

U.S. Natural Gas Imports and Exports: Issues and Trends 2003

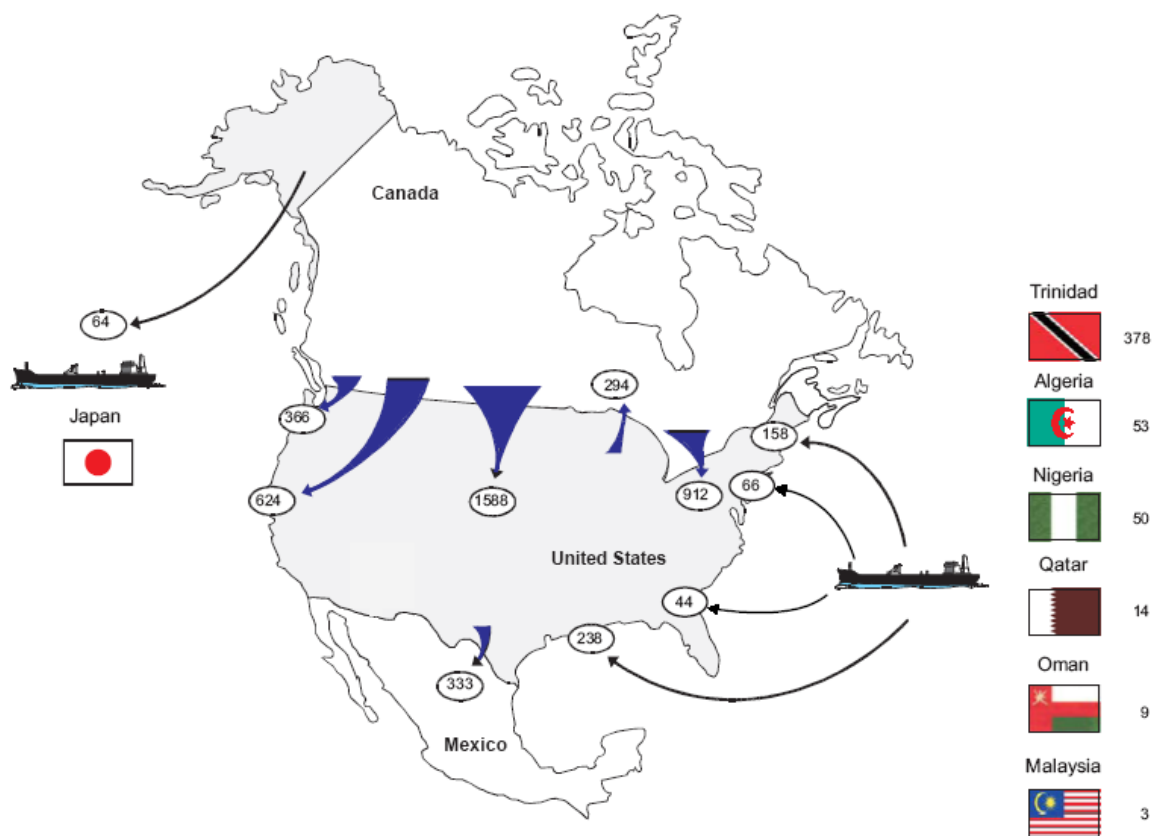
by Damien Gaul

This special report looks at U.S. international trade of natural gas in 2003. Historical trends and the near-term outlook for imports and exports are examined. In addition, this article discusses the amount of additional LNG import capacity proposed for development during the next several years. U.S. foreign trade volumes and prices in this article are based on data from the Office of Fossil Energy, U.S. Department of Energy. A more complete note on the sources of data for this article is provided at the end. A special appendix to this report contains a set of tables with extensive historical data on U.S. natural gas imports and exports. Information in this appendix includes volumes and prices by source country and border crossing.

Natural gas flows into and out of the United States reflect an integrated North American marketplace and this country's nascent role in the world marketplace for liquefied natural gas (LNG).¹ Canada is by far the largest foreign supplier of natural gas to the United States, providing enough net exports through pipeline transportation to meet over one-seventh of annual U.S. consumption.

However, growth in U.S. imports of Canadian gas appears to be slowing, and the United States is increasing its reliance on LNG from other countries to meet demand growth. In total, the United States in 2003 received natural gas from seven countries, while it exported natural gas to three countries (Figure 1).

**Figure 1. Flow of Natural Gas Imports and Exports, 2003
(Billion Cubic Feet)**



Source: Energy Information Administration, Office of Oil and Gas, Natural Gas Division, based on data from the U.S. Department of Energy, Office of Fossil Energy. Flows from Canada are divided into four regions. Flows in the Pacific Northwest region include points of entry in the State of Washington. Flows in the West region include points of entry in Idaho. Points of entry in Montana, North Dakota, Michigan, and Minnesota are included in the Midwest region. Points of entry in New York, Vermont, and Maine are included in the Northeast region.

¹LNG (liquefied natural gas) is natural gas, primarily methane, which has been cooled to its liquid state at -260° Fahrenheit (-162.2° Celsius). Liquefying natural gas reduces the volume it occupies by more than 600 times, making it a practical size for storage and transportation.

The United States is the largest natural gas consuming country in the world. U.S. domestic production is also large relative to current world production, with only Russia supplying more natural gas. However, the United States historically has also met a large percentage of consumption through importation of natural gas, primarily by pipeline in continental trade. Recent and likely further expansion of international trade involves importation of LNG, which is economically traded at greater distances than natural gas delivered through pipelines.² Because of the diverse logistical capability and economics of the two forms of trade, this report distinguishes between international trade of natural gas by pipeline and LNG trade. This report first addresses natural gas trade imports and exports by pipeline to Mexico and Canada in 2003, and, second, developments in U.S. participation in global LNG trade.

Overview/Trends

In 2003, the United States imported 3,996 billion cubic feet (Bcf) of natural gas from seven countries, a slight decrease (0.5 percent) from the volume in 2002.³ U.S. imports comprise approximately 18.1 percent of import activity in the world. U.S. natural gas imports by pipeline (all of which were from Canada) account for approximately 21.7 percent of natural gas traded internationally via pipeline. The volume of natural gas received by the United States in the form of LNG has historically been a much smaller portion of the global LNG market. However, U.S. imports of LNG during 2003 reached 507 Bcf, double those of the previous year and nearly 8.5 percent of global LNG imports.⁴

Net imports of natural gas to the United States in 2003 declined to 3,305 Bcf, or 5.6 percent (Figure 2). The volume of net imports fell for the second consecutive year, after 15 years of increases in net imports starting in 1987. In 2003, U.S. imports of Canadian gas decreased, and U.S. exports to Mexico and Canada increased. Because U.S. natural gas consumption dropped by 4 to 5 percent in 2003, net imports as a percent of U.S. consumption fell less than a tenth of a percentage point to 15.1 percent. Natural gas imports represent a small percentage of U.S. consumption relative to many other major-consuming countries, such as Japan and Spain, both of which receive over nine-tenths of their natural gas supplies from imports.⁵

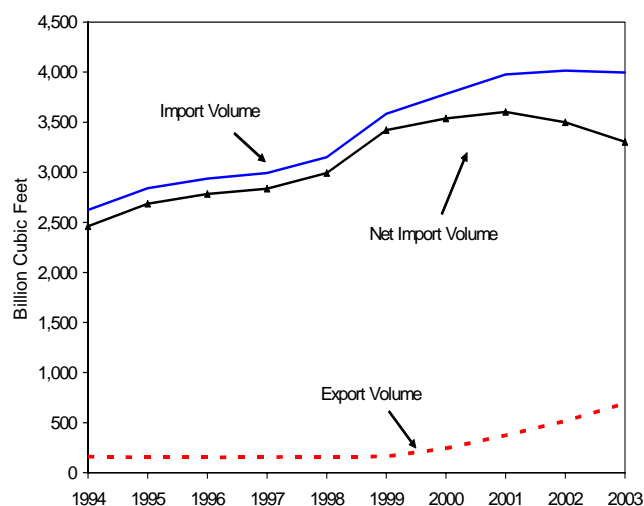
²Department of Energy, Office of Fossil Energy, *Liquefied Natural Gas: Issues for the Industry* (Washington, DC, September 2002), p. vi.

³Unless explicitly stated to be net imports or exports, references to volumes of imports and exports in this article should be understood as gross volumes.

⁴BP, *Statistical Review of World Energy 2004*, Online. <http://www.bp.com>. (June 2004).

⁵International Energy Agency, *Natural Gas Monthly Survey, January 2004*. Online. <http://www.iea.org>, Table 2.1.

Figure 2. Total U.S. Natural Gas Imports and Exports, 1994-2003



Sources: **1994:** Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." **1995–2003:** U.S. Department of Energy, Office of Fossil Energy.

The volume of U.S. imports by pipeline declined in 2003 for the first time in 16 years. Gross pipeline imports from Canada decreased to 3,490 Bcf in 2003, which was a year-to-year decline of 7.8 percent. The decline appears to reflect the maturation of Canadian production, particularly in the Western Canadian Sedimentary Basin (WCSB). The United States received no imports from Mexico.

U.S. pipeline exports to Mexico in 2003 rose 70 Bcf to a record 333 Bcf. Although exports to Mexico represent only a small portion of U.S. gas flows, trade opportunities over the border continue to attract U.S. companies. Exports to Mexico, which have grown with the construction of new pipelines in Texas and California, increased by 26.5 percent between 2002 and 2003.

The United States in 2003 received a record high of 507 Bcf of LNG. LNG was a marginal source of supply to U.S. markets through the 1980s and 1990s, but now is an integral part of the U.S. supply mix. The Atlantic LNG liquefaction plant in Point Fortin, Trinidad and Tobago, is the largest source of LNG to the United States, supplying 378 Bcf, or 74.6 percent of the total LNG imports in 2003.

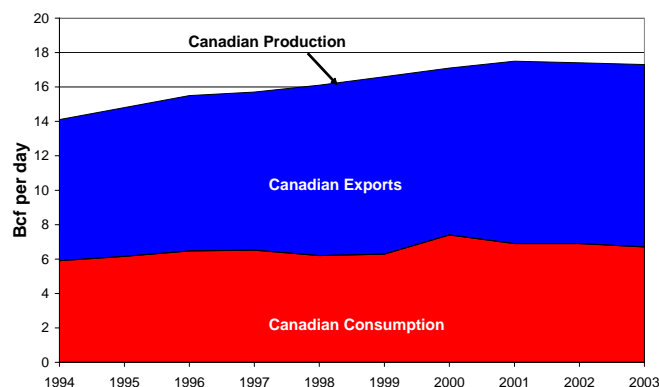
The development of LNG trade in the United States is driven by both demand and supply factors. Prices at the Henry Hub averaged well above \$5 per million Btu (MMBtu) in 2003, more than double the prices for most years in the 1990s. This has led to the re-commissioning and expansion of existing U.S. LNG import facilities, as well as proposed new facilities throughout North America. On the supply side, Trinidad and Tobago and other countries are looking to monetize plentiful reserves through the export of LNG.

Canadian Pipeline Trade

North American international trade predominantly occurs through major long-haul pipeline systems originating from supply basins in British Columbia, Alberta, and Nova Scotia, Canada. Although ownership of individual pipeline networks often changes at the U.S.-Canadian border, the integrated network transports Canadian gas to markets in nearly every major northern consuming region of the United States. Canadian production accounts for about 23.9 percent of total North American supplies of about 27 trillion cubic feet (Tcf).⁶ Because Canada's demand represents only about 11.5 percent of continental consumption, Canada exports the majority of its domestic gas production to the United States (Figure 3).

In 2003, U.S. imports of Canadian gas reflect underlying trends in production. Canada's industry has responded to increasing market prices with gas well drilling in 2003 amounting to 13,900 wells, about 4,800 more than the number of gas wells drilled in the WCSB in 2002 (Figure 4).⁷ But the average productivity of these wells continues to fall, and the National Energy Board projects deliverability from the WCSB to decrease from 16.3 Bcf per day at the end of 2002 to 15.8 Bcf per day by the end of 2005.⁸

Figure 3. Canadian Natural Gas Production by Consumption and Net Exports



Source: Canadian Association of Petroleum Producers.

⁶BP, *Statistical Review of World Energy 2004*, Online. <http://www.bp.com>. (June 2004).

⁷Canadian Association of Petroleum Producers, *Statistical Handbook*. <http://www.capp.ca>. (April 2004). The number of wells drilled in 2003 is an estimate from May 2004.

⁸National Energy Board, *Short-term Natural Gas Deliverability from the Western Canada Sedimentary Basin 2003 – 2005* (Calgary, Alberta, December 2003), p. v.

U.S. imports from Canada in 2003 declined by 295 Bcf, with at least a portion of the decline viewed as a one-time result of production declines at the Ladyfern development in British Columbia (Figure 5). Flows from Ladyfern increased quickly in 2002, reaching as much as 700 million cubic feet (MMcf) per day, but dropped off by the end of 2003 to 120 MMcf per day.⁹

Given the rapid fall off in Canadian production, the pace of development for other prospects was not sufficient to offset this decline. For example, exploration on the eastern Canadian offshore proved disappointing during the year, but the lack of new production may be temporary as efforts to develop the Scotian shelf resources continue. Before the 2003 decline, U.S. imports from Canada in 2002 were only 56 Bcf higher than the levels of the previous year. The slowed growth (1.5 percent versus an annualized average of more than 6.5 percent in the previous 4 years) was likely due in part to lower drilling activity in 2002 than in 2001 as reduced import prices provided less incentive to producers.

In 2003, the Canadian National Energy Board significantly lowered its estimates for total production in 2015 to between 5.9 and 7.1 Tcf (from an earlier assessment that ranged from 8.1 to 9.0).¹⁰ As a result, Canadian officials have launched initiatives to begin the development of unconventional resources such as coalbed methane (see Box, "Canada Looks to Increase Coalbed Methane Production," p. 5).

In response to the need to monetize stranded gas in Canada, companies have launched the permitting process for a pipeline from the Mackenzie Delta in the Arctic. While resources in the Delta are viewed as plentiful, the effect of the Mackenzie pipeline on natural gas supply to the United States is uncertain, with at least a portion of the incremental supplies likely dedicated to Canadian oil sands production, a process currently requiring large volumes of natural gas. However, substitutes to natural gas for fueling this production are being developed.

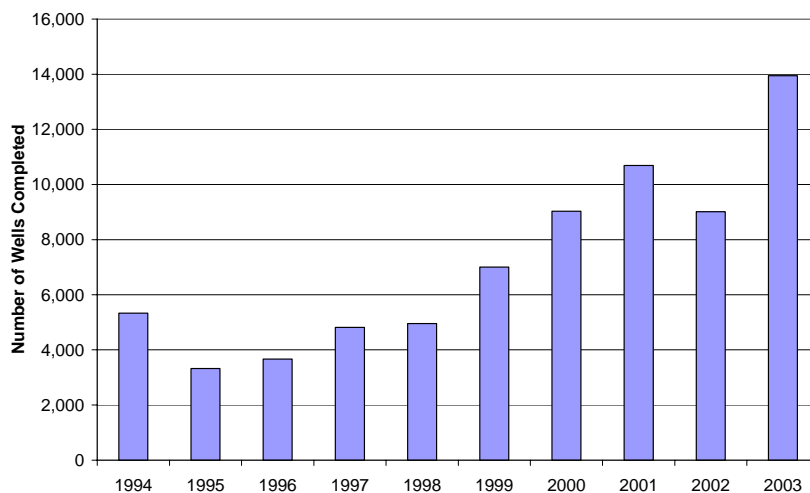
Trade movements at the U.S.-Canadian border in 2003 reflected the overall decline in exports from the WCSB and the difficulty in finding and developing of East Canada resources (Figure 6). The U.S. receipt point with the largest volumes for U.S. imports from Canada is located at Port of Morgan, Montana, where the Northern Border Pipeline connects to the Foothills pipeline portion of Canada's largest pipeline network, the TransCanada Pipeline system. In 2003, volumes declined by 9.0 percent to 699 Bcf.

Volumes at the Sherwood, North Dakota, border-crossing of Alliance Pipeline continued to run at or near Alliance's

⁹Energy Information Administration, *Annual Energy Outlook 2004 with Projections to 2025*, DOE/EIA-0383(2004) (Washington, DC, January 2004), p. 43.

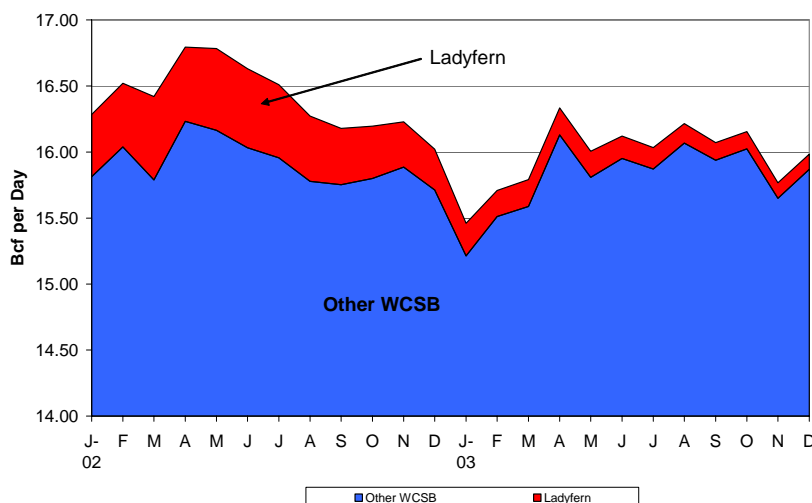
¹⁰Ibid.

Figure 4. Natural Gas Well Completions in the WCSB, 1994-2003



Source: Canadian Association of Petroleum Producers, *Statistical Handbook*. Available on the Internet at <http://www.capp.ca>. The number of wells drilled in 2003 is an estimate dated May 2004.

Figure 5. Western Canadian Sedimentary Basin Production by Month



Source: FirstEnergy & British Columbia Oil and Gas Commission

system design capacity, delivering 496 Bcf (up 43 Bcf from 2002) to U.S. markets near Chicago, Illinois, in 2003.¹¹

Volume growth appears to have stalled on the Maritimes and Northeast Pipeline system, which has transported gas through the Calais, Maine, border point since 1999. A

decrease in volumes at the border point from 2002 reflects difficulties in finding and developing gas deposits in the eastern Canadian offshore. In 2003, the volume transported across the border point dropped 17 Bcf, or 13.3 percent, to 108 Bcf. Companies continue to explore Sable Island and adjoining prospects, including near the Deep Panuke field in offshore Nova Scotia.

¹¹ EIA reduces the reported volume of gas imported by Alliance Pipeline by the amount of natural gas liquids removed from the saturated natural gas carried by the pipeline. Alliance moves liquids saturated natural gas to a processing plant in Illinois.

Canada Looks to Increase Coalbed Methane Production

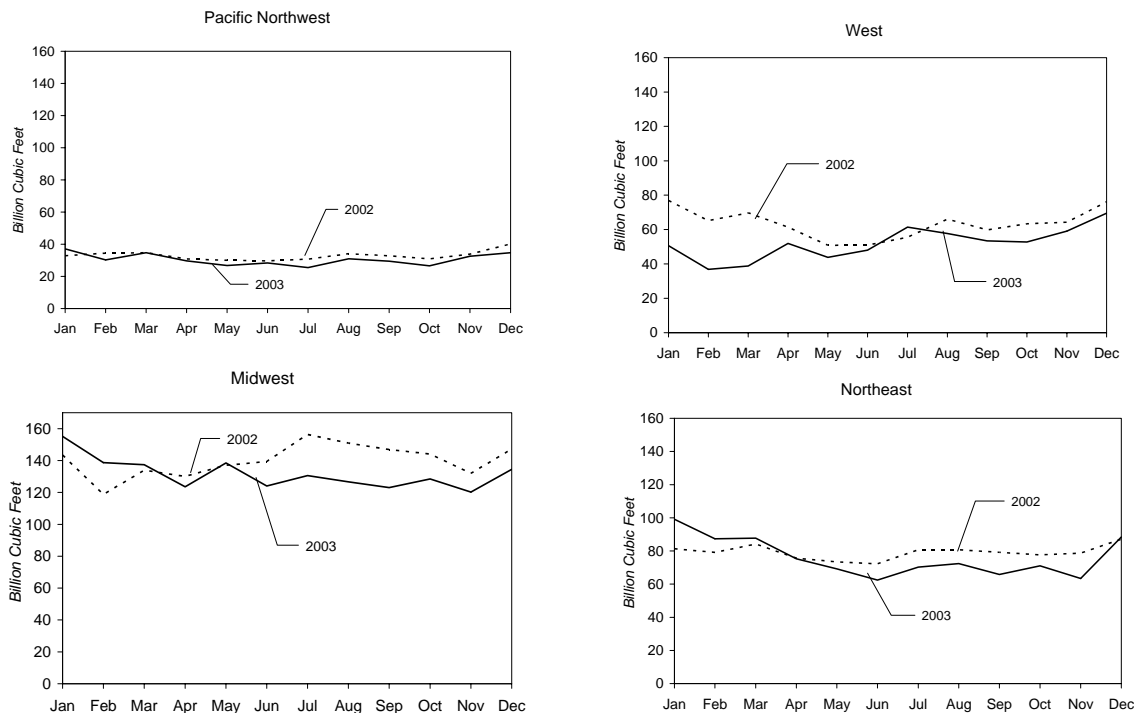
The Albertan Government in 2003 began a series of public meetings to examine issues related to development of Canada's significant coalbed methane (CBM) resources. CBM is natural gas or methane that is found in coal seams instead of being trapped in the pores of rock as in conventional resources. Pointing to success in development of CBM resources in the U.S. Rockies, the National Energy Board of Canada estimates that up to 80 Tcf of gas in the country's coal seams is recoverable. CBM production has increased significantly in the United States in recent years. U.S. production in 2002 totaled 1.6 Tcf, 8 percent of total dry gas production, up more than 1 Tcf in 10 years.

Coalbed production in Canada is still in its infancy with only about 13 Bcf produced in 2003. However, CBM opportunities are believed to have the potential possibly to double proved conventional natural gas reserves of 42 Tcf in Alberta and eventually contribute 3 Bcf per day or about 15 percent of total Canadian natural gas production of about 16.4 Bcf per day.

With gross U.S. natural gas imports from Canada of approximately 9.6 Bcf per day, the development of CBM resources in Canada could play a significant role in meeting U.S. demand in the future. To date, most of CBM development has targeted the Horseshoe Canyon in south-central Alberta. Public meeting were held through April 2004 with the goal of submitting a final report on improvements to Canada's fiscal and tax regimes for CBM development by November 2004.

Sources: Department of Alberta Energy, *Natural Gas in Coal/Coalbed Methane*, Online. <http://www.energy.gov.ab.ca/com/Gas/NGC-CBM>. Lehman Brothers, *Insight on Canadian CBM* (New York, New York, April 2004).

Figure 6. U.S. Natural Gas Pipeline Imports from Canada by Regional Point of Entry



Source: Energy Information Administration, Office of Oil and Gas, Natural Gas Division. Flows in the Pacific Northwest region include points of entry in the State of Washington. Flows in the West region include points of entry in Idaho. Points of entry in Montana, North Dakota, Michigan, Minnesota, are included in the Midwest region. Points of entry in New York, Vermont, and Maine are included in the Northeast region.

U.S. exports to Canada have risen dramatically in recent years mostly owing to increased utilization of relative new capacity such as the Vector Pipeline connecting the Chicago, Illinois, and Dawn, Ontario, trading hubs. Approximately 261 Bcf crossed the St. Clair, Michigan, border point via the 348-mile, 42-inch pipeline.¹² Because the United States is exporting greater volumes to Canada, net imports of Canadian gas have fallen by 11.1 percent, compared with a decline of 7.8 percent in U.S. gross receipts of Canadian gas.

Mexican Pipeline Trade

Mexican supplies are currently inadequate to meet the country's demand. Mexican consumption accounts for about 6.0 percent of the total for North America, while Mexican production is just 4.8 percent of continental supplies.¹³ As a result, Mexico currently relies on the United States for a small volume of imports (Figure 7).

In 2003, Mexico's state oil and gas company Petroleos Mexicanos (Pemex) reversed a trend of declining gas production with a 1.7 percent year-over-year increase.¹⁴ Additionally, Mexican officials continue to press forward with plans to develop reserves and lessen reliance on U.S. exports. Mexico's Strategic Gas Plan, formulated by Pemex in 2000, calls for domestic natural gas production to rise to 8 Bcf per day by 2008 from a current level of about 4.5 Bcf per day.

The plan calls for as increased domestic production through "multiple service contracts" (MSCs), as well as new imports of LNG to both east and west coasts.¹⁵ The MSCs are meant to comply with the country's Constitution, which prohibits foreign ownership of oil and gas resources. They make private companies responsible for 100 percent of the financing and operations associated with a project while mandating that the natural gas produced in a field will remain the property of Pemex.

Mexican President Vicente Fox has voiced support for increasing production through private investment in the oil and gas industry. However, members of the opposition party now controlling Congress have objected to a proposed constitutional amendment that would allow private investment and have indicated intent to challenge MSCs recently awarded by Pemex.

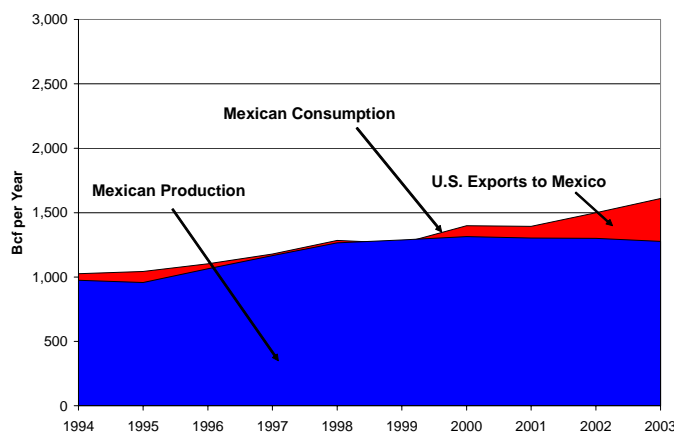
¹²Vector Pipeline, *Vector Begins Operations December 1, 2000*, http://www.vectorpipeline.com/media/news_releases/pdf/nr_20001201.pdf (December 2000).

¹³BP, *Statistical Review of World Energy 2004*, Online, <http://www.bp.com>. (June 2004).

¹⁴"Pemex pumps up 2003 Investment," *Business News Americas* (April 2, 2004).

¹⁵Energy Information Administration, *Mexico Country Analysis Brief* (Washington, D.C. April 2004), p. 2

Figure 7. Mexican Consumption by Production and Imports, 1994-2003



Source: **1994–2002:** Energy Information Administration, *International Energy Annual 2002*. **2003:** International Energy Agency, *Natural Gas Monthly Survey*.

Recent Mexican demand growth has come from the country's electric generation sector, which is increasingly relying on natural gas to meet incremental demand. Since 1998, U.S. exports have grown by more than 526.4 percent from 53 Bcf to 333 Bcf in 2003. Last year's volumes were the most ever exported to Mexico and nearly 26.5 percent higher than levels of the previous year.

Completion of several pipeline projects, including the Kinder Morgan-owned Monterrey Pipeline in 2003, has allowed the dramatic increase in export volumes at U.S.-Mexican border points. In all, natural gas is exported to Mexico at 13 points on the U.S.-Mexico borders in Texas, Arizona, and California.

The newly constructed Mier-Monterrey Pipeline stretches 95 miles between interconnects with the southern end of Kinder Morgan's Texas intrastate system in Starr County and a 1,000-megawatt power plant near Monterrey. A subsidiary of Kinder Morgan entered into a 15-year contract with Pemex for the transportation of up to 375 MMcf per day, which is the entire capacity of the pipeline.¹⁶ After coming on-line in late March 2003, the Monterrey Pipeline transported 66 Bcf across its border point in Roma, Texas.

Exports of 51 Bcf at the U.S.-Mexican border at McAllen, Texas, on the Kinder Morgan Border Pipeline accounted for about 15.3 percent of flows into Mexico. Also contributing to the increase in volumes in 2003 was 29 Bcf being transported across the Ogilby, California, crossing by the North Baja Pipeline, which was operational for a first full year after starting up on September 1, 2002. It is a 220-mile natural gas transportation pipeline originating at the

¹⁶ Kinder Morgan, Inc., *Kinder Morgan's New Monterrey Pipeline in Service*, Online, <http://www.kindermorgan.com/investor/> (March 2003).

California/Arizona border designed to serve growing energy demand in Baja California, Mexico, and portions of Riverside, Imperial, and San Diego counties in California.¹⁷

North American Trade Prices

Because of the integrated nature of the North American natural gas marketplace, prices for U.S. imports from Canada generally rise and fall in concert with price movements at U. S. trading locations. As the average wellhead price in the United States increased 68.8 percent to \$4.85 per MMBtu in 2003, the average annual price of U.S. imports from Canada increased 66.6 percent to \$5.13 per MMBtu.¹⁸ Similarly, the price of U.S. exports to Canada rose dramatically, from \$3.28 per MMBtu to \$5.93, or 80.8 percent.

As is the case in trading at markets in the Lower 48 States, Canadian prices for natural gas are often set at hubs where multiple pipelines connect and storage facilities exist to balance temporary or seasonal fluctuations in the supply and demand balance. In Western Canada, the largest of these hubs is the AECO hub near Wardlaw, Alberta, a major transportation point for the TransCanada system. The Dawn hub in Lambton County, Ontario, serves U.S. Midwest and Northeast markets with connects to CMS Energy, Great Lakes Gas Transmission, Michigan Consolidated, and TransCanada. At the import point in Niagara, New York, gas frequently moves from the TransCanada system to major U.S. Northeast consuming markets off Dominion Pipeline, National Fuel Gas Supply, and Tennessee Gas Pipeline.

Owing to their proximity to pipeline-constrained U.S. Northeast consuming markets, pipeline border points in New York, New Hampshire, and Maine generally have the highest average prices. While the average price at Grand Island, New York, was the highest of all border points at \$6.14 per MMBtu, the lowest major border price of \$4.63 per MMBtu was reported at Eastport, Idaho.

Mexican consumers must compete with U.S. consumers for supplies, and very little of the cross-border trade is contracted for with long-term fixed prices. As a result, the average price for these exports also rose sharply in 2003 along with U.S. prices. The average price during the year was \$5.36 per MMBtu, which was 62.4 percent higher than the average price in 2002. Because of higher prices and larger volumes, the value of total trade with Mexico

reached record levels with receipts totaling approximately \$1.8 billion.

U.S. LNG Trade

LNG imports, although still a small share of imports, have grown significantly in recent years to exceed levels of the 1970s (the most active time for LNG deliveries to the United States). LNG imports surged in 2003 to approximately 507 Bcf, as relatively high U.S. prices attracted cargos through short-term contractual agreements from around the world (Figure 8).

The previous record for annual deliveries of LNG was established in 1979, when the United States received 253 Bcf from Algeria. Last year, while Algerian supplies totaled just 53 Bcf, Trinidad and Tobago for the fourth consecutive year was the source country with the largest volume of imports to the United States, delivering 378 Bcf in 173 cargos (see Box, "Trinidad and Tobago: The Largest LNG Supplier to the United States," p. 8).

Other than Trinidad and Tobago and Algeria, source countries for U.S. LNG imports in 2003 included Nigeria (50 Bcf), Qatar (13.6 Bcf), Oman (8.6 Bcf), and Malaysia (2.7 Bcf). Increased U.S. gas prices likely provided the impetus for purchases under short-term contractual agreements in 2003.¹⁹ Last year, these sales represented 87.0 percent of total LNG imports, higher than the 74.0 percent received in 2002 and the 64.3 percent received in 2001.

In August 2003, Dominion's regasification facility in Cove Point, Maryland, reopened after two decades of dormancy from international trade. Cove Point began commercial import operations in September, adding as much as 1 Bcf per day of peak deliverability into the pipeline grid. Meanwhile, Tractebel's Distrigas facility in Everett, Massachusetts, completed an expansion in April 2003 that increased its send-out capacity by approximately 300 MMcf per day to 725 MMcf per day. In 2002, El Paso reopened the Elba Island, Georgia, terminal, and has since agreed to contract the capacity of the facility to BG Group, which has plans to bring LNG from Trinidad and Tobago.²⁰

In 2003, seven companies imported LNG to the United States. Although as recently as two years ago, several LNG importers were U.S.-based marketing companies without

¹⁷ National Energy & Gas Transmission, *Pipeline Facts*, Online. http://www.northbajapipeline.com/company_info/ (October 2003).

¹⁸ Energy Information Administration, *Natural Gas Monthly, May 2004* (Washington, D.C., May 2004) Table 5, for wellhead price data. The wellhead price was converted from \$ per Mcf to \$ per MMBtu using an average heat content of 1,027 Btu per cubic foot as published in Table A4 of the *Annual Energy Review 2002*. Heating values for imports are listed in Table SR 2. Summary of Natural Gas Imports, 2002-2003.

¹⁹ Section 3 of the Natural Gas Act of 1938 requires companies wanting to import or export natural gas from or to a foreign country to obtain an authorization from the Department of Energy. There are basically two types of authorizations, blanket and long-term authorizations. The blanket authorization enables companies to import or export on a short-term or spot market basis for a period of 2 years. The long-term authorization is used when a company has a signed gas purchase or sales agreement/contract for a period of time longer than 2 years.

²⁰ Energy Information Administration, *U.S. LNG Markets and Uses: June 2004 Update* (Washington D.C., June 2004), p. 6.

Trinidad and Tobago: The Largest Supplier to the United States

Trinidad and Tobago is a Caribbean nation that is rich in both oil and gas resources, but has in the past concentrated its efforts on exploiting crude oil deposits. In the 1990s, however, the owner of the Distrigas LNG import facility in Everett, Massachusetts, approached the Trinidad and Tobago government with the idea of developing its gas resources through the development of an LNG production plant. With producers such as BG and BP supportive of the proposal, construction of a first LNG plant began in 1996. After 3 years of construction, a first train became operational in May 1999, liquefying gas transported to the facility from fields offshore the southeast coast of the island. Atlantic LNG has since expanded to three trains, with the second becoming operational in July 2002 and the third becoming operational in April 2003.

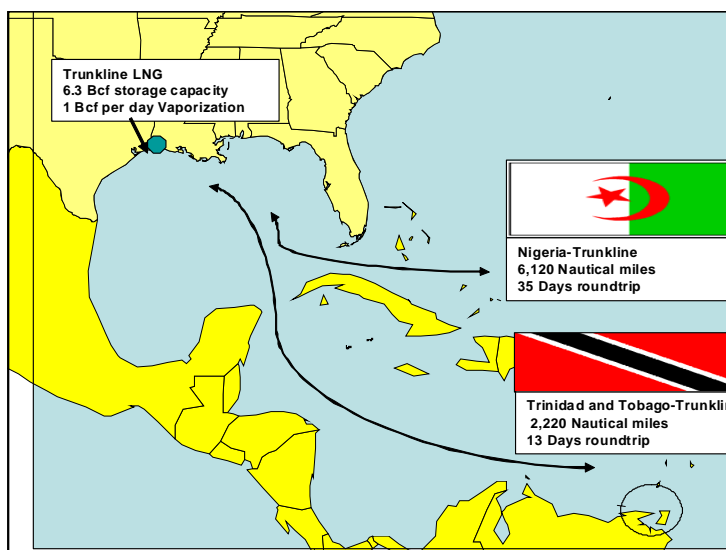
Even before producing its first LNG, the Atlantic LNG plant in Point Fortin, Trinidad and Tobago, marked a new era for the global LNG industry.

Costs for construction of the first production train were nearly 30 percent less than the costs associated with comparable-sized liquefaction trains built in the 1970s and early 1980s. The project sponsors chose the Phillips Optimized Cascade Process, which was developed and currently used at the Marathon/ConocoPhillips facility in Kenai, Alaska.

Much of the output of the first train, which has a capacity of about 158 Bcf per year, was earmarked for Spain. However, a long-term supply agreement with the Distrigas facility in Everett, Massachusetts, was successfully negotiated. The backers of the project also anticipated the proximity of the plant to U.S. markets (approximately 2,220 nautical miles to Lake Charles, compared with 9,600 nautical miles from Qatar) would provide a commercial opportunity for short-term, or "spot" sales, into the largest natural gas market in the world. In the brief 5 years of operation, the Atlantic LNG facility has more than benefited from this option, as it is now the largest source of LNG to the U.S. market, delivering 378 Bcf in 2003. That volume was roughly 70 percent of total LNG supplies to the U.S. market. Atlantic LNG normally processes 65 percent of Trinidad and Tobago's total natural gas production to produce 1.7 Bcf per day of LNG. The size and scope of Atlantic LNG make the operation integral to the economy of Trinidad and Tobago, which is a nation of about 1.3 million and a Gross Domestic Product of \$9.4 billion (U.S.), according to the U.S. Department of State.

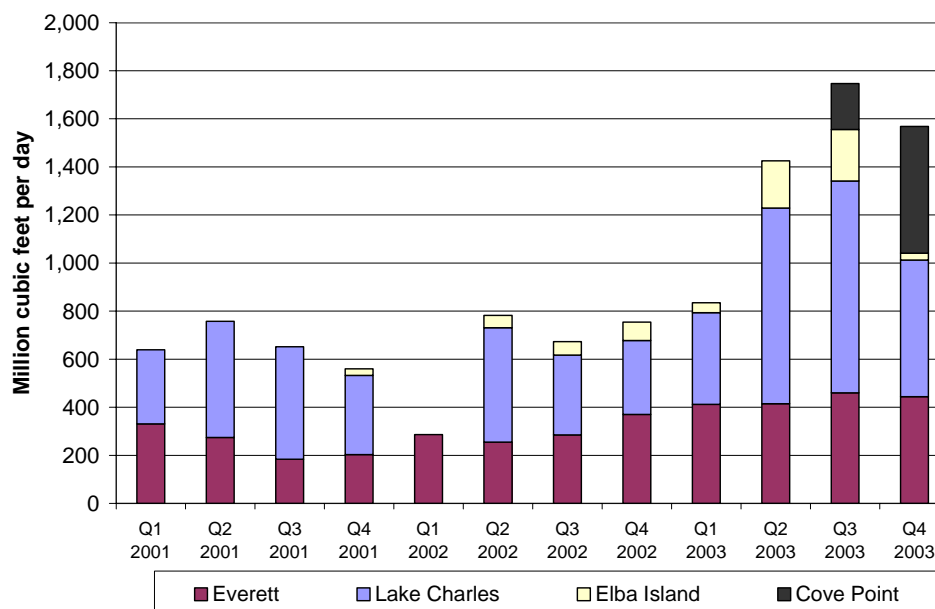
The reliance on new countries for gas supply will undoubtedly change the aspects of trade in natural gas for the United States. The shutdown of LNG production in Trinidad and Tobago for a brief period in March 2004 illustrates the potential for possible conflicts that affect LNG supplies to the United States. A series of strikes shut down all three of its liquefaction trains on Monday, March 8, after contracted tugboat operators joined a strike by construction workers seeking a wage increase. LNG shipments resumed on Wednesday, March 10, as the tugboat operators returned to work. A spokesman for Atlantic LNG acknowledged that while a few LNG cargos were delayed, the strike did not cause significant disruptions for the firm's clients as the three liquefaction trains were shut down for only two days.

After 12 months of negotiations between stakeholders, the Trinidad and Tobago government in June 2003 approved the construction of a fourth train at the Atlantic LNG complex. Because Train 4 is essentially a new project with a required additional storage tank, jetty, and related equipment, the project is expected to be more expensive than the second and third trains at about \$1.2 billion. The train will likely become the largest train in the world with a production capacity of 250 Bcf per year. Trinidad and Tobago also anticipates a fifth train, for which Prime Minister Manning has announced invitations to numerous international companies to indicate interest. Trinidad and Tobago also has been considering a 600-mile pipeline that would transport natural gas undersea to eastern Caribbean states, including Martinique, Guadeloupe, Barbados, St. Lucia and Dominica. Discussions are also focusing on the possibility of delivery into Florida.



Sources: Energy Information Administration, Office of Oil and Gas; trade press, and industry sources. More information is available at the Atlantic LNG web site at <http://www.atlanticlng.com>.

Figure 8. Quarterly Deliveries of LNG by U.S. Terminal, 2001-2003



Source: U.S. Department of Energy, Office of Fossil Energy.

upstream LNG investments, all but one of the LNG importers last year were subsidiaries of major diversified oil and gas companies with upstream LNG assets. The growing involvement by diversified companies likely is a factor behind the increasing imports under short-term authority as LNG can be diverted to the United States by LNG plant owners with available short-term supplies.

In 2003, Southern Union's Trunkline LNG terminal, located in Lake Charles, Louisiana, received the largest volume of any U.S. terminal with receipts of 238 Bcf, all through spot cargo sales. Distrigas received 158 Bcf, all from Trinidad, at its Everett, Massachusetts, terminal. Dominion's Cove Point, Maryland, terminal received 66 Bcf, while El Paso's Elba Island, Georgia, terminal received the least of the four operating terminals with only 44 Bcf over the year. Although LNG imports exceeded historical highs, even at the pace of deliveries in 2003 they represent only about 2.3 percent of U.S. consumption and 12.9 percent of gross imports. It is expected that LNG imports will grow to much higher levels.

In 2003, the United States also exported LNG to two countries. Slightly more than 64 Bcf of LNG was delivered to Japan from the ConocoPhillips/Marathon facility in Kenai, Alaska, while a very small amount was trucked into Mexico. The Kenai facility consists of a single liquefaction train with a capacity of approximately 90 Bcf per year. The amount of LNG exported to Mexico across the Arizona border (by truck) totaled 376 MMcf.

U.S. LNG Trade Prices

Although prices for LNG in the global market are often set through long-term contracts of 20 or more years in length and are often tied to the price of oil, prices for U.S. LNG imports are usually set on a short-term basis. In 2003, the United States received 187 spot market cargos carrying 440 Bcf. Although price considerations are not uniform for all LNG imports, prices for LNG cargos under short-term authorizations appear pegged to U.S. domestic prices, particularly prices at the Henry Hub.

In 2003, the average price for LNG imports was highest for Algeria at \$4.88 per MMBtu, while Malaysia received the second highest price of \$4.53 for the one cargo delivered from the country. The price of imports from Trinidad and Tobago, under both short-term and long-term contracts, averaged \$4.51 per MMBtu. The average price for LNG from each source country in 2003 was well below the price of imports by pipeline from Canada.

The evolution of the LNG industry toward commoditization appears to be reducing prices and providing more flexibility in LNG supply contracts. In 2003, several existing LNG projects entered an official round of price renegotiation. After renewal talks are completed, LNG prices are likely to go down and contract terms will probably improve in such forms as a shortened contract and increased flexibility of supply.²¹ Despite the trend toward more flexible contracts

²¹ The Institute of Energy Economics, *LNG: Falling Price and Increasing Flexibility of Supply - Risk Redistribution Creates Contract Diversity*,

such as allowances for flexible delivery locations, many industry observers believe long-term contracts will still be required to attract the required volume of LNG supplies to the United States in the future.

U.S. LNG Trade Expansion

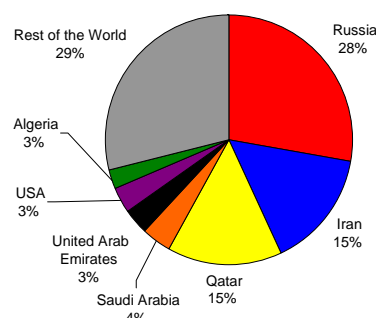
The Energy Information Administration (EIA) expects that LNG imports will increase by 16 percent per year from 2002 through 2025.²² Although much uncertainty still surrounds the potential flows of LNG into this country, additional likely long-term LNG source countries to the United States include such countries as Norway, Equatorial Guinea, Egypt, Nigeria, and Qatar.

The potential U.S. market for increased LNG imports is attracting the interest of a large number of U.S. and foreign companies, including many with interests in natural gas fields and LNG production facilities in LNG exporting nations. Following the decision by the Federal Energy Regulatory Commission (FERC) in late 2002 to exempt new LNG regasification terminals from FERC's open access regulations, many companies with interests in LNG facilities in foreign countries have proposed U.S. LNG import terminals to receive their growing LNG supplies.

The reliance on new countries for gas supply will undoubtedly change aspects of trade in natural gas for the United States. For example, the shutdown of LNG production in Trinidad and Tobago for a brief period in March 2004 owing to a labor strike illustrates the potential for possible conflicts in foreign countries that could affect supplies of LNG to the United States. In 2001, an Islamic secessionist insurgency on the island of Sumatra temporarily shut down LNG facilities that supply Japan, although LNG from elsewhere in Indonesia made up for the shortfall.²³

Other considerations such as access to world natural gas reserves point to greater flexibility in bringing supplies of natural gas to meet U.S. consumption. Estimated worldwide reserves totaled more than 6,000 Tcf at the end of 2003; however, much of the reserves are still "stranded" or located in areas remote from major demand centers (Figure 9).²⁴ Countries across the world have launched LNG projects in order to benefit from the monetization of these reserves.

Figure 9. World Natural Gas Reserves, 2004



Source: *Oil and Gas Journal*.

Current Atlantic Basin LNG producers such as Trinidad and Tobago, Nigeria, and Algeria are all likely to continue as suppliers. With its interest in the Atlantic LNG plant in Trinidad and Tobago, BG has announced intentions of shipping future production from the plant's fourth train to the United States, specifically the Lake Charles terminal.²⁵ ChevronTexaco is likely to receive LNG from planned expansions or new projects in Angola, Nigeria, or Venezuela at its proposed Port Pelican terminal in the offshore Gulf of Mexico.²⁶ Meanwhile, Norway's Statoil intends to ship LNG to the United States from its Snohvit plant beginning in 2007, most likely to the Cove Point terminal where it holds one-third of the facility's operating capacity.²⁷

Although Atlantic Basin suppliers may have an advantage in bringing LNG to the United States owing in part to shorter shipping distances to East Coast terminals, the competition to bring LNG to the North American market is worldwide. For example, Middle East countries such as Qatar appear ready to expand LNG production facilities to meet growing U.S. demand. Qatar holds 15.0 percent of the world's natural gas reserves, including the enormous North Field.

In October 2003, ExxonMobil and Qatar Petroleum announced a Heads of Agreement to supply 2 Bcf per day of LNG from Qatar to the United States for an expected

(Japan, March 2003), p. 7.

²² Energy Information Administration, *Annual Energy Outlook 2004 with Projections to 2025*, DOE/EIA-0383(2004) (Washington, DC, January 2004), p. 42.

²³ Daniel Yergin & Micheal Stoppard, "The Next Prize," Volume 82, Number 6, *Foreign Affairs* (November/December 2003), p. 113.

²⁴ "Worldwide Reserves Grow; Oil Production Climbs in 2003," *Oil and Gas Journal* (December 22, 2003), pp. 46-48.

²⁵ BG Group, *LNG Facts Sheets*, May 2004, Online. <http://ir.bg-group.com/bgir/presentations/2003-11-13/factsheets.pdf>. (May 2004).

²⁶ "Shook, Barbara and Junnola, Jill, "LNG Interim Supply Could Fall Short of New Terminal Capacity," *Natural Gas Week* (June 28, 2004), pp. 3-4.

²⁷ Statoil, *U.S. LNG Capacity Quadrupled*, Online <http://www.statoil.com/STATOILCOM/snohvit/svg02699.nsf?OpenDatabase&lang=en> (June 11, 2004).

period of 25 years beginning later this decade. According to ExxonMobil, the agreement represents nearly \$12 billion in trade between the company and Qatar, including cost of ships.²⁸ ConocoPhillips has also recently announced an agreement with Qatar to participate in the construction of an additional LNG train in Qatar.²⁹ This train would bring approximately 360 Bcf a year to the United States, likely to a proposed regasification terminal offshore Alabama near Dauphin Island in the Gulf of Mexico.³⁰

Although the United States has received very little LNG from Pacific Rim countries to date, the expansion of U.S. LNG markets includes the possibility of imports from a variety of countries in the region. Numerous proposed LNG regasification terminals on the Mexican and U.S. west coasts are seeking supplies from currently exporting countries such as Indonesia, Australia, and Malaysia, and from potential exporting countries such as Russia. ChevronTexaco, which has proposed to build a terminal offshore Baja California, Mexico, has signed an initial agreement to receive about 96 Bcf per year of LNG from the Gorgon LNG plant in Australia, in which it holds a 60 percent interest.³¹

As LNG producers and importers continue to negotiate supply contracts, stiff competition has emerged in the U.S. market to expand and build regasification facilities. Through planned expansions at three of the four existing facilities, the United States will increase its peak regasification capacity by 43.8 percent from the 2002 level (3.2 Bcf per day) to approximately 4.6 Bcf per day by 2005. Additionally, through recently announced new expansion projects at Lake Charles and Cove Point, total U.S. regasification capacity would reach 6.2 Bcf per day by 2008.³²

As of mid-June 2004, EIA has tracked at least 35 proposed new LNG import terminals for North America.³³ Projects in Canada would move regasified product south through existing pipelines, while LNG deliveries to terminals in Mexico would either displace current U.S. exports to the country or result in net imports to the United States. Bahamas-based projects include proposals to build pipelines into Florida.

²⁸ ExxonMobil, *ExxonMobil and Qatar Petroleum Sign Heads of Agreement for LNG Supply*, Online, <http://www.exxonmobil.com/Corporate/Newsroom> (October 16, 2003).

²⁹ ConocoPhillips, *Qatar Petroleum and ConocoPhillips Agree to Develop LNG Project*, Online, http://www.conocophillips.com/news/nr/print/071103_qatar.pdf. (July 11, 2003).

³⁰ The capacity of liquefaction plants is usually expressed in million tons per annum. One million tons of LNG is approximately equivalent to 48 Bcf (the conversion factor used in the text).

³¹ Sethuraman, Dinakar, "Australian Government Helps Competing LNG Projects," *World Gas Intelligence* (April 21, 2004), p. 8.

³² Energy Information Administration, *U.S. LNG Markets and Uses: June 2004 Update* (Washington D.C., June 2004), p. 6.

³³ *Ibid.* p. 7.

Two terminals have received final approval from the Federal Energy Regulatory Commission, which has jurisdiction over onshore facilities. The Commission's approval on September 10, 2003, of Sempra's Cameron LNG terminal was the first such U.S. regulatory approval for an LNG import terminal in 25 years. In June 2004, the second approval was granted to the Freeport LNG project in Texas.

Offshore LNG facilities come under the regulatory oversight of the U.S. Coast Guard and the Maritime Administration (MARAD) within the U.S. Department of Transportation, rather than the FERC. ChevronTexaco's Port Pelican project received licensing approval from MARAD in November 2003 and Excelsior's Energy Bridge project received approval in December 2003. If construction is completed, these terminals will be the first offshore LNG facilities in the world. In Excelsior's Energy Bridge project, the LNG is regasified aboard ship and then delivered to an offshore pipeline through use of a mooring system.

At least 14 terminals have been proposed for the onshore and offshore Gulf of Mexico, where they are expected to receive less public opposition than elsewhere in the country and where an existing complex of petrochemical plants are potential consumers of natural gas liquids stripped from LNG. Owing to extensive pipeline infrastructure both through and out of the region, the Gulf also offers an opportunity for facilities that can take advantage of economies of scale.

The proposed terminals for the region generally have the capacity to deliver 1 to 2 Bcf per day into the pipeline grid. For example, Freeport LNG has received approval for the construction of a facility that could deliver up to 1.5 Bcf per day to Texas, giving their customers a choice of delivery to three major interstate pipelines and access to much of the eastern United States.³⁴ In summer, these large plants are feasible because they will serve national rather than local markets, given the extensive pipeline network.

Sempra's Cameron LNG facility would also have the capability to deliver as much as 1.5 Bcf per day into the grid and, with nearly 9 Bcf of storage and two docks, the flexibility to handle two LNG shipments at a time.³⁵ Projects for the Gulf area require a large capital investment of about \$600 million on average, but the investment amount depends heavily on site-specific considerations (including whether or not the terminal is designed for the offshore).

In market areas such as the Northeast and California, the terminals proposed to date are generally smaller and require less investment capital. Average costs are about \$400

³⁴ Schmollinger, Christian, "FERC OKs Freeport LNG Terminal; Wades Into Ocean Express Flap," *Natural Gas Week* (June 21, 2004), p. 1.

³⁵ "Cameron LNG Terminal in Louisiana Gets Green Light," *Natural Gas Intelligence* (September 15, 2003), p. 1.

million for a new facility with deliverability of about 500-600 MMcf per day. Although a smaller financial investment, the smaller deliverability would result in capital costs that are up to double that of a larger facility in the Gulf of Mexico. The facilities are being proposed for certain markets that currently experience a premium price relative to prices in the Gulf.

Conclusion

The international trade of natural gas between the United States and other countries developed consistently through the 1990s. Net imports, consisting almost exclusively of Canadian pipeline imports, grew every year. Since the late 1980s, Mexican purchases of U.S. gas have risen in order to satisfy growing demand for natural gas as a fuel for electric power production in that country. Meanwhile, growth in U.S. receipts of LNG for most of the 1990s stalled as other sources of supply proved more price competitive.

A new landscape for U.S. international trade of natural gas is emerging. For the first time in 16 years, net imports fell in 2002 and data for 2003 show a further decline. The dominant factors driving this new trend are the increase in U.S. net exports to Mexico and lower net imports from Canada. Although U.S. imports are expected to grow in the future, the driving factor behind this growth would be increasing LNG imports rather than imports from Canada.

EIA currently expects LNG imports to rise at an average rate of 16 percent per year between 2002 and 2025. This fast growth is supported by the large number of LNG terminals currently proposed, which reflects the economic opportunity for importing LNG into the United States. Although economics appear favorable for tremendous growth in the global LNG industry and the construction of many regasification terminals in North America, there remain many obstacles and risks.

Data Sources

Volume and price data for 1995 through 2003 are based on company filings made with the U.S. Department of Energy, Office of Fossil Energy, but may be the result of adjustments by the Energy Information Administration (EIA) during review and comparison with data from EIA's *Natural Gas Monthly* and *Natural Gas Annual*. The Office of Fossil Energy 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). Data related to pipeline and terminal capacities are from the Energy Information Administration, Office of Oil and Gas, as well as from trade press, companies and industry sources.

The data for 1994 and earlier years are taken from Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas," which was discontinued in 1995. The data reported on Form FPC-14 represented physical movements of natural gas, whereas 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, 1955-2003
(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	18,800,826	6.8
1990.....	1,532,259	85,565	1,446,694	18,715,090	7.7
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	21,966,616	12.7
1997.....	2,994,173	157,006	2,837,167	21,958,660	12.9
1998.....	3,152,058	159,007	2,993,051	21,277,205	14.1
1999.....	3,585,505	163,415	3,422,090	21,619,616	15.8
2000.....	3,781,603	243,716	3,537,887	22,546,944	15.7
2001.....	3,976,939	373,278	3,603,661	22,238,624	16.2
2002.....	4,015,463	516,233	3,499,230	23,017,983	15.2
2003.....	3,996,447	691,880	3,304,567	^a 21,950,777	15.1

^a Preliminary data.
- Not Applicable.
^R Revised Data.

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

Sources: **Total Consumption:** *Historical Natural Gas Annual* for

1955 through 2000; *Natural Gas Monthly* July 2004 for 2001 through 2003.
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 2003: Energy Information Administration based on data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR2. Summary of U.S. Natural Gas Imports, 2002-2003

Source	Volume		Percent Change	Average Btu		Revenue		Average Price					
	(million cubic feet)			(Cubic Foot)		(thousand dollars)		(dollars/ thousand cubic feet)		Percent Change	(dollars/ million Btu)		Percent Change
	2002	2003		2002	2003	2002	2003	2002	2003		2002	2003	
Pipeline													
Canada.....	3,784,978	3,489,928	-7.8	1,019	1,019	11,863,260	18,248,111	3.13	5.23	67.1	3.08	5.13	66.6
Mexico.....	1,755	0	-	1,000	0	4,136	0	2.36	0	-	2.36	0	-
Total.....	3,786,733	3,489,928	-7.8	1,019	1,019	11,867,395	18,248,111	3.13	5.23	67.1	3.08	5.13	66.6
LNG													
Algeria.....	26,584	53,423	101.0	1,125	1,090	96,047	284,054	3.61	5.32	47.4	3.21	4.88	52.0
Australia.....	0	0	-	0	0	0	0	0	0	-	0	0	-
Brunei.....	2,401	0	-	1,152	0	7,804	0	3.25	0	-	2.82	0	-
Indonesia.....	0	0	-	0	0	0	0	0	0	-	0	0	-
Malaysia.....	2,423	2,704	11.6	1,097	1,097	8,311	13,438	3.43	4.97	44.9	3.13	4.53	44.7
Nigeria.....	8,123	50,067	516.4	1,111	1,110	26,083	233,244	3.21	4.66	45.2	2.89	4.20	45.3
Oman.....	3,013	8,632	186.5	1,173	1,040	10,065	32,440	3.34	3.76	12.6	2.85	3.61	26.7
Qatar.....	35,081	13,623	-61.2	1,125	1,125	118,832	67,938	3.39	4.99	47.2	3.01	4.43	47.2
Trinidad.....	151,104	378,069	150.2	1,040	1,051	513,579	1,793,583	3.40	4.74	39.4	3.27	4.51	37.9
Un. Arab Emirates.....	0	0	-	0	0	0	0	0	0	-	0	0	-
Total.....	228,730	506,519	121.4	1,069	1,063	780,720	2,424,697	3.41	4.79	40.5	3.20	4.50	40.7
Grand Total.....	4,015,463	3,996,447	-0.5	1,022	1,025	12,648,116	20,672,808	3.15	5.17	64.1	3.09	5.05	63.6

- 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. For 2002 and 2003, the percentages of volumes associated with the type of price are: **Algeria**-2002, 100 percent landed; 2003, 100 percent landed. **Brunei**-2002, 100 percent landed. **Malaysia**-2002, 100 percent tailgate; 2003, 100 percent landed. **Nigeria**-2002, 67 percent landed, 33 percent tailgate; 2003, 100 percent landed. **Oman**-2002,

100 percent landed; 2003, 100 percent landed. **Qatar**-2002, 93 percent landed, 7 percent tailgate; 2003, 100 percent landed. **Trinidad**-2002, 100 percent landed; 2003, 100 percent landed.

Source: Energy Information Administration based on data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR3. Summary of U.S. Natural Gas Exports, 2002-2003

Source	Volume		Percent Change	Average Btu		Revenue		Average Price					
	(million cubic feet)			(Cubic Foot)		(thousand dollars)		(dollars/ thousand cubic feet)		Percent Change	(dollars/ million Btu)		Percent Change
	2002	2003		2002	2003	2002	2003	2002	2003		2002	2003	
Pipeline													
Canada.....	189,313	294,285	55.4	1,019	1,019	633,254	1,778,981	3.35	6.05	80.6	3.28	5.93	80.8
Mexico.....	263,078	332,829	26.5	1,000	1,000	867,172	1,783,748	3.30	5.36	62.4	3.30	5.36	62.4
Total.....	452,391	627,115	38.6	1,008	1,009	1,500,426	3,562,728	3.32	5.68	71.1	3.29	5.64	71.5
LNG													
Japan.....	63,439	64,389	1.5	1,010	1,010	258,441	287,675	4.07	4.47	9.8	4.03	4.42	9.7
Mexico.....	403	376	-6.7	1,000	1,000	2,344	2,191	5.82	5.82	0	5.82	5.82	0.0
Total.....	63,842	64,765	1.4	1,010	1,010	260,785	289,866	4.08	4.48	9.8	4.04	4.43	9.6
Grand Total.....	516,233	691,880	34	1,008	1,009	1,761,211	3,852,595	3.41	5.57	63.3	3.38	5.55	64.1

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

Source: Energy Information Administration based on data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR4. Historical Summary of U.S. Natural Gas Imports, 1955-2003

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

Year	Imports From										
	Pipeline		LNG								
	Canada	Mexico	Algeria	Australia	Brunei	Canada	Indonesia	Malaysia	Nigeria	Oman	Qatar
1955.....	10,881	7	0	0	0	0	0	0	0	0	0
1956.....	10,374	6	0	0	0	0	0	0	0	0	0
1957.....	20,971	16,970	0	0	0	0	0	0	0	0	0
1958.....	89,586	46,211	0	0	0	0	0	0	0	0	0
1959.....	83,061	50,929	0	0	0	0	0	0	0	0	0
1960.....	108,657	46,989	0	0	0	0	0	0	0	0	0
1961.....	167,104	51,756	0	0	0	0	0	0	0	0	0
1962.....	350,438	51,096	0	0	0	0	0	0	0	0	0
1963.....	356,455	49,749	0	0	0	0	0	0	0	0	0
1964.....	390,721	52,605	0	0	0	0	0	0	0	0	0
1965.....	404,686	51,708	0	0	0	0	0	0	0	0	0
1966.....	430,189	49,591	0	0	0	0	0	0	0	0	0
1967.....	513,255	50,971	0	0	0	0	0	0	0	0	0
1968.....	604,462	47,423	0	0	0	0	0	0	0	0	0
1969.....	680,106	46,845	0	0	0	0	0	0	0	0	0
1970.....	778,687	41,336	757	0	0	0	0	0	0	0	0
1971.....	910,926	20,689	1,433	0	0	1,500	0	0	0	0	0
1972.....	1,009,093	8,140	2,032	0	0	230	0	0	0	0	0
1973.....	1,027,216	1,632	3,388	0	0	667	0	0	0	0	0
1974.....	959,063	222	0	0	0	0	0	0	0	0	0
1975.....	948,115	0	4,893	0	0	0	0	0	0	0	0
1976.....	953,613	0	10,155	0	0	0	0	0	0	0	0
1977.....	996,723	2,384	11,324	0	0	572	0	0	0	0	0
1978.....	881,123	0	84,422	0	0	0	0	0	0	0	0
1979.....	1,000,775	0	252,608	0	0	0	0	0	0	0	0
1980.....	796,507	102,410	85,850	0	0	0	0	0	0	0	0
1981.....	762,107	105,013	36,824	0	0	6	0	0	0	0	0
1982.....	783,407	94,794	55,136	0	0	0	0	0	0	0	0
1983.....	711,923	75,361	131,124	0	0	0	0	0	0	0	0
1984.....	755,368	51,502	36,191	0	0	0	0	0	0	0	0
1985.....	926,056	0	23,659	0	0	0	0	0	0	0	0
1986.....	748,780	0	0	0	0	0	1,669	0	0	0	0
1987.....	992,532	0	0	0	0	0	0	0	0	0	0
1988.....	1,276,322	0	17,490	0	0	0	0	0	0	0	0
1989.....	1,339,357	0	42,163	0	0	0	0	0	0	0	0
1990.....	1,448,065	0	84,193	0	0	0	0	0	0	0	0
1991.....	1,709,716	0	63,596	0	0	0	0	0	0	0	0
1992.....	2,094,387	0	43,116	0	0	0	0	0	0	0	0
1993.....	2,266,751	1,678	81,685	0	0	0	0	0	0	0	0
1994.....	2,566,049	7,013	50,778	0	0	0	0	0	0	0	0
1995.....	2,816,408	6,722	17,918	0	0	0	0	0	0	0	0
1996.....	2,883,277	13,862	35,325	0	0	0	0	0	0	0	0
1997.....	2,899,152	17,243	65,675	9,686	0	0	0	0	0	0	0
1998.....	3,052,073	14,532	68,567	11,634	0	0	0	0	0	0	0
1999.....	3,367,545	54,530	75,763	11,904	0	0	0	2,576	0	0	19,697
2000.....	3,543,966	11,601	46,947	5,945	0	0	2,760	0	12,654	9,998	46,057
2001.....	3,728,537	10,276	64,945	2,394	0	0	0	0	37,966	12,055	22,758
2002.....	3,784,978	1,755	26,584	0	2,401	0	0	2,423	8,123	3,013	35,081
2003.....	3,489,928	0	53,423	0	0	0	0	2,704	50,067	8,632	13,623

See footnotes at end of table.

Table SR4. Historical Summary of U.S. Natural Gas Imports, 1955-2003

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

Year	Imports From		Total Imports ^a	Average Price
	LNG			
	Trinidad	Un. Arab Emirates		
1955	0	0	10,888	NA
1956	0	0	10,380	NA
1957	0	0	37,941	NA
1958	0	0	135,797	NA
1959	0	0	133,990	NA
1960	0	0	155,646	NA
1961	0	0	218,860	NA
1962	0	0	401,534	NA
1963	0	0	406,204	NA
1964	0	0	443,326	NA
1965	0	0	456,394	NA
1966	0	0	479,780	NA
1967	0	0	564,226	NA
1968	0	0	651,885	NA
1969	0	0	726,951	NA
1970	0	0	820,780	NA
1971	0	0	934,548	NA
1972	0	0	1,019,496	0.31
1973	0	0	1,032,901	0.35
1974	0	0	959,284	0.55
1975	0	0	953,008	1.21
1976	0	0	963,768	1.72
1977	0	0	1,011,002	1.98
1978	0	0	965,545	2.13
1979	0	0	1,253,383	2.49
1980	0	0	984,767	4.28
1981	0	0	903,949	4.88
1982	0	0	933,336	5.03
1983	0	0	918,407	4.78
1984	0	0	843,060	4.08
1985	0	0	949,715	3.21
1986	0	0	750,449	2.43
1987	0	0	992,532	1.95
1988	0	0	1,293,812	1.84
1989	0	0	1,381,520	1.82
1990	0	0	1,532,259	1.94
1991	0	0	1,773,313	1.83
1992	0	0	2,137,504	1.85
1993	0	0	2,350,115	2.03
1994	0	0	2,623,839	1.87
1995	0	0	2,841,048	1.49
1996	0	4,949	2,937,413	1.97
1997	0	2,417	2,994,173	2.17
1998	0	5,252	3,152,058	1.97
1999	50,777	2,713	3,585,505	2.24
2000	98,949	2,725	3,781,603	3.95
2001	98,009	0	3,976,939	4.43
2002	151,104	0	4,015,463	3.15
2003	378,069	0	3,996,447	5.17

^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.

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. For 2002 and 2003, the percentages of volumes associated with the type

of price are: **Algeria**-2002, 100 percent landed; 2003, 100 percent landed. **Brunei**-2002, 100 percent landed. **Malaysia**-2002, 100 percent tailgate; 2003, 100 percent landed. **Nigeria**-2002, 67 percent landed, 33 percent tailgate; 2003, 100 percent landed. **Oman**-2002, 100 percent landed; 2003, 100 percent landed. **Qatar**-2002, 93 percent landed, 7 percent tailgate; 2003, 100 percent landed. **Trinidad**-2002, 100 percent landed; 2003, 100 percent landed.

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 2003: Energy Information Administration based on data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR5. Historical Summary of U.S. Natural Gas Exports, 1955-2003

(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	Mexico		
1955.....	11,467	19,562	0	0	31,029	NA
1956.....	16,819	19,144	0	0	35,963	NA
1957.....	30,867	10,788	0	0	41,655	NA
1958.....	32,129	6,590	0	0	38,719	NA
1959.....	11,739	6,674	0	0	18,413	NA
1960.....	5,759	5,573	0	0	11,332	NA
1961.....	5,577	5,170	0	0	10,747	NA
1962.....	5,574	10,240	0	0	15,814	NA
1963.....	6,879	10,078	0	0	16,957	NA
1964.....	9,763	9,840	0	0	19,603	NA
1965.....	17,979	8,153	0	0	26,132	NA
1966.....	20,281	4,358	0	0	24,639	NA
1967.....	70,456	11,158	0	0	81,614	NA
1968.....	81,647	12,098	0	0	93,745	NA
1969.....	34,931	13,391	2,982	0	51,304	NA
1970.....	10,878	14,678	44,257	0	69,813	NA
1971.....	14,349	15,632	50,231	0	80,212	NA
1972.....	15,553	14,579	47,882	0	78,013	0.51
1973.....	14,824	13,999	48,346	0	77,169	0.54
1974.....	13,263	13,268	50,258	0	76,789	0.72
1975.....	10,219	9,454	53,002	0	72,675	1.25
1976.....	7,506	7,425	49,779	0	64,711	1.55
1977.....	31	3,940	51,655	0	55,626	1.92
1978.....	66	4,033	48,434	0	52,532	2.13
1979.....	76	4,308	51,289	0	55,673	2.29
1980.....	113	3,886	44,732	0	48,731	4.70
1981.....	106	3,337	55,929	0	59,372	5.90
1982.....	162	1,705	49,861	0	51,728	5.81
1983.....	136	1,646	52,857	0	54,639	5.10
1984.....	127	1,786	52,840	0	54,753	4.92
1985.....	178	2,207	52,883	0	55,268	4.77
1986.....	9,203	1,896	50,172	0	61,271	2.81
1987.....	3,297	2,125	48,599	0	54,020	3.07
1988.....	19,738	2,327	51,573	0	73,638	2.74
1989.....	38,443	17,004	51,424	0	106,871	2.51
1990.....	17,359	15,659	52,546	0	85,565	3.10
1991.....	14,791	60,448	54,005	0	129,244	2.59
1992.....	67,777	95,973	52,532	0	216,282	2.25
1993.....	44,518	39,676	55,989	0	140,183	2.59
1994.....	52,556	46,500	62,682	0	161,738	2.50
1995.....	27,554	61,283	65,283	0	154,119	2.39
1996.....	51,905	33,840	67,648	0	153,393	2.97
1997.....	56,447	38,372	62,187	0	157,006	3.02
1998.....	39,891	53,133	65,951	33	159,007	2.45
1999.....	38,508	61,025	63,607	275	163,415	2.61
2000.....	72,586	105,102	65,610	418	243,716	4.10
2001.....	166,690	140,370	65,753	465	373,278	4.19
2002.....	189,313	263,078	63,439	403	516,233	3.41
2003.....	294,285	332,829	64,389	376	691,880	5.57

NA Not Available.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. LNG exports to Mexico are shipped by truck.

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 2003: Energy Information Administration based on data from the 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, 2002-2003
(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		Marysville, MI	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	32,863	3.35	76,882	2.55	63	1.90	350	2.35	85	2.81	0	-
February	34,448	2.43	65,162	2.16	83	1.57	500	3.96	85	2.00	0	-
March	34,673	2.71	69,647	2.39	88	2.04	25	2.71	104	2.40	0	-
April	30,837	3.29	61,320	3.08	76	2.40	0	-	50	3.39	0	-
May	30,034	2.99	50,817	3.05	68	2.51	0	-	55	3.16	0	-
June	29,653	2.49	50,914	2.69	737	2.39	0	-	26	3.20	0	-
July	30,704	1.96	55,483	2.33	3,358	1.93	271	2.94	31	3.26	0	-
August	34,080	2.22	66,023	2.18	497	2.03	171	3.19	19	2.80	0	-
September ..	32,782	2.84	59,777	2.61	340	2.26	0	-	29	3.33	0	-
October	30,891	3.36	63,303	3.16	347	2.87	0	-	25	3.52	74	3.95
November ...	33,813	3.97	64,257	3.76	330	3.57	596	4.27	48	4.16	0	-
December ...	40,151	4.22	76,061	3.86	340	3.50	34	4.84	46	4.18	0	-
Total	394,929	3.01	759,647	2.83	6,326	2.24	1,948	3.56	602	3.01	74	3.95
2003												
January	37,034	4.91	50,629	4.29	339	4.29	0	-	0	-	0	-
February	30,229	5.05	36,830	4.72	300	5.61	555	6.96	0	-	0	-
March	34,706	6.55	38,729	6.41	331	7.87	641	6.16	0	-	0	-
April	29,652	4.25	51,913	4.63	322	4.58	24	5.95	0	-	0	-
May	26,781	4.66	43,824	4.78	332	4.75	0	-	0	-	0	-
June	28,369	4.92	47,992	5.74	321	4.90	0	-	0	-	0	-
July	25,411	4.62	61,373	4.90	340	4.32	0	-	0	-	0	-
August	30,943	4.19	57,701	4.28	340	4.05	0	-	0	-	0	-
September ..	29,455	4.29	53,366	4.49	323	4.20	0	-	0	-	0	-
October	26,506	4.27	52,708	4.32	1,170	4.31	0	-	0	-	0	-
November ...	32,511	4.28	59,036	4.18	207	4.16	807	4.91	0	-	0	-
December ...	34,660	4.73	69,533	4.59	320	4.22	487	6.28	0	-	0	-
Total	366,257	4.76	623,635	4.72	4,645	4.70	2,514	5.96	0	-	0	-

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 2002-2003
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)											
	Midwest											
	Noyes, MN		Port of del Bonita, MT		Port of Morgan, MT		Portal, ND		Sherwood, ND ^a		St Clair, MI	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	34,280	2.62	13	2.33	61,686	2.48	60	3.32	43,337	2.35	2,029	2.60
February	25,981	2.31	12	1.87	53,296	1.98	30	3.38	34,357	2.06	3,090	2.36
March	26,949	2.59	13	2.05	63,796	2.33	37	3.42	38,951	2.53	2,533	2.95
April	24,316	3.37	18	2.80	64,040	3.13	24	2.25	38,702	3.22	1,553	3.11
May	30,121	3.23	10	2.96	67,734	3.11	49	2.20	36,138	3.22	1,546	3.73
June	31,370	3.02	18	2.76	67,087	2.97	25	2.05	37,492	3.14	1,383	3.37
July	38,061	2.60	23	2.22	68,013	2.92	90	1.84	38,485	2.97	7,284	3.12
August	37,823	2.65	22	1.72	67,834	2.57	35	2.04	39,761	2.77	3,013	3.03
September ..	38,235	2.97	26	2.30	65,313	2.90	162	2.71	39,451	3.07	1,814	3.50
October	42,446	3.50	27	2.91	62,622	3.59	23	2.14	33,806	3.65	3,183	3.91
November ...	33,898	3.87	25	3.66	61,148	4.06	16	2.19	33,853	4.03	245	4.20
December ...	39,141	4.05	25	3.55	65,965	4.08	2	5.36	38,761	4.15	769	4.74
Total	402,621	3.09	234	2.66	768,533	3.02	553	2.55	453,093	3.08	28,441	3.19
2003												
January	40,044	4.71	24	4.13	65,634	4.65	7	3.03	46,915	4.84	342	5.64
February	36,608	5.55	25	4.76	56,620	5.43	5	2.98	42,593	5.94	237	6.00
March	34,985	7.19	0	-	58,162	8.58	5	2.89	40,724	8.08	438	9.68
April	24,061	4.60	26	4.63	62,856	4.98	5	3.16	38,868	5.10	10	5.66
May	30,428	4.80	31	4.87	68,380	4.98	5	3.22	40,890	5.29	448	5.54
June	23,409	5.09	31	5.22	52,242	5.63	37	3.17	44,768	5.68	696	6.19
July	29,346	4.77	31	5.24	59,462	5.13	29	2.92	39,035	5.05	1,212	5.71
August	24,618	4.35	31	4.25	60,323	4.46	41	3.28	39,594	4.68	405	4.65
September ..	20,395	4.40	29	4.54	61,295	4.70	38	3.36	39,202	4.73	599	5.20
October	26,762	4.31	29	4.32	57,386	4.45	34	3.29	41,296	4.58	627	4.95
November ...	28,446	4.50	0	-	47,045	4.64	24	3.11	41,426	4.61	158	4.77
December ...	40,538	5.24	0	-	49,884	5.07	25	3.03	41,052	5.14	30	5.23
Total	359,640	5.04	257	4.68	699,288	5.22	255	3.17	496,364	5.31	5,202	5.84

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 2002-2003
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)											
	Midwest						Northeast					
	Warroad, MN		Whitlash, MT		Total		Calais, ME		Champlain, NY		Grand Island, NY	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	521	2.82	974	1.96	143,397	2.47	5,010	2.79	1,476	4.14	13,184	2.90
February	477	2.32	862	1.74	118,772	2.09	9,631	2.29	1,280	4.14	11,262	2.63
March	529	2.54	910	1.81	133,935	2.45	11,501	2.72	1,434	4.15	10,462	3.18
April	449	3.31	845	2.11	130,072	3.20	10,786	3.57	1,203	4.14	7,301	3.62
May	439	3.41	893	2.19	137,052	3.17	9,843	3.53	1,304	4.14	4,906	3.67
June	377	3.21	856	2.10	139,372	3.02	11,116	3.49	1,441	4.15	7,463	3.46
July	429	2.72	348	1.41	156,393	2.84	12,765	3.37	1,459	4.14	6,598	3.19
August	400	2.28	1,428	1.80	151,004	2.64	10,582	3.21	1,445	4.14	8,101	3.10
September ..	442	2.90	1,110	2.43	146,923	2.97	13,135	3.49	1,421	4.14	8,542	3.62
October	147	3.54	1,443	3.14	144,142	3.58	8,960	3.85	1,531	4.15	11,110	4.20
November ...	494	4.25	1,372	3.57	132,025	4.00	10,548	4.44	1,422	4.30	9,323	4.44
December ...	671	4.27	1,517	3.02	147,270	4.08	11,115	4.76	1,487	4.31	12,164	4.74
Total	5,374	3.16	12,558	2.42	1,680,357	3.05	124,991	3.49	16,904	4.17	110,417	3.57
2003												
January	633	4.97	1,182	4.44	155,122	4.72	11,647	6.00	0	-	15,518	5.46
February	595	5.60	1,214	5.75	138,753	5.63	8,396	6.96	0	-	14,671	7.11
March	658	8.60	1,413	7.19	137,357	8.06	11,439	9.90	0	-	8,339	9.03
April	391	5.22	1,194	4.67	127,755	4.94	9,374	5.37	1,454	4.31	5,352	5.74
May	357	5.18	1,210	4.90	142,080	5.03	10,428	5.41	1,484	4.31	2,867	5.71
June	336	6.02	1,191	4.99	123,030	5.54	8,991	5.87	1,407	4.31	2,609	6.41
July	275	5.40	855	4.36	130,585	5.02	9,064	5.19	1,407	4.30	3,755	5.61
August	310	4.80	951	4.19	126,614	4.51	7,639	4.74	1,432	4.31	4,390	5.34
September ..	292	6.06	860	4.27	123,034	4.66	8,119	4.75	1,389	4.30	3,936	5.39
October	275	4.49	889	4.20	128,468	4.46	7,964	4.38	1,260	4.30	3,584	5.79
November ...	386	4.41	1,772	4.10	120,270	4.59	6,855	4.51	1,261	4.48	4,760	5.07
December ...	417	4.79	1,744	4.65	134,497	5.14	8,426	5.43	1,485	4.48	6,639	6.02
Total	4,925	5.63	14,475	4.86	1,587,564	5.21	108,342	5.86	12,579	4.34	76,421	6.26

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 2002-2003
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)											
	Northeast											
	Highgate Springs, VT		Massena, NY		Niagara Falls, NY		Pittsburg, NH		Waddington, NY		Total	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	1,118	4.39	904	3.89	32,356	2.98	3,932	2.93	23,358	3.02	81,339	3.01
February	1,068	3.57	858	3.96	29,638	2.79	3,239	2.55	22,191	2.55	79,166	2.67
March	1,018	3.61	891	4.04	30,986	3.09	3,075	2.85	24,822	2.88	84,190	3.01
April	625	4.09	772	3.91	30,788	3.51	1,097	3.61	23,101	3.67	75,675	3.60
May	532	4.28	523	3.99	31,592	3.60	972	3.58	23,736	3.68	73,408	3.64
June	359	4.81	384	3.81	26,696	3.57	2,053	3.55	22,728	3.66	72,238	3.59
July	323	4.99	507	3.31	32,771	3.38	2,293	3.38	23,943	3.46	80,660	3.41
August	341	4.63	431	3.57	31,339	3.29	3,550	3.19	24,942	3.35	80,731	3.29
September ..	361	4.73	352	3.97	28,835	3.53	2,701	3.40	23,880	3.69	79,227	3.60
October	650	4.53	576	3.94	29,548	3.96	1,255	4.03	24,040	4.02	77,669	4.01
November ...	883	4.79	640	5.15	29,929	4.33	2,351	4.40	23,549	4.48	78,644	4.42
December ...	1,142	4.79	824	4.81	32,971	4.62	2,496	4.35	24,899	4.66	87,099	4.66
Total	8,421	4.33	7,662	4.08	367,448	3.55	29,014	3.37	285,188	3.60	950,046	3.58
2003												
January	1,297	5.47	1,021	5.87	37,407	5.13	4,832	5.77	27,456	5.67	99,178	5.48
February	1,006	5.72	890	5.87	33,203	6.59	4,291	6.58	24,893	6.58	87,352	6.69
March	889	6.87	771	7.57	31,739	8.49	3,820	9.94	30,694	8.10	87,690	8.63
April	775	5.97	549	5.59	32,111	5.43	2,041	5.61	23,579	5.52	75,236	5.46
May	426	5.72	270	6.05	30,278	5.46	1,871	5.79	21,538	5.62	69,162	5.50
June	343	7.24	297	6.41	25,680	5.96	2,114	6.37	21,083	6.08	62,525	5.99
July	280	6.51	289	6.04	29,418	5.56	2,484	5.65	23,618	5.62	70,314	5.52
August	333	6.00	507	5.41	30,677	5.06	2,367	5.11	25,048	5.11	72,393	5.05
September ..	323	6.22	291	5.89	26,595	5.05	2,315	5.11	22,923	5.24	65,891	5.09
October	626	5.60	505	5.35	30,050	4.87	2,340	5.08	24,650	4.86	70,979	4.86
November ...	804	5.00	653	6.23	24,993	4.89	2,542	5.06	21,494	5.04	63,362	4.93
December ...	1,169	5.20	776	6.19	36,564	5.77	3,849	4.98	29,484	5.67	88,391	5.66
Total	8,272	5.80	6,817	6.08	368,715	5.71	34,866	6.07	296,459	5.81	912,472	5.81

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 2002-2003
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)		Mexico (Pipeline)								LNG	
	Total		Texas						Total		Midwest	
	Volume	Average Price	Alamo, TX		Hidalgo, TX		McAllen, TX		Volume	Average Price	Lake Charles, LA	
			Volume	Average Price	Volume	Average Price	Volume	Average Price			Volume	Average Price
2002												
January	334,481	2.71	230	2.53	324	2.55	402	2.62	956	2.58	0	-
February	297,548	2.30	340	2.15	458	2.05	0	-	798	2.09	0	-
March	322,445	2.61	0	-	0	-	0	-	0	-	0	-
April	297,903	3.28	0	-	0	-	0	-	0	-	6,942	3.07
May	291,312	3.25	0	-	0	-	0	-	0	-	17,780	3.41
June	292,178	3.05	0	-	0	-	0	-	0	-	18,568	3.47
July	323,240	2.81	0	-	0	-	0	-	0	-	11,544	3.46
August	331,839	2.67	0	-	0	-	0	-	0	-	12,433	3.21
September ..	318,707	3.04	0	-	0	-	0	-	0	-	6,582	3.39
October	316,006	3.58	0	-	0	-	0	-	0	-	12,993	3.31
November ...	308,739	4.05	0	-	0	-	0	-	0	-	11,406	3.71
December ...	350,581	4.19	0	-	0	-	0	-	0	-	3,882	4.04
Total	3,784,978	3.13	571	2.30	782	2.26	402	2.62	1,755	2.36	102,130	3.42
2003												
January	341,962	4.90	0	-	0	-	0	-	0	-	9,095	4.80
February	293,163	5.77	0	-	0	-	0	-	0	-	8,509	5.16
March	298,482	7.84	0	-	0	-	0	-	0	-	16,667	6.25
April	284,557	4.95	0	-	0	-	0	-	0	-	19,991	5.65
May	281,847	5.07	0	-	0	-	0	-	0	-	26,074	4.90
June	261,917	5.62	0	-	0	-	0	-	0	-	24,535	5.05
July	287,683	5.08	0	-	0	-	0	-	0	-	32,027	5.68
August	287,651	4.56	0	-	0	-	0	-	0	-	24,535	4.35
September ..	271,746	4.69	0	-	0	-	0	-	0	-	24,523	4.66
October	278,661	4.52	0	-	0	-	0	-	0	-	28,571	4.39
November ...	275,179	4.54	0	-	0	-	0	-	0	-	15,943	4.13
December ...	327,080	5.12	0	-	0	-	0	-	0	-	7,767	5.41
Total	3,489,928	5.23	0	-	0	-	0	-	0	-	238,237	5.00

See footnotes at end of table.

Table SR6. U.S. Natural Gas Imports by Point of Entry, 2002-2003
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) — Continued

Year and Month	LNG								Grand Total	
	Northeast				Southeast		Total		Volume	Average Price
	Cove Point, MD		Everett, MA		Elba Island, GA		Volume	Average Price		
	Volume	Average Price	Volume	Average Price	Volume	Average Price				
2002										
January	0	-	8,043	3.70	0	-	8,043	3.70	343,481	2.73
February	0	-	7,571	2.97	0	-	7,571	2.97	305,917	2.32
March	0	-	10,151	2.65	0	-	10,151	2.65	332,596	2.61
April	0	-	8,713	3.00	1,558	3.41	17,213	3.07	315,116	3.27
May	0	-	8,781	3.20	1,531	3.15	28,092	3.33	319,404	3.25
June	0	-	5,701	3.15	1,555	3.15	25,824	3.38	318,002	3.08
July	0	-	9,856	3.18	0	-	21,400	3.33	344,641	2.84
August	0	-	8,110	3.16	3,632	2.89	24,174	3.14	356,013	2.70
September ..	0	-	8,833	3.32	1,472	3.00	16,886	3.32	335,594	3.06
October	0	-	9,945	3.48	4,483	3.45	27,421	3.39	343,427	3.56
November ...	0	-	10,399	3.99	0	-	21,804	3.84	330,544	4.04
December ...	0	-	13,660	4.27	2,606	5.24	20,147	4.35	370,729	4.20
Total	0	-	109,763	3.39	16,837	3.51	228,730	3.41	4,015,463	3.15
2003										
January	0	-	12,202	4.52	1,816	5.34	23,113	4.69	365,075	4.89
February	0	-	12,498	4.61	0	-	21,007	4.83	314,170	5.71
March	0	-	12,443	4.35	1,892	4.93	31,002	5.41	329,484	7.61
April	0	-	10,018	5.03	2,673	4.97	32,682	5.40	317,239	5.00
May	0	-	14,119	4.41	5,621	5.26	45,814	4.79	327,661	5.03
June	0	-	13,752	4.83	9,628	5.24	47,914	5.02	309,831	5.53
July	1,890	4.29	13,904	4.44	9,982	5.28	57,803	5.27	345,486	5.11
August	3,011	4.33	14,366	4.44	7,101	4.54	49,012	4.40	336,663	4.54
September ..	12,667	5.09	14,029	4.12	2,615	4.19	53,835	4.60	325,581	4.67
October	14,654	4.54	14,298	3.92	0	-	57,523	4.31	336,183	4.48
November ...	17,637	4.69	13,163	4.14	0	-	46,743	4.34	321,922	4.51
December ...	16,219	4.62	13,487	4.29	2,599	6.40	40,072	4.78	367,153	5.08
Total	66,078	4.69	158,277	4.41	43,927	5.12	506,519	4.79	3,996,447	5.17

^a EIA is reducing the reported volume of gas imported by pipeline from Canada by the amount of natural gas liquids removed from the saturated natural gas carried by Alliance Pipeline. Alliance moves saturated natural gas from the border to a processing plant in Illinois. After the adjustment, volumes of imported natural gas on this pipeline are on the same physical basis as other reported volumes of pipeline imports.

- 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. For 2002 and 2003, the percentages of volumes associated with the type of price are: **Algeria**-2002, 100 percent landed; 2003, 100 percent landed. **Brunei**-2002, 100 percent landed. **Malaysia**-2002, 100 percent tailgate; 2003, 100 percent landed. **Nigeria**-2002, 67 percent landed, 33 percent tailgate; 2003, 100 percent landed. **Oman**-2002, 100 percent landed; 2003, 100 percent landed. **Qatar**-2002, 93 percent landed, 7 percent tailgate; 2003, 100 percent landed. **Trinidad**-2002, 100 percent landed; 2003, 100 percent landed.

Sources: Energy Information Administration based on data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*, and EIA estimates of dry natural gas imports.

Table SR7. Summary of U.S. Natural Gas Imports, 1978-2003

(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 Total	2,899,152	2.15	17,243	2.31	2,916,394	2.15
1998 Total	3,052,073	1.95	14,532	2.03	3,066,605	1.95
1999 Total	3,367,545	2.23	54,530	2.14	3,422,075	2.23
2000 Total	3,543,966	3.97	11,601	5.43	3,555,567	3.98
2001 Total	3,728,537	4.43	10,276	5.00	3,738,814	4.44
2002						
January	334,481	2.71	956	2.58	335,437	2.71
February	297,548	2.30	798	2.09	298,346	2.30
March	322,445	2.61	0	-	322,445	2.61
April	297,903	3.28	0	-	297,903	3.28
May	291,312	3.25	0	-	291,312	3.25
June	292,178	3.05	0	-	292,178	3.05
July	323,240	2.81	0	-	323,240	2.81
August	331,839	2.67	0	-	331,839	2.67
September	318,707	3.04	0	-	318,707	3.04
October	316,006	3.58	0	-	316,006	3.58
November	308,739	4.05	0	-	308,739	4.05
December	350,581	4.19	0	-	350,581	4.19
Total	3,784,978	3.13	1,755	2.36	3,786,733	3.13
2003						
January	341,962	4.90	0	-	341,962	4.90
February	293,163	5.77	0	-	293,163	5.77
March	298,482	7.84	0	-	298,482	7.84
April	284,557	4.95	0	-	284,557	4.95
May	281,847	5.07	0	-	281,847	5.07
June	261,917	5.62	0	-	261,917	5.62
July	287,683	5.08	0	-	287,683	5.08
August	287,651	4.56	0	-	287,651	4.56
September	271,746	4.69	0	-	271,746	4.69
October	278,661	4.52	0	-	278,661	4.52
November	275,179	4.54	0	-	275,179	4.54
December	327,080	5.12	0	-	327,080	5.12
Total	3,489,928	5.23	0	-	3,489,928	5.23

See footnotes at end of table.

Table SR7. Summary of U.S. Natural Gas Imports, 1978-2003

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

Year And Month	LNG							
	Algeria		Australia		Brunei		Canada	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1978 Total	84,422	1.53	0	-	0	-	0	-
1979 Total	252,608	2.03	0	-	0	-	0	-
1980 Total	85,850	3.77	0	-	0	-	0	-
1981 Total	36,824	5.54	0	-	0	-	6	6.63
1982 Total	55,136	5.82	0	-	0	-	0	-
1983 Total	131,124	6.41	0	-	0	-	0	-
1984 Total	36,191	4.90	0	-	0	-	0	-
1985 Total	23,659	4.60	0	-	0	-	0	-
1986 Total	0	-	0	-	0	-	0	-
1987 Total	0	-	0	-	0	-	0	-
1988 Total	17,490	2.71	0	-	0	-	0	-
1989 Total	42,163	2.22	0	-	0	-	0	-
1990 Total	84,193	2.47	0	-	0	-	0	-
1991 Total	63,596	2.36	0	-	0	-	0	-
1992 Total	43,116	2.54	0	-	0	-	0	-
1993 Total	81,685	2.20	0	-	0	-	0	-
1994 Total	50,778	2.28	0	-	0	-	0	-
1995 Total	17,918	2.30	0	-	0	-	0	-
1996 Total	35,325	2.70	0	-	0	-	0	-
1997 Total	65,675	2.67	9,686	2.92	0	-	0	-
1998 Total	68,567	2.51	11,634	3.30	0	-	0	-
1999 Total	75,763	2.41	11,904	2.70	0	-	0	-
2000 Total	46,947	3.48	5,945	3.25	0	-	0	-
2001 Total	64,945	3.73	2,394	3.86	0	-	0	-
2002								
January	2,726	3.77	0	-	0	-	0	-
February	0	-	0	-	0	-	0	-
March	0	-	0	-	0	-	0	-
April	1,912	3.18	0	-	0	-	0	-
May	7,344	3.43	0	-	2,401	3.25	0	-
June	4,665	3.60	0	-	0	-	0	-
July	4,665	3.41	0	-	0	-	0	-
August	0	-	0	-	0	-	0	-
September.....	0	-	0	-	0	-	0	-
October	0	-	0	-	0	-	0	-
November.....	2,636	4.07	0	-	0	-	0	-
December.....	2,636	4.20	0	-	0	-	0	-
Total	26,584	3.61	0	-	2,401	3.25	0	-
2003								
January	0	-	0	-	0	-	0	-
February	0	-	0	-	0	-	0	-
March	2,778	7.54	0	-	0	-	0	-
April	10,893	5.93	0	-	0	-	0	-
May	4,190	4.6	0	-	0	-	0	-
June	2,788	5.36	0	-	0	-	0	-
July	5,462	6.47	0	-	0	-	0	-
August	2,768	4.47	0	-	0	-	0	-
September.....	8,191	4.99	0	-	0	-	0	-
October	10,910	4.69	0	-	0	-	0	-
November.....	2,784	4.24	0	-	0	-	0	-
December.....	2,659	4.79	0	-	0	-	0	-
Total	53,423	5.32	0	-	0	-	0	-

See footnotes at end of table.

Table SR7. Summary of U.S. Natural Gas Imports, 1978-2003

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

Year And Month	LNG							
	Indonesia		Malaysia		Nigeria		Oman	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
1978 Total	0	-	0	-	0	-	0	-
1979 Total	0	-	0	-	0	-	0	-
1980 Total	0	-	0	-	0	-	0	-
1981 Total	0	-	0	-	0	-	0	-
1982 Total	0	-	0	-	0	-	0	-
1983 Total	0	-	0	-	0	-	0	-
1984 Total	0	-	0	-	0	-	0	-
1985 Total	0	-	0	-	0	-	0	-
1986 Total	1,669	4.62	0	-	0	-	0	-
1987 Total	0	-	0	-	0	-	0	-
1988 Total	0	-	0	-	0	-	0	-
1989 Total	0	-	0	-	0	-	0	-
1990 Total	0	-	0	-	0	-	0	-
1991 Total	0	-	0	-	0	-	0	-
1992 Total	0	-	0	-	0	-	0	-
1993 Total	0	-	0	-	0	-	0	-
1994 Total	0	-	0	-	0	-	0	-
1995 Total	0	-	0	-	0	-	0	-
1996 Total	0	-	0	-	0	-	0	-
1997 Total	0	-	0	-	0	-	0	-
1998 Total	0	-	0	-	0	-	0	-
1999 Total	0	-	2,576	2.36	0	-	0	-
2000 Total	2,760	3.99	0	-	12,654	4.37	9,998	3.36
2001 Total	0	-	0	-	37,965	5.56	12,055	5.56
2002								
January	0	-	0	-	0	-	0	-
February	0	-	0	-	0	-	0	-
March	0	-	0	-	0	-	0	-
April	0	-	0	-	0	-	0	-
May	0	-	2,423	3.43	0	-	0	-
June	0	-	0	-	0	-	0	-
July	0	-	0	-	0	-	0	-
August	0	-	0	-	2,720	3.61	3,013	3.34
September.....	0	-	0	-	0	-	0	-
October	0	-	0	-	5,403	3.01	0	-
November.....	0	-	0	-	0	-	0	-
December.....	0	-	0	-	0	-	0	-
Total	0	-	2,423	3.43	8,123	3.21	3,013	3.34
2003								
January	0	-	0	-	0	-	0	-
February	0	-	0	-	0	-	0	-
March	0	-	0	-	0	-	0	-
April	0	-	0	-	2,604	5.02	0	-
May	0	-	0	-	11,288	4.74	0	-
June	0	-	0	-	11,237	4.63	0	-
July	0	-	2,704	4.97	2,770	5.26	0	-
August	0	-	0	-	8,132	4.5	2,646	3.52
September.....	0	-	0	-	8,250	4.56	2,322	3.52
October	0	-	0	-	5,787	4.47	0	-
November.....	0	-	0	-	0	-	3,664	4.08
December.....	0	-	0	-	0	-	0	-
Total	0	-	2,704	4.97	50,067	4.66	8,632	3.76

See footnotes at end of table.

Table SR7. Summary of U.S. Natural Gas Imports, 1978-2003

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

Year And Month	LNG						Total LNG		Grand Total	
	Qatar		Trinidad		United Arab Emirates		Volume	Average Price	Volume	Average Price
	Volume	Average Price	Volume	Average Price	Volume	Average Price				
1978 Total	0	-	0	-	0	-	84,422	1.53	965,545	2.13
1979 Total	0	-	0	-	0	-	252,608	2.03	1,253,383	2.49
1980 Total	0	-	0	-	0	-	85,850	3.77	984,767	4.28
1981 Total	0	-	0	-	0	-	36,830	5.54	903,949	4.88
1982 Total	0	-	0	-	0	-	55,136	5.82	933,336	5.03
1983 Total	0	-	0	-	0	-	131,124	6.41	918,407	4.78
1984 Total	0	-	0	-	0	-	36,191	4.90	843,060	4.08
1985 Total	0	-	0	-	0	-	23,659	4.60	949,715	3.21
1986 Total	0	-	0	-	0	-	1,669	4.62	750,449	2.43
1987 Total	0	-	0	-	0	-	0	-	992,532	1.95
1988 Total	0	-	0	-	0	-	17,490	2.71	1,293,812	1.84
1989 Total	0	-	0	-	0	-	42,163	2.22	1,381,520	1.82
1990 Total	0	-	0	-	0	-	84,193	2.47	1,532,259	1.94
1991 Total	0	-	0	-	0	-	63,596	2.36	1,773,313	1.83
1992 Total	0	-	0	-	0	-	43,116	2.54	2,137,504	1.85
1993 Total	0	-	0	-	0	-	81,685	2.20	2,350,115	2.03
1994 Total	0	-	0	-	0	-	50,778	2.28	2,623,839	1.87
1995 Total	0	-	0	-	0	-	17,918	2.30	2,841,048	1.49
1996 Total	0	-	0	-	4,949	3.46	40,274	2.79	2,937,413	1.97
1997 Total	0	-	0	-	2,417	3.74	77,778	2.73	2,994,173	2.17
1998 Total	0	-	0	-	5,252	2.63	85,453	2.63	3,152,058	1.97
1999 Total	19,697	2.71	50,777	2.39	2,713	3.03	163,430	2.47	3,585,505	2.24
2000 Total	46,057	3.44	98,949	3.43	2,725	3.53	226,036	3.50	3,781,603	3.95
2001 Total	22,758	4.37	98,009	4.14	0	-	238,126	4.35	3,976,939	4.43
2002										
January	0	-	5,318	3.67	0	-	8,043	3.70	343,481	2.73
February.....	0	-	7,571	2.97	0	-	7,571	2.97	305,917	2.32
March	0	-	10,151	2.65	0	-	10,151	2.65	332,596	2.61
April.....	5,030	3.03	10,271	3.06	0	-	17,213	3.07	315,116	3.27
May	5,612	3.45	10,312	3.19	0	-	28,092	3.33	319,404	3.25
June	13,903	3.43	7,256	3.15	0	-	25,824	3.38	318,002	3.08
July.....	5,375	3.56	11,360	3.19	0	-	21,400	3.33	344,641	2.84
August.....	2,644	3.16	15,796	3.02	0	-	24,174	3.14	356,013	2.70
September.....	2,517	3.59	14,369	3.27	0	-	16,886	3.32	335,594	3.06
October	0	-	22,018	3.49	0	-	27,421	3.39	343,427	3.56
November.....	0	-	19,169	3.81	0	-	21,804	3.84	330,544	4.04
December.....	0	-	17,512	4.37	0	-	20,147	4.35	370,729	4.20
Total	35,081	3.39	151,104	3.40	0	-	228,730	3.41	4,015,463	3.15
2003										
January	0	-	23,113	4.69	0	-	23,113	4.69	365,075	4.89
February.....	0	-	21,007	4.83	0	-	21,007	4.83	314,170	5.71
March	1,871	5.94	26,353	5.14	0	-	31,002	5.41	329,484	7.61
April.....	0	-	19,184	5.16	0	-	32,682	5.40	317,239	5.00
May	0	-	30,336	4.84	0	-	45,814	4.79	327,661	5.03
June	0	-	33,889	5.13	0	-	47,914	5.02	309,831	5.53
July.....	2,993	6.22	43,874	5.07	0	-	57,803	5.27	345,486	5.11
August.....	0	-	35,466	4.44	0	-	49,012	4.40	336,663	4.54
September.....	5,760	4.79	29,312	4.55	0	-	53,835	4.60	325,581	4.67
October	2,999	3.54	37,828	4.24	0	-	57,523	4.31	336,183	4.48
November.....	0	-	40,295	4.38	0	-	46,743	4.34	321,922	4.51
December.....	0	-	37,414	4.78	0	-	40,072	4.78	367,153	5.08
Total	13,623	4.99	378,069	4.74	0	-	506,519	4.79	3,996,447	5.17

- 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. For 2002 and 2003, the percentages of volumes associated with the type of price are: **Algeria**-2002, 100 percent landed; 2003, 100 percent landed. **Brunei**-2002, 100 percent landed. **Malaysia**-2002, 100 percent tailgate;

2003, 100 percent landed. **Nigeria**-2002, 67 percent landed, 33 percent tailgate; 2003, 100 percent landed. **Oman**-2002, 100 percent landed; 2003, 100 percent landed. **Qatar**-2002, 93 percent landed, 7 percent tailgate; 2003, 100 percent landed. **Trinidad**-2002, 100 percent landed; 2003, 100 percent landed.

Sources: 1994 and Earlier Years: Energy Information Administration, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 2003: Energy Information Administration based on data from the 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, 2002-2003
(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet)

Year and Month	Canada (Pipeline)											
	Babb, MT		Detroit, MI		Eastport, ID		Havre, MT		Marysville, MI		Niagara Falls, NY	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	0	-	1,585	2.76	0	-	1,226	2.39	0	-	0	-
February	0	-	1,984	2.24	0	-	1,119	1.80	0	-	0	-
March	0	-	1,309	2.64	0	-	1,195	2.43	0	-	0	-
April	0	-	54	3.54	0	-	1,114	3.04	0	-	0	-
May	0	-	604	3.40	0	-	1,818	3.14	0	-	0	-
June	0	-	62	3.37	0	-	1,774	2.80	0	-	0	-
July	53	2.27	0	-	0	-	1,511	2.43	0	-	0	-
August	8	2.47	0	-	0	-	1,792	2.26	0	-	0	-
September ..	21	2.18	0	-	0	-	1,843	2.68	0	-	0	-
October	53	2.27	46	3.71	1	2.84	853	3.28	0	-	0	-
November ...	8	2.47	881	4.27	0	-	815	3.67	0	-	0	-
December ...	0	-	906	4.26	175	4.41	832	3.77	0	-	39	5.04
Total	143	2.28	7,431	3.03	176	4.40	15,892	2.74	0	-	39	5.04
2003												
January	0	-	1,204	5.11	15	4.34	664	4.57	0	-	311	6.90
February	38	6.48	1,090	5.79	0	-	615	3.87	0	-	199	6.62
March	0	-	1,021	9.00	0	-	717	6.69	0	-	929	7.73
April	0	-	919	5.32	0	-	986	4.93	0	-	776	5.62
May	0	-	1,018	5.66	0	-	936	4.93	0	-	0	-
June	0	-	2,053	6.14	0	-	752	5.23	0	-	0	-
July	0	-	1,231	5.55	0	-	711	5.25	0	-	0	-
August	0	-	578	4.82	0	-	833	4.25	0	-	0	-
September ..	0	-	1,407	5.11	0	-	633	4.55	0	-	0	-
October	0	-	1,077	4.85	0	-	629	4.33	0	-	0	-
November ...	0	-	4,169	4.89	0	-	545	4.20	509	4.86	0	-
December ...	0	-	3,971	5.21	0	-	829	4.44	302	5.39	0	-
Total	38	6.48	19,737	5.47	15	4.34	8,851	4.80	811	5.06	2,215	6.77

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 2002-2003

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

Continued

Year and Month	Canada (Pipeline)											
	Noyes, MN		Port of Morgan, MT		Sault Ste. Marie, MI		Sherwood, ND		St Clair, MI		Sumas, WA	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	71	1.99	0	-	0	-	0	-	13,392	2.62	0	-
February	0	-	0	-	0	-	0	-	12,621	2.17	98	1.89
March	0	-	0	-	0	-	0	-	11,765	2.40	0	-
April	0	-	0	-	0	-	0	-	11,451	3.41	0	-
May	0	-	0	-	0	-	0	-	11,316	3.41	1,038	2.87
June	0	-	0	-	0	-	0	-	12,544	3.32	0	-
July	0	-	0	-	0	-	0	-	10,291	3.30	0	-
August	0	-	0	-	0	-	0	-	9,868	2.67	315	1.86
September ..	0	-	0	-	0	-	0	-	11,606	3.32	0	-
October	0	-	0	-	0	-	0	-	9,204	3.84	26	3.10
November ...	0	-	1	3.47	0	-	0	-	25,973	4.36	0	-
December ...	0	-	0	-	0	-	0	-	24,053	4.35	0	-
Total	71	1.99	1	3.47	0	-	0	-	164,084	3.42	1,477	2.59
2003												
January	0	-	0	-	0	-	0	-	25,224	6.50	0	-
February	0	-	0	-	0	-	0	-	25,899	7.60	0	-
March	0	-	0	-	0	-	0	-	29,005	9.41	8	4.80
April	0	-	0	-	0	-	0	-	22,944	5.53	0	-
May	0	-	0	-	0	-	0	-	15,628	5.56	0	-
June	0	-	0	-	0	-	0	-	17,304	6.20	0	-
July	0	4.90	0	-	0	-	20	5.47	13,824	5.66	0	-
August	5	5.14	0	-	0	-	19	4.85	14,714	4.98	10	4.00
September ..	0	-	0	-	0	-	17	5.13	19,152	5.35	0	-
October	167	5.44	0	-	0	-	11	4.52	18,296	4.81	15	4.16
November ...	0	-	0	-	297	4.83	0	-	26,693	4.93	0	-
December ...	0	-	0	-	307	5.04	0	-	32,417	5.28	0	-
Total	172	5.43	0	-	605	4.94	66	5.05	261,101	6.13	33	4.27

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 2002-2003(Volumes in Million Cubic Feet; Average Prices in Dollars per Thousand Cubic Feet) —
Continued

Year and Month	Canada (Pipeline)				Mexico (Pipeline)							
	Warroad, MN		Total		Alamo, TX		Calexico, CA		Clint, TX		Douglas, AZ	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	0	-	16,274	2.61	320	2.26	313	3.02	5,191	2.75	1,053	2.47
February	0	-	15,822	2.15	499	2.34	353	2.41	4,097	2.33	613	2.25
March	0	-	14,270	2.42	3,095	2.58	396	2.67	5,188	2.69	1,271	2.67
April	0	-	12,619	3.38	3,598	3.29	215	3.56	5,029	3.27	355	3.89
May	0	-	14,777	3.34	4,412	3.24	271	3.27	5,433	3.20	451	2.93
June	0	-	14,379	3.26	5,010	3.22	267	3.70	5,207	2.96	967	3.10
July	0	-	11,856	3.18	5,455	3.12	269	3.69	4,658	3.22	1,393	3.20
August	0	-	11,983	2.59	6,235	2.88	273	3.31	5,394	2.82	1,347	2.94
September ..	0	-	13,471	3.23	5,736	3.19	275	3.51	5,286	3.20	1,290	3.31
October	0	-	10,182	3.78	6,289	3.62	342	3.68	4,392	3.38	1,059	3.48
November ...	0	-	27,678	4.34	5,531	4.01	325	4.48	4,585	4.00	678	3.83
December ...	0	-	26,005	4.33	5,210	4.16	279	4.42	4,759	4.13	462	4.31
Total	0	-	189,313	3.35	51,391	3.35	3,580	3.44	59,218	3.16	10,938	3.11
2003												
January	0	-	27,417	6.40	7,010	4.92	243	5.01	4,684	5.26	508	5.47
February	50	8.58	27,892	7.44	6,412	5.78	220	5.36	4,346	5.72	625	6.46
March	61	11.15	31,742	9.29	3,122	9.13	219	7.37	3,778	8.53	783	8.25
April	58	8.03	25,684	5.51	3,619	5.07	219	5.32	3,614	5.24	878	5.54
May	65	7.92	17,646	5.54	5,119	5.32	214	5.35	4,979	5.50	1,050	6.01
June	55	7.99	20,164	6.17	5,104	5.79	200	6.14	4,993	5.93	1,121	6.05
July	59	7.36	15,845	5.64	4,927	5.14	204	5.79	5,221	5.66	1,303	5.62
August	53	7.44	16,213	4.95	2,858	4.92	180	4.97	6,059	5.07	1,316	5.08
September ..	40	7.18	21,249	5.31	3,979	4.80	178	5.25	5,416	5.16	1,231	5.02
October	58	6.74	20,252	4.81	5,822	4.48	278	4.78	5,384	4.69	1,049	4.58
November ...	68	6.80	32,282	4.92	5,912	4.37	336	4.72	4,962	4.59	395	4.87
December ...	73	7.44	37,899	5.26	5,526	5.99	344	4.99	5,416	5.56	290	6.31
Total	640	7.88	294,285	6.05	59,408	5.36	2,836	5.36	58,851	5.50	10,551	5.69

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 2002-2003
(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		McAllen, TX		Ogilby, CA		Otay Mesa, CA	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	195	3.06	979	2.74	0	-	3,152	2.53	0	-	1,358	2.62
February	180	2.72	813	2.12	0	-	2,672	2.22	0	-	1,542	2.02
March	171	2.98	686	2.52	900	2.89	4,806	2.91	0	-	1,700	2.28
April	157	3.44	484	3.42	570	3.44	6,939	3.85	0	-	1,774	3.41
May	155	3.50	439	3.32	1,596	3.39	7,563	3.34	0	-	2,480	3.19
June	145	3.51	450	3.09	2,123	3.19	6,930	3.30	0	-	3,089	2.88
July	140	3.44	430	3.46	2,525	3.14	7,686	3.21	0	-	4,039	3.31
August	147	3.11	369	3.01	1,985	3.06	7,893	2.95	0	-	4,209	2.92
September ..	142	3.45	455	3.40	2,015	3.35	7,444	3.33	3,816	3.14	0	-
October	154	3.78	549	3.62	1,973	3.75	7,733	3.70	2,734	3.32	0	-
November ...	159	4.22	854	4.08	700	4.03	6,111	4.03	2,322	4.09	0	-
December ...	169	4.19	1,125	4.24	932	4.45	7,415	4.36	2,578	4.28	0	-
Total	1,914	3.44	7,632	3.28	15,318	3.39	76,345	3.42	11,450	3.63	20,191	2.93
2003												
January	213	4.90	1,088	4.94	2,140	5.03	7,434	4.87	4,037	5.12	0	-
February	184	5.58	896	5.87	1,671	5.73	6,790	5.74	3,428	5.62	0	-
March	153	8.93	699	8.14	520	9.39	4,460	8.97	2,293	7.01	0	-
April	150	5.07	583	5.02	3,891	5.14	0	-	1,645	5.22	0	-
May	143	5.13	262	5.17	5,642	5.54	0	-	1,601	6.03	0	-
June	137	6.01	471	5.83	6,950	5.84	0	-	2,054	5.85	0	-
July	130	5.50	484	5.41	295	5.04	5,275	5.18	1,992	5.22	0	-
August	138	4.80	406	4.80	0	-	5,467	4.77	5,067	5.26	0	-
September ..	148	4.96	442	4.97	58	4.53	4,239	4.74	4,190	4.79	0	-
October	173	4.40	1,837	4.39	0	-	5,246	4.51	5,778	4.74	0	-
November ...	189	4.49	1,882	4.26	210	4.65	6,248	4.47	4,117	4.53	0	-
December ...	211	4.89	2,403	5.57	120	6.19	5,723	5.64	4,567	5.39	0	-
Total	1,969	5.34	11,453	5.20	21,497	5.61	50,884	5.36	40,767	5.25	0	-

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 2002-2003

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

Continued

Year and Month	Mexico (Pipeline)								Japan (LNG)		Mexico (LNG)	
	Penitas, TX		Rio Bravo, TX		Roma, TX		Total		Kenai, AK		Nogales, AZ	
	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price	Volume	Average Price
2002												
January	0	-	0	-	0	-	12,562	2.66	5,605	4.26	45	5.82
February	0	-	0	-	0	-	10,770	2.25	3,755	4.02	33	5.82
March	0	-	0	-	0	-	18,213	2.70	5,619	3.73	33	5.82
April	0	-	0	-	0	-	19,122	3.52	7,427	3.67	20	5.82
May	0	-	0	-	0	-	22,799	3.27	1,853	3.76	22	5.82
June	760	3.16	0	-	0	-	24,948	3.14	5,586	3.84	17	5.82
July	975	3.09	0	-	0	-	27,570	3.21	5,588	4.08	13	5.82
August	1,070	2.97	0	-	0	-	28,922	2.92	5,583	4.25	15	5.82
September ..	1,021	3.22	0	-	0	-	27,482	3.25	5,583	4.29	19	5.82
October	1,089	3.60	0	-	0	-	26,314	3.58	5,571	4.27	33	5.82
November ...	0	-	0	-	0	-	21,264	4.03	5,609	4.29	33	5.82
December ...	185	4.69	0	-	0	-	23,113	4.26	5,660	4.33	37	5.82
Total	5,100	3.27	0	-	0	-	263,078	3.30	63,439	4.07	319	5.82
2003												
January	665	5.57	0	-	0	-	28,021	5.03	4,301	4.42	36	5.82
February	607	6.96	0	-	0	-	25,177	5.78	5,569	4.43	32	5.82
March	625	9.11	0	-	646	5.78	17,298	8.46	5,565	4.29	32	5.82
April	20	4.93	0	-	5,598	5.09	20,217	5.15	5,605	4.43	25	5.82
May	190	5.85	0	-	9,718	5.73	28,919	5.60	3,798	4.61	20	5.82
June	331	5.87	0	-	8,765	6.15	30,124	5.95	3,498	4.75	12	5.82
July	0	-	0	-	7,548	5.17	27,381	5.29	6,546	4.67	10	5.82
August	0	-	2,146	4.90	6,127	4.83	29,764	4.96	5,145	4.42	12	5.82
September ..	0	-	2,222	4.98	5,657	4.82	27,760	4.89	5,475	4.39	20	5.82
October	0	-	989	4.88	6,397	4.48	32,953	4.58	7,566	4.39	26	5.82
November ...	360	4.63	1,673	4.61	6,649	4.40	32,934	4.47	5,659	4.44	31	5.82
December ...	239	5.82	1,957	5.46	5,487	5.20	32,281	5.56	5,663	4.50	32	5.82
Total	3,036	6.53	8,986	4.99	62,591	5.18	332,829	5.36	64,389	4.47	289	5.82

See footnotes at end of table.

Table SR8. U.S. Natural Gas Exports by Point of Exit, 2002-2003

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

Year and Month	Mexico (LNG)		Grand Total	
	Otay Mesa, CA		Volume	Average Price
	Volume	Average Price		
2002				
January	6	5.82	34,491	2.90
February	4	5.82	30,383	2.42
March	5	5.82	38,141	2.75
April	7	5.82	39,194	3.51
May	8	5.82	39,459	3.32
June	8	5.82	44,939	3.27
July	6	5.82	45,032	3.31
August	9	5.82	46,511	2.99
September ..	8	5.82	46,563	3.37
October	10	5.82	42,109	3.72
November ...	5	5.82	54,589	4.21
December ...	6	5.82	54,821	4.30
Total	84	5.82	516,233	3.41
2003				
January	9	5.82	59,784	5.61
February	8	5.82	58,678	6.44
March	7	5.82	54,644	8.51
April	8	5.82	51,537	5.25
May	7	5.82	50,390	5.50
June	7	5.82	53,805	5.95
July	7	5.82	49,790	5.32
August	8	5.82	51,142	4.90
September ..	8	5.82	54,512	5.01
October	7	5.82	60,804	4.63
November ...	6	5.82	70,912	4.67
December ...	6	5.82	75,882	5.33
Total	88	5.82	691,880	5.57

- Not Applicable.

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

Sources: Energy Information Administration based on data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.

Table SR9. Summary of U.S. Natural Gas Exports, 1978-2003

(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 Total	56,447	2.52	38,372	2.46	94,818	2.49	62,187	3.83	0	-	157,006	3.02
1998 Total	39,891	2.25	53,133	2.04	93,023	2.13	65,951	2.91	33	5.69	159,007	2.45
1999 Total	38,508	2.35	61,025	2.27	99,533	2.30	63,607	3.08	275	6.95	163,415	2.61
2000 Total	72,586	3.66	105,102	4.26	177,688	4.01	65,610	4.31	418	5.82	243,716	4.10
2001 Total	166,690	3.97	140,370	4.34	307,060	4.14	65,753	4.39	465	5.82	373,278	4.19
2002												
January	16,274	2.61	12,562	2.66	28,835	2.63	5,605	4.26	51	5.82	34,491	2.90
February.....	15,822	2.15	10,770	2.25	26,591	2.19	3,755	4.02	37	5.82	30,383	2.42
March	14,270	2.42	18,213	2.70	32,483	2.58	5,619	3.73	39	5.82	38,141	2.75
April.....	12,619	3.38	19,122	3.52	31,740	3.47	7,427	3.67	26	5.82	39,194	3.51
May	14,777	3.34	22,799	3.27	37,576	3.29	1,853	3.76	30	5.82	39,459	3.32
June	14,379	3.26	24,948	3.14	39,327	3.18	5,586	3.84	25	5.82	44,939	3.27
July.....	11,856	3.18	27,570	3.21	39,426	3.20	5,588	4.08	19	5.82	45,032	3.31
August.....	11,983	2.59	28,922	2.92	40,905	2.82	5,583	4.25	24	5.82	46,511	2.99
September.....	13,471	3.23	27,482	3.25	40,952	3.24	5,583	4.29	28	5.82	46,563	3.37
October	10,182	3.78	26,314	3.58	36,495	3.64	5,571	4.27	43	5.82	42,109	3.72
November.....	27,678	4.34	21,264	4.03	48,942	4.20	5,609	4.29	37	5.82	54,589	4.21
December.....	26,005	4.33	23,113	4.26	49,118	4.30	5,660	4.33	43	5.82	54,821	4.30
Total	189,313	3.35	263,078	3.30	452,391	3.32	63,439	4.07	403	5.82	516,233	3.41
2003												
January	27,417	6.40	28,021	5.03	55,439	5.71	4,301	4.42	44	5.82	59,784	5.61
February.....	27,892	7.44	25,177	5.78	53,070	6.65	5,569	4.43	40	5.82	58,678	6.44
March	31,742	9.29	17,298	8.46	49,040	8.99	5,565	4.29	40	5.82	54,644	8.51
April.....	25,684	5.51	20,217	5.15	45,900	5.35	5,605	4.43	33	5.82	51,537	5.25
May	17,646	5.54	28,919	5.6	46,565	5.58	3,798	4.61	27	5.82	50,390	5.5
June	20,164	6.17	30,124	5.95	50,288	6.04	3,498	4.75	19	5.82	53,805	5.95
July.....	15,845	5.64	27,381	5.29	43,226	5.42	6,546	4.67	18	5.82	49,790	5.32
August.....	16,213	4.95	29,764	4.96	45,977	4.96	5,145	4.42	21	5.82	51,142	4.9
September.....	21,249	5.31	27,760	4.89	49,009	5.08	5,475	4.39	28	5.82	54,512	5.01
October	20,252	4.81	32,953	4.58	53,205	4.67	7,566	4.39	32	5.82	60,804	4.63
November.....	32,282	4.92	32,934	4.47	65,216	4.69	5,659	4.44	37	5.82	70,912	4.67
December.....	37,899	5.26	32,281	5.56	70,180	5.39	5,663	4.5	38	5.82	75,882	5.33
Total	294,285	6.05	332,829	5.36	627,115	5.68	64,389	4.47	376	5.82	691,880	5.57

- Not Applicable.

Notes: Totals may not equal sum of components due to independent rounding. Geographic coverage is the continental United States including Alaska. LNG exports to Mexico are shipped by truck.

Sources: 1994 and Earlier Years: Energy Information Administration,, Form FPC-14, "Annual Report for Importers and Exporters of Natural Gas." 1995 to 2003: Energy Information Administration based on data from the Office of Fossil Energy, U.S. Department of Energy, *Natural Gas Imports and Exports*.