,238	2.22	3	1.05	43,413	1.79	510	1.25
July	0	-	30,630	2.13	5	1.05	44,688	1.80	645	1.21
August	0	-	31,340	2.09	5	1.05	45,576	1.88	926	1.23
September	0	-	32,005	2.25	5	1.05	44,943	2.27	317	1.12
October	0	-	31,377	2.71	5	1.02	46,366	2.70	1,005	1.69
November	0	-	34,838	2.90	5	1.01	47,091	3.02	854	2.58
December	0	-	33,099	2.43	5	1.00	49,141	2.20	866	1.75
Total	0	-	395,650	2.46	58	1.04	548,022	2.18	7,672	1.67
1998										
January	0	-	38,223	2.26	5	1.15	50,322	2.01	885	1.94
February	0	-	37,558	2.14	5	1.18	44,172	1.81	823	1.68
March	0	-	35,239	2.33	6	1.34	48,273	1.90	910	1.82
April	0	-	35,443	2.24	5	1.44	45,198	1.98	877	1.82
May	0	-	36,371	1.97	5	1.71	47,922	1.93	626	1.72
June	0	-	35,909	2.00	0	-	42,488	1.78	895	1.61
July	399	2.48	44,516	2.06	0	-	46,389	2.03	910	1.60
August	862	2.19	42,102	1.74	0	-	47,318	1.64	921	1.68
September	406	1.91	37,034	1.74	0	-	45,144	1.38	895	1.55
October	159	1.98	44,390	2.09	0	-	45,125	1.71	744	1.51
November	0	-	42,504	2.14	0	-	43,246	1.85	394	1.82
December	0	-	39,287	2.16	0	-	50,617	1.88	388	1.96
Total	1,827	2.17	468,576	2.07	25	1.37	556,215	1.83	9,268	1.71

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 1997-1998
 (Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
 Continued

Year and Month	Canada (Pipeline)									
	Midwest								Northeast	
	St Clair, MI		Warroad, MN		Whitlash, MT		Total		Champlain, NY	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1997										
January	2,717	3.98	86	3.61	638	1.83	96,986	3.56	1,541	3.41
February	1,274	3.30	77	2.15	544	2.24	79,590	2.56	1,433	3.37
March	14	2.20	62	1.20	603	1.42	85,696	1.59	1,527	3.34
April	679	2.18	48	1.18	510	1.21	81,309	1.68	1,343	3.35
May	519	2.47	29	1.45	518	1.46	82,412	1.82	1,408	3.38
June	799	2.52	15	1.67	482	1.39	78,657	1.95	1,334	3.39
July	466	2.36	13	1.57	501	1.34	80,107	1.92	1,329	3.39
August	715	2.42	5	1.52	496	1.26	81,813	1.95	1,259	3.39
September	748	2.84	16	1.86	477	2.04	81,476	2.24	1,330	3.39
October	1,635	3.20	35	2.60	523	1.44	83,389	2.67	1,466	3.40
November	1,351	3.58	62	2.06	543	1.79	87,512	2.94	1,237	3.52
December	939	2.84	63	2.88	586	1.79	87,766	2.28	1,463	3.49
Total	11,855	3.16	512	2.22	6,420	1.61	1,006,712	2.28	16,669	3.40
1998										
January	1,453	2.37	83	1.64	765	1.19	95,267	2.11	748	3.40
February	308	2.40	59	1.35	729	1.25	86,739	1.95	1,074	3.44
March	78	2.61	62	1.58	711	1.34	88,455	2.07	1,501	3.47
April	1,708	2.58	32	1.67	645	1.44	86,371	2.09	1,296	3.53
May	1,282	2.45	18	1.65	657	1.71	89,801	1.96	1,339	3.53
June	1,734	2.21	19	1.42	109	1.45	84,386	1.88	1,336	3.53
July	5,262	2.17	11	1.73	121	1.42	100,827	2.04	1,360	3.53
August	7,896	1.88	13	1.34	121	1.49	102,386	1.71	1,327	3.52
September	7,290	1.83	15	1.13	115	1.24	93,502	1.57	1,357	3.53
October	4,577	2.09	27	1.52	759	1.59	98,457	1.91	1,310	3.55
November	1,183	2.06	54	2.12	852	1.93	90,422	2.00	1,121	3.67
December	1,821	2.27	81	2.15	948	2.01	95,699	2.02	1,486	3.63
Total	34,592	2.07	473	1.71	6,533	1.57	1,112,312	1.94	15,258	3.53

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)									
	Northeast									
	Grand Island, NY		Highgate Springs, VT		Massena, NY		Niagara Falls, NY		North Troy, VT	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1997										
January	5,635	4.65	1,159	2.97	1,430	3.22	26,740	3.74	974	3.01
February	5,177	3.66	965	2.36	1,299	3.30	23,876	3.22	880	3.28
March	6,577	2.81	1,027	2.12	1,403	2.80	24,406	2.54	974	3.60
April	2,039	2.92	682	2.26	1,049	2.85	23,945	2.38	933	2.73
May	2,274	3.00	500	2.78	973	2.98	22,969	2.56	964	2.78
June	2,162	3.10	293	3.32	786	3.15	22,585	2.58	923	2.75
July	2,185	3.02	280	3.32	837	3.10	23,781	2.55	852	2.73
August	2,105	3.04	300	3.12	770	3.16	24,305	2.58	955	2.80
September	1,981	3.22	372	2.99	845	3.08	22,885	2.76	918	2.91
October	2,272	3.56	622	2.95	988	3.00	25,753	3.02	971	3.08
November	5,022	3.72	856	3.02	1,177	3.00	23,879	3.40	898	3.13
December	4,873	3.18	1,080	2.28	1,371	2.93	23,740	2.99	964	2.70
Total	42,302	3.42	8,136	2.66	12,927	3.04	288,865	2.87	11,207	2.96
1998										
January	5,551	2.86	1,216	2.08	1,053	3.00	27,689	2.86	962	3.08
February	4,547	2.88	970	2.00	1,142	2.91	22,107	2.79	869	3.13
March	5,174	3.06	954	2.24	1,166	2.93	25,181	2.78	962	2.70
April	3,264	3.06	576	2.75	904	3.06	25,112	2.74	931	2.75
May	2,086	3.33	364	2.89	736	3.24	23,165	2.71	962	2.75
June	3,175	2.85	327	2.85	849	3.20	26,299	2.57	931	2.75
July	3,110	2.90	326	3.05	507	2.31	24,797	2.64	940	2.57
August	3,131	2.44	306	2.77	445	2.00	26,698	2.47	965	2.54
September	3,416	2.37	347	2.37	442	1.77	25,048	2.32	933	2.55
October	3,538	2.60	550	2.10	502	2.19	26,273	2.43	964	2.68
November	3,863	2.75	752	2.59	659	2.59	24,056	2.57	933	2.69
December	4,127	2.61	993	2.77	780	2.74	27,175	2.56	964	2.82
Total	44,981	2.80	7,680	2.43	9,184	2.78	303,599	2.62	11,319	2.75

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)						Mexico (Pipeline)				
	Northeast				Total		Texas				
	Waddington, NY		Total		Volume	Average Price	El Paso, TX		Hidalgo, TX		Penitas, TX
	Volume	Average Price	Volume	Average Price			Volume	Average Price	Volume	Average Price	
1997											
January	26,502	3.82	63,980	3.81	266,756	3.27	0	-	1,555	3.09	0
February	24,250	3.32	57,880	3.29	230,352	2.50	0	-	2,526	2.49	0
March	25,475	2.56	61,390	2.62	251,328	1.70	0	-	3,127	1.83	0
April	23,292	2.31	53,282	2.41	235,431	1.66	0	-	189	1.92	0
May	24,083	2.46	53,172	2.57	234,345	1.81	0	-	2,380	2.03	0
June	23,864	2.58	51,946	2.64	225,366	1.87	0	-	1,692	2.20	0
July	23,875	2.46	53,139	2.56	229,479	1.82	0	-	1,088	1.98	0
August	23,760	2.46	53,455	2.58	237,142	1.81	0	-	6	2.35	0
September	23,200	2.67	51,530	2.76	232,090	2.00	0	-	29	2.47	0
October	24,292	2.96	56,364	3.03	245,742	2.32	0	-	965	2.92	0
November	25,155	3.36	58,224	3.40	257,782	2.71	0	-	1,874	2.82	0
December	27,821	2.80	61,313	2.91	253,338	2.17	0	-	1,810	2.12	0
Total	295,568	2.82	675,675	2.90	2,899,152	2.15	0	-	17,243	2.31	0
1998											
January	25,597	2.57	62,817	2.74	276,118	2.06	5	2.91	10	2.03	40
February	22,061	2.41	52,769	2.65	239,091	1.90	21	1.86	2,163	2.04	0
March	23,846	2.52	58,784	2.71	257,485	1.97	0	-	380	2.20	0
April	23,852	2.58	55,935	2.72	247,363	2.03	0	-	3,249	2.37	0
May	24,883	2.50	53,535	2.67	243,868	2.00	0	-	845	2.15	0
June	24,512	2.32	57,429	2.51	235,847	1.86	0	-	5	2.21	0
July	25,027	2.49	56,067	2.61	259,412	1.96	812	2.19	1,009	2.09	0
August	25,990	2.10	58,860	2.33	268,535	1.80	0	-	1,413	1.78	0
September	24,092	2.02	55,635	2.22	254,752	1.66	157	1.60	2,100	1.88	0
October	24,523	2.35	57,661	2.43	260,135	1.92	0	-	905	1.65	0
November	22,926	2.37	54,310	2.52	247,971	2.09	0	-	0	-	0
December	25,927	2.38	61,452	2.52	261,495	2.14	0	-	1,418	1.77	0
Total	293,234	2.38	685,255	2.55	3,052,073	1.95	996	2.09	13,496	2.03	40

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Mexico (Pipeline)			LNG						Grand Total	
	Texas	Total		Midwest		Northeast		Total		Volume	Average Price
	Penitas, TX	Volume	Average Price	Lake Charles, LA		Everett, MA		Volume	Average Price		
	Average Price			Volume	Average Price	Volume	Average Price				
1997											
January	-	1,555	3.09	2,558	2.78	7,420	3.09	9,977	3.01	278,288	3.26
February	-	2,526	2.49	2,582	3.00	5,085	3.00	7,667	3.00	240,545	2.52
March	-	3,127	1.83	0	-	2,530	2.98	2,530	2.98	256,985	1.72
April	-	189	1.92	2,557	2.23	0	-	2,557	2.23	238,178	1.67
May	-	2,380	2.03	2,552	2.20	2,455	2.68	5,007	2.44	241,732	1.83
June	-	1,692	2.20	2,555	2.49	2,504	2.49	5,059	2.49	232,118	1.88
July	-	1,088	1.98	2,528	2.48	2,498	2.47	5,026	2.48	235,593	1.84
August	-	6	2.35	2,551	2.43	4,984	2.43	7,535	2.43	244,684	1.83
September	-	29	2.47	2,553	2.41	4,814	2.64	7,367	2.56	239,486	2.01
October	-	965	2.92	2,541	2.69	2,509	2.70	5,050	2.70	251,758	2.33
November	-	1,874	2.82	5,076	2.98	7,359	2.95	12,435	2.96	272,091	2.72
December	-	1,810	2.12	2,543	2.88	5,024	2.88	7,567	2.88	262,716	2.19
Total	-	17,243	2.31	30,596	2.63	47,183	2.81	77,778	2.74	2,994,173	2.17
1998											
January	2.04	55	2.12	2,512	2.52	7,593	2.50	10,105	2.51	286,278	2.07
February	-	2,184	2.04	2,553	2.52	7,224	2.95	9,777	2.84	251,052	1.94
March	-	380	2.20	0	-	5,166	2.50	5,166	2.50	263,032	1.98
April	-	3,249	2.37	2,549	2.52	0	-	2,549	2.52	253,161	2.04
May	-	845	2.15	2,535	2.52	5,062	2.50	7,596	2.51	252,310	2.02
June	-	5	2.21	5,020	2.71	2,570	2.50	7,590	2.64	243,442	1.89
July	-	1,821	2.13	5,086	2.52	0	-	5,086	2.52	266,319	1.97
August	-	1,413	1.78	4,862	2.71	0	-	4,862	2.71	274,809	1.82
September	-	2,257	1.86	5,133	2.52	0	-	5,133	2.52	262,142	1.68
October	-	905	1.65	0	-	5,023	2.50	5,023	2.50	266,063	1.93
November	-	0	-	5,207	2.66	4,855	3.01	10,062	2.83	258,033	2.12
December	-	1,418	1.77	7,467	2.71	5,037	2.50	12,504	2.63	275,417	2.16
Total	2.04	14,532	2.03	42,922	2.62	42,531	2.64	85,453	2.63	3,152,058	1.97

- Not Applicable.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. Prices for LNG imports are reported as "landed," defined as received at the terminal or "tailgate," defined as after regasification at the terminal. Generally, prices for shipments received at Everett, MA are reported as landed and at Lake Charles, LA as tailgate. For 1997 and

1998, the percentages of volumes associated with the type of price are: **Algeria**-1997, 57 percent landed, 43 percent tailgate; 1998, 55 percent landed, 45 percent tailgate. **Australia**-1997, 74 percent landed, 26 percent tailgate; 1998, 39 percent landed, 61 percent tailgate. **United Arab Emirates**-1997, 100 percent landed; 1998, nearly 100 percent tailgate.

Sources: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR7. Summary of U.S. Natural Gas Imports, 1977-1998

(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet)

Year and Month	Pipeline				Total Pipeline	
	Canada		Mexico		Volume	Average Price
	Volume	Average Price	Volume	Average Price		
1978 Total	881,123	2.19	0	-	881,123	2.19
1979 Total	1,000,775	2.61	0	-	1,000,775	2.61
1980 Total	796,507	4.32	102,410	4.41	898,917	4.33
1981 Total	762,107	4.83	105,013	5.01	867,120	4.85
1982 Total	783,407	4.97	94,794	5.02	878,200	4.98
1983 Total	711,923	4.49	75,361	4.70	787,284	4.51
1984 Total	755,368	4.01	51,502	4.49	806,870	4.04
1985 Total	926,056	3.17	0	-	926,056	3.17
1986 Total	748,780	2.42	0	-	748,780	2.42
1987 Total	992,532	1.95	0	-	992,532	1.95
1988 Total	1,276,322	1.83	0	-	1,276,322	1.83
1989 Total	1,339,357	1.81	0	-	1,339,357	1.81
1990 Total	1,448,065	1.91	0	-	1,448,065	1.91
1991 Total	1,709,716	1.81	0	-	1,709,716	1.81
1992 Total	2,094,387	1.84	0	-	2,094,387	1.84
1993 Total	2,266,751	2.02	1,678	1.94	2,268,429	2.02
1994 Total	2,566,049	1.86	7,013	1.99	2,572,377	1.86
1995 Total	2,816,408	1.48	6,722	1.53	2,823,130	1.48
1996 Total	2,883,277	1.96	13,862	2.25	2,897,138	1.96
1997						
January	266,756	3.27	1,555	3.09	268,310	3.27
February	230,352	2.50	2,526	2.49	232,878	2.50
March	251,328	1.70	3,127	1.83	254,455	1.70
April	235,431	1.66	189	1.92	235,621	1.66
May	234,345	1.81	2,380	2.03	236,725	1.82
June	225,366	1.87	1,692	2.20	227,059	1.87
July	229,479	1.82	1,088	1.98	230,567	1.82
August	237,142	1.81	6	2.35	237,149	1.81
September	232,090	2.00	29	2.47	232,119	2.00
October	245,742	2.32	965	2.92	246,707	2.32
November	257,782	2.71	1,874	2.82	259,656	2.71
December	253,338	2.17	1,810	2.12	255,149	2.17
Total	2,899,152	2.15	17,243	2.31	2,916,394	2.15
1998						
January	276,118	2.06	55	2.12	276,173	2.06
February	239,091	1.90	2,184	2.04	241,275	1.90
March	257,485	1.97	380	2.20	257,866	1.97
April	247,363	2.03	3,249	2.37	250,612	2.03
May	243,868	2.00	845	2.15	244,713	2.00
June	235,847	1.86	5	2.21	235,852	1.86
July	259,412	1.96	1,821	2.13	261,233	1.96
August	268,535	1.80	1,413	1.78	269,948	1.80
September	254,752	1.66	2,257	1.86	257,009	1.66
October	260,135	1.92	905	1.65	261,040	1.92
November	247,971	2.09	0	-	247,971	2.09
December	261,495	2.14	1,418	1.77	262,913	2.14
Total	3,052,073	1.95	14,532	2.03	3,066,605	1.95

See footnotes at end of table.

Table SR7. Summary of U.S. Natural Gas Imports, 1977-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	LNG								Grand Total	
	Algeria		Australia		United Arab Emirates		Other		Volume	Average Price
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price		
1978 Total	84,422	1.53	0	-	0	-	0	-	965,545	2.13
1979 Total	252,608	2.03	0	-	0	-	0	-	1,253,383	2.49
1980 Total	85,850	3.77	0	-	0	-	0	-	984,767	4.28
1981 Total	36,824	5.54	0	-	0	-	6	6.63	903,949	4.88
1982 Total	55,136	5.82	0	-	0	-	0	-	933,336	5.03
1983 Total	131,124	6.41	0	-	0	-	0	-	918,407	4.78
1984 Total	36,191	4.90	0	-	0	-	0	-	843,060	4.08
1985 Total	23,659	4.60	0	-	0	-	0	-	949,715	3.21
1986 Total	0	-	0	-	0	-	^a 1,669	^a 4.62	750,449	2.43
1987 Total	0	-	0	-	0	-	0	-	992,532	1.95
1988 Total	17,490	2.71	0	-	0	-	0	-	1,293,812	1.84
1989 Total	42,163	2.22	0	-	0	-	0	-	1,381,520	1.82
1990 Total	84,193	2.47	0	-	0	-	0	-	1,532,259	1.94
1991 Total	63,596	2.36	0	-	0	-	0	-	1,773,313	1.83
1992 Total	43,116	2.54	0	-	0	-	0	-	2,137,504	1.85
1993 Total	81,685	2.20	0	-	0	-	0	-	2,350,115	2.03
1994 Total	50,778	2.28	0	-	0	-	0	-	2,623,839	1.87
1995 Total	17,918	2.30	0	-	0	-	0	-	2,841,048	1.49
1996 Total	35,325	2.70	0	-	4,949	3.46	0	-	2,937,413	1.97
1997										
January	7,560	2.78	0	-	2,417	3.74	0	-	278,288	3.26
February	7,667	3.00	0	-	0	-	0	-	240,545	2.52
March	2,530	2.98	0	-	0	-	0	-	256,985	1.72
April	2,557	2.23	0	-	0	-	0	-	238,178	1.67
May	2,552	2.20	2,455	2.68	0	-	0	-	241,732	1.83
June	5,059	2.49	0	-	0	-	0	-	232,118	1.88
July	5,026	2.48	0	-	0	-	0	-	235,593	1.84
August	7,535	2.43	0	-	0	-	0	-	244,684	1.83
September	5,030	2.41	2,337	2.88	0	-	0	-	239,486	2.01
October	5,050	2.70	0	-	0	-	0	-	251,758	2.33
November	7,542	2.89	4,893	3.07	0	-	0	-	272,091	2.72
December	7,567	2.88	0	-	0	-	0	-	262,716	2.19
Total	65,675	2.67	9,686	2.92	2,417	3.74	0	-	2,994,173	2.17
1998										
January	10,105	2.51	0	-	0	-	0	-	286,278	2.07
February	7,606	2.51	2,171	3.99	0	-	0	-	251,052	1.94
March	5,166	2.50	0	-	0	-	0	-	263,032	1.98
April	2,549	2.52	0	-	0	-	0	-	253,161	2.04
May	7,596	2.51	0	-	0	-	0	-	252,310	2.02
June	5,149	2.51	2,441	2.91	0	-	0	-	243,442	1.89
July	5,086	2.52	0	-	0	-	0	-	266,319	1.97
August	2,540	2.52	2,321	2.92	0	-	0	-	274,809	1.82
September	5,133	2.52	0	-	0	-	0	-	262,142	1.68
October	5,023	2.50	0	-	0	-	0	-	266,063	1.93
November	5,042	2.51	2,353	3.55	2,667	2.78	0	-	258,033	2.12
December	7,572	2.51	2,348	3.18	2,585	2.47	0	-	275,417	2.16
Total	68,567	2.51	11,634	3.30	5,252	2.63	0	-	3,152,058	1.97

^a Received from Indonesia.

- Not Applicable.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. Prices for LNG imports are reported as "landed," defined as received at the terminal or "tailgate," defined as after regasification at the terminal. Generally, prices for shipments received at Everett, MA are reported as landed and at Lake Charles, LA as tailgate. For 1997 and 1998, the percentages of volumes associated with the

type of price are: **Algeria**-1997, 57 percent landed, 43 percent tailgate; 1998, 55 percent landed, 45 percent tailgate. **Australia**-1997, 74 percent landed, 26 percent tailgate; 1998, 39 percent landed, 61 percent tailgate. **United Arab Emirates**-1997, 100 percent landed; 1998, nearly 100 percent tailgate.

Sources: 1994 and Earlier Years: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 1998: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet)

Year and Month	Canada (Pipeline)							
	Detroit, MI		Marysville, MI		St Clair, MI		Sumas, WA	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1997								
January	2,569	4.00	325	4.47	1,299	4.15	0	-
February	2,397	2.88	298	2.92	2,474	3.18	0	-
March	3,396	1.88	828	1.87	4,891	2.20	0	-
April	2,923	1.78	681	1.95	1,564	1.70	0	-
May	2,719	2.03	623	2.18	766	2.18	0	-
June	1,950	2.25	623	2.39	589	2.27	0	-
July	2,025	2.07	644	2.24	588	2.29	0	-
August	2,641	2.09	644	2.20	535	2.38	0	-
September ..	2,195	2.46	621	2.56	312	1.40	0	-
October	1,860	2.97	0	-	572	2.46	0	-
November ...	3,247	3.36	0	-	2,332	2.74	0	-
December ...	3,158	2.84	0	-	4,160	2.39	0	-
Total	31,080	2.55	5,286	2.36	20,080	2.51	0	-
1998								
January	2,490	2.84	493	2.15	1,947	2.23	0	-
February	1,904	2.17	729	2.02	1,869	2.08	0	-
March	3,917	2.19	807	2.23	3,127	2.33	0	-
April	3,358	2.50	479	2.24	671	2.47	0	-
May	1,860	2.29	0	-	223	2.21	0	-
June	1,900	2.03	0	-	38	2.14	0	-
July	1,240	2.07	0	-	394	1.66	0	-
August	0	-	0	-	52	1.87	0	-
September ..	1,481	2.09	0	-	0	-	0	-
October	1,380	2.01	0	-	703	2.07	44	1.80
November ...	2,543	2.12	60	2.44	878	2.27	150	2.24
December ...	2,835	2.19	808	2.19	1,494	2.36	14	11.82
Total	24,908	2.26	3,377	2.17	11,397	2.23	208	2.80

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) — Continued

Year and Month	Canada (Pipeline)		Mexico (Pipeline)					
	Total		Calexico, CA		Clint, TX		Douglas, AZ	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1997								
January	4,193	4.08	0	-	0	-	555	4.09
February	5,169	3.02	0	-	0	-	805	2.36
March	9,115	2.05	0	-	0	-	780	1.49
April	5,168	1.78	0	-	0	-	13	1.89
May	4,107	2.08	0	-	0	-	78	1.95
June	3,162	2.28	0	-	0	-	156	2.00
July	3,257	2.14	0	2.53	0	-	328	2.00
August	3,820	2.15	10	2.56	0	-	279	2.07
September ..	3,129	2.37	13	2.84	0	-	386	2.33
October	2,432	2.85	67	3.44	0	-	254	2.86
November ...	5,579	3.10	91	3.70	0	-	17	2.90
December ...	7,318	2.58	128	2.69	111	2.24	251	2.16
Total	56,447	2.52	308	3.15	111	2.24	3,901	2.38
1998								
January	4,930	2.53	160	2.71	2,145	2.11	380	2.03
February	4,502	2.11	125	2.45	1,489	2.05	400	1.89
March	7,851	2.25	139	2.62	1,986	2.08	336	2.02
April	4,509	2.47	143	2.73	1,770	2.18	255	2.10
May	2,083	2.28	141	2.75	2,610	2.09	438	1.97
June	1,938	2.03	132	2.42	2,818	1.86	656	1.78
July	1,634	1.97	148	2.56	2,530	2.21	329	1.87
August	52	1.87	171	2.64	2,842	1.94	355	1.80
September ..	1,481	2.09	209	2.36	1,970	1.74	121	1.67
October	2,127	2.03	229	2.37	3,859	1.89	353	1.74
November ...	3,630	2.17	235	2.70	3,459	1.95	298	1.94
December ...	5,152	2.26	237	2.66	3,404	1.94	212	1.92
Total	39,891	2.25	2,067	2.58	30,880	1.99	4,133	1.89

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) — Continued

Year and Month	Mexico (Pipeline)							
	Eagle Pass, TX		El Paso, TX		Hidalgo, TX		Penitas, TX	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1997								
January	144	4.05	1,525	4.08	7	2.89	0	-
February	121	2.92	672	2.17	79	2.22	0	-
March	93	1.87	611	1.57	2	1.70	0	-
April	92	1.96	2,087	1.72	853	2.10	0	-
May	81	2.23	2,018	1.95	0	-	0	-
June	75	2.45	1,810	2.14	429	2.14	109	2.19
July	79	2.31	1,298	2.09	1,418	2.29	0	-
August	64	2.35	1,984	2.22	3,776	2.46	169	2.43
September ..	73	2.66	1,064	2.31	2,832	2.82	1,792	2.47
October	149	3.20	2,505	2.77	783	3.01	424	3.00
November ...	127	3.44	580	2.88	568	3.25	398	3.21
December ...	163	2.59	1,626	2.26	1,288	2.30	84	2.26
Total	1,260	2.79	17,779	2.36	12,035	2.54	2,977	2.62
1998								
January	140	2.37	418	2.08	531	2.07	484	1.99
February	124	2.15	900	2.07	40	2.40	40	1.98
March	124	2.39	677	2.26	544	2.13	396	2.12
April	108	2.46	399	2.27	0	-	0	-
May	106	2.45	759	2.13	2,064	2.14	0	-
June	99	2.20	407	1.86	1,259	2.28	246	2.34
July	102	2.53	53	2.35	689	2.18	0	-
August	101	2.11	1,154	1.93	211	1.82	0	-
September ..	108	1.80	484	1.93	0	-	0	-
October	135	2.15	425	1.96	126	1.77	40	1.64
November ...	146	2.12	599	2.07	341	1.90	0	-
December ...	177	2.23	1,082	1.99	211	1.95	0	-
Total	1,471	2.24	7,358	2.05	6,017	2.13	1,206	2.09

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 1997-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) — Continued

Year and Month	Mexico (Pipeline)		Japan (LNG)		Mexico (LNG)		Grand Total	
	Total		Port Nikiski, AK		Nogales, AZ		Volume	Average Price
	Volume	Average Price	Volume	Average Price	Volume	Average Price		
1997								
January	2,231	4.08	5,604	4.25	0	-	12,028	4.16
February	1,677	2.32	5,596	4.20	0	-	12,443	3.46
March	1,486	1.55	5,675	4.16	0	-	16,276	2.74
April	3,044	1.83	5,660	4.06	0	-	13,872	2.72
May	2,177	1.96	3,812	3.83	0	-	10,097	2.72
June	2,579	2.14	3,786	3.72	0	-	9,527	2.81
July	3,122	2.17	3,756	3.66	0	-	10,136	2.71
August	6,282	2.37	7,532	3.62	0	-	17,633	2.86
September ..	6,159	2.59	3,767	3.58	0	-	13,055	2.83
October	4,182	2.87	5,676	3.58	0	-	12,289	3.19
November ...	1,782	3.16	5,691	3.66	0	-	13,051	3.35
December ...	3,650	2.30	5,631	3.58	0	-	16,600	2.86
Total	38,372	2.46	62,187	3.83	0	-	157,006	3.02
1998								
January	4,257	2.11	7,446	3.67	0	-	16,632	2.93
February	3,117	2.06	3,726	3.42	0	-	11,346	2.53
March	4,202	2.14	7,435	3.09	0	-	19,488	2.55
April	2,675	2.23	5,702	2.81	0	-	12,886	2.57
May	6,119	2.12	1,891	2.70	0	-	10,093	2.26
June	5,617	1.98	5,695	2.69	0	-	13,250	2.29
July	3,852	2.20	5,679	2.70	0	-	11,166	2.42
August	4,834	1.95	5,676	2.70	1	5.88	10,563	2.35
September ..	2,892	1.81	7,584	2.68	0	-	11,957	2.40
October	5,167	1.91	5,679	2.72	3	5.74	12,975	2.28
November ...	5,079	2.00	3,776	2.75	9	5.69	12,494	2.28
December ...	5,323	1.99	5,662	2.73	20	5.68	16,157	2.34
Total	53,133	2.04	65,951	2.91	33	5.69	159,007	2.45

- Not Applicable.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. The price of LNG exports to

Japan is the "landed" price, defined as received at the terminal in Japan.

Sources: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR9. Summary of U.S. Natural Gas Exports, 1977-1998
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet)

Year and Month	Pipeline				Total Pipeline		LNG				Grand Total	
	Canada		Mexico		Volume	Average Price	Japan		Mexico		Volume	Average Price
	Volume	Average Price	Volume	Average Price			Volume	Average Price	Volume	Average Price		
1978 Total	66	1.79	4,033	1.65	4,098	1.66	48,434	2.17	0	-	52,532	2.13
1979 Total	76	2.04	4,308	1.97	4,384	1.97	51,289	2.32	0	-	55,673	2.29
1980 Total	113	3.31	3,886	2.47	3,999	2.50	44,732	4.90	0	-	48,731	4.70
1981 Total	106	4.79	3,337	3.37	3,443	3.41	55,929	6.05	0	-	59,372	5.90
1982 Total	162	4.95	1,705	5.17	1,867	5.15	49,861	5.83	0	-	51,728	5.81
1983 Total	136	4.60	1,646	4.79	1,782	4.78	52,857	5.11	0	-	54,639	5.10
1984 Total	127	4.19	1,786	4.48	1,913	4.46	52,840	4.93	0	-	54,753	4.92
1985 Total	178	3.06	2,207	3.99	2,385	3.92	52,883	4.81	0	-	55,268	4.77
1986 Total	9,203	2.12	1,896	3.49	11,099	2.35	50,172	2.91	0	-	61,271	2.81
1987 Total	3,297	1.81	2,125	3.18	5,421	2.35	48,599	3.15	0	-	54,020	3.07
1988 Total	19,738	2.02	2,327	3.21	22,065	2.14	51,573	2.99	0	-	73,638	2.74
1989 Total	38,443	2.00	17,004	2.14	55,447	2.05	51,424	3.01	0	-	106,871	2.51
1990 Total	17,359	2.70	15,659	1.88	33,018	2.31	52,546	3.59	0	-	85,565	3.10
1991 Total	14,791	1.91	60,448	1.76	75,239	1.79	54,005	3.71	0	-	129,244	2.59
1992 Total	67,777	1.83	95,973	1.90	163,750	1.88	52,532	3.43	0	-	216,282	2.25
1993 Total	44,518	2.14	39,676	2.02	84,195	2.08	55,989	3.34	0	-	140,183	2.59
1994 Total	52,556	2.42	46,500	1.68	99,057	2.08	62,682	3.18	0	-	161,738	2.50
1995 Total	27,554	1.96	61,283	1.50	88,836	1.64	65,283	3.41	0	-	154,119	2.39
1996 Total	51,905	2.67	33,840	2.11	85,745	2.45	67,648	3.65	0	-	153,393	2.97
1997												
January	4,193	4.08	2,231	4.08	6,424	4.08	5,604	4.25	0	-	12,028	4.16
February	5,169	3.02	1,677	2.32	6,846	2.85	5,596	4.20	0	-	12,443	3.46
March	9,115	2.05	1,486	1.55	10,601	1.98	5,675	4.16	0	-	16,276	2.74
April	5,168	1.78	3,044	1.83	8,211	1.80	5,660	4.06	0	-	13,872	2.72
May	4,107	2.08	2,177	1.96	6,284	2.04	3,812	3.83	0	-	10,097	2.72
June	3,162	2.28	2,579	2.14	5,741	2.22	3,786	3.72	0	-	9,527	2.81
July	3,257	2.14	3,122	2.17	6,380	2.16	3,756	3.66	0	-	10,136	2.71
August	3,820	2.15	6,282	2.37	10,101	2.28	7,532	3.62	0	-	17,633	2.86
September	3,129	2.37	6,159	2.59	9,288	2.52	3,767	3.58	0	-	13,055	2.83
October	2,432	2.85	4,182	2.87	6,613	2.86	5,676	3.58	0	-	12,289	3.19
November	5,579	3.10	1,782	3.16	7,361	3.12	5,691	3.66	0	-	13,051	3.35
December	7,318	2.58	3,650	2.30	10,968	2.49	5,631	3.58	0	-	16,600	2.86
Total	56,447	2.52	38,372	2.46	94,818	2.49	62,187	3.83	0	-	157,006	3.02
1998												
January	4,930	2.53	4,257	2.11	9,187	2.34	7,446	3.67	0	-	16,632	2.93
February	4,502	2.11	3,117	2.06	7,619	2.09	3,726	3.42	0	-	11,346	2.53
March	7,851	2.25	4,202	2.14	12,054	2.21	7,435	3.09	0	-	19,488	2.55
April	4,509	2.47	2,675	2.23	7,184	2.38	5,702	2.81	0	-	12,886	2.57
May	2,083	2.28	6,119	2.12	8,202	2.16	1,891	2.70	0	-	10,093	2.26
June	1,938	2.03	5,617	1.98	7,555	2.00	5,695	2.69	0	-	13,250	2.29
July	1,634	1.97	3,852	2.20	5,487	2.13	5,679	2.70	0	-	11,166	2.42
August	52	1.87	4,834	1.95	4,886	1.95	5,676	2.70	1	5.88	10,563	2.35
September	1,481	2.09	2,892	1.81	4,373	1.91	7,584	2.68	0	-	11,957	2.40
October	2,127	2.03	5,167	1.91	7,294	1.94	5,679	2.72	3	5.74	12,975	2.28
November	3,630	2.17	5,079	2.00	8,709	2.07	3,776	2.75	9	5.69	12,494	2.28
December	5,152	2.26	5,323	1.99	10,475	2.12	5,662	2.73	20	5.68	16,157	2.34
Total	39,891	2.25	53,133	2.04	93,023	2.13	65,951	2.91	33	5.69	159,007	2.45

- Not Applicable.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. The price of LNG exports to Japan is the "landed" price, defined as received at the terminal in Japan.

Sources: 1994 and Earlier Years: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 1998: Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.