QUARTERLY FOCUS

2000 NATURAL GAS IMPORT/EXPORT TRADE: A SECOND LOOK

The Focus feature that was included in the fourth quarter 2000 *Quarterly Report of Natural Gas Imports and Exports* (*"Report"*) provided an overview of natural gas import/export activity for calendar 2000. This Focus feature, like the ones found in the *Report* issued in the first quarter of the past four years, provides additional information on North American natural gas trade. Specifically, it provides more volume and price information on U.S. natural gas import trade with Canada; reviews volume and price trends with respect to natural gas exports to Mexico; looks at gas marketing developments in California and New England, two important regional markets for imported gas; and identifies the major importers and exporters transacting cross-border sales between the United States, Canada and Mexico.

2000 Natural Gas Trade with Canada

Canadian imports continue to be an increasingly important supplemental source of natural gas to U.S. markets. Over the past sixteen years, import volumes from Canada have almost quadrupled. **Figures 1 and 2** on page ii illustrate the significant growth over the past fifteen years (1986-2000) of Canadian gas imports into the U. S. and the growing importance of this trade to Canadian producers in terms of expanded markets and revenues generated from this cross-border trade.

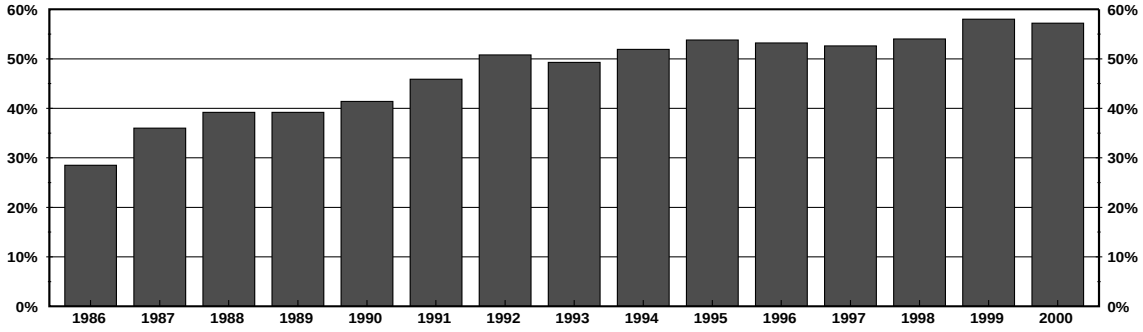
In **Figure 1**, the first bar chart shows Canadian natural gas exports to the U. S. as a percentage of Canada's total marketable production from 1986 to 2000. During this fifteen-year period, this percentage has grown from 29 percent in 1986 to 57 percent in 2000 [National Energy Board of Canada's (NEB) *2000 Annual Report*]. This was the seventh year in a row where gas exports to the U.S. equaled more than half of Canada's marketable production. Canadian natural gas exports as a percentage of total marketable gas production are expected to continue to grow during the next few years as new pipeline facilities serving the market reach full capacity. These include the Alliance Pipeline, which serves Midwest markets, and the Maritimes & Northeast Pipeline, which serves New England markets. The second bar chart in **Figure 1** shows the growth in U.S. market shares for Canadian gas imports from 1986 to 2000. As illustrated, net Canadian imports as a percentage of total domestic gas demand has grown from 4.6 percent in 1986 to an estimated 15.5 percent in 2000.

Recent projections by most forecasters show continuing growth in Canadian gas sales to the U.S., including Natural Resources Canada (NRC), the Energy Information Administration (EIA), and the National Petroleum Council (NPC). The NRC's recent annual report, titled *Canadian Natural Gas: Market Review & Outlook* (May 2001), forecasts that annual Canadian gas exports to the U. S. likely will reach 4 Tcf by 2005 and 4.2 Tcf by 2010. The NRC forecast is best viewed as conservative since it does not assume any export pipeline capacity expansions. EIA projects in its reference case forecast that Canadian natural gas imports will grow to 4.81 Tcf by 2010 and 5.46 Tcf by 2020 [*Annual Energy Outlook 2001*, DOE/EIA-0383(2001), December 2000].

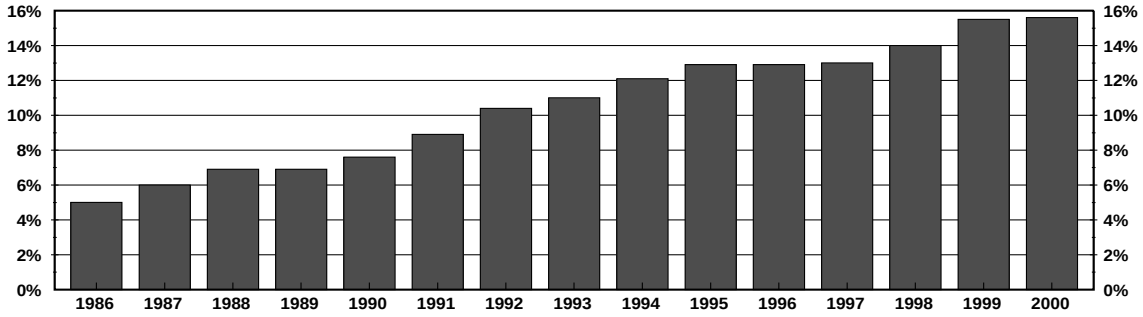
The estimated revenues accrued to Canadian natural gas exporters for natural gas sales to the U. S. over the past fifteen years (1986-2000) are shown in **Figure 2**. The Office of Fossil Energy estimates that in 2000, Canadian gas exports to the United States generated over $13.8 billion in revenues, up almost 78 percent from last year's earnings of $7.3 billion. This sharp rise in Canadian export revenues is the direct result of record volumes entering the U. S. at record high prices. The weighted average international border price of Canadian gas imported into the U.S. during 2000 was $3.90 per MMBtu. This is an increase of 78 percent over last year's average price of $2.19 per MMBtu.

Figure 1

CANADIAN NATURAL GAS EXPORTS TO THE U.S.
AS A PERCENTAGE OF CANADIAN MARKETABLE PRODUCTION



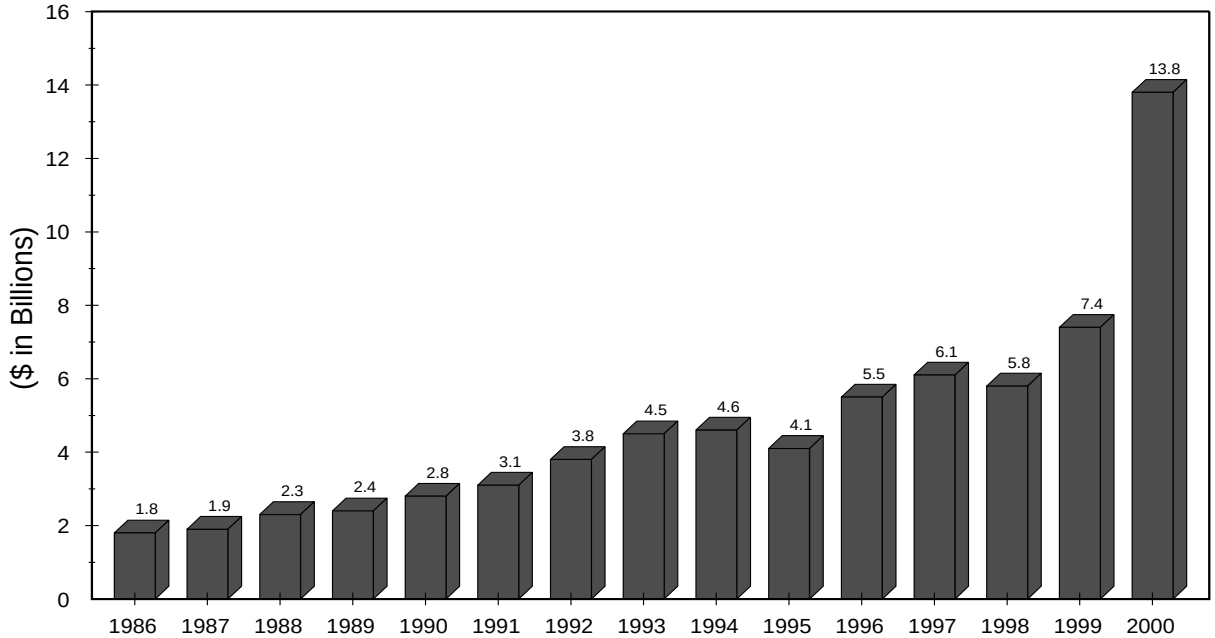
NET CANADIAN IMPORTS AS A PERCENTAGE
OF TOTAL U.S. GAS CONSUMPTION



Sources: Statistics Canada, Natural Resources Canada, company filings with FE.

Figure 2

CANADIAN REVENUES DERIVED FROM NATURAL GAS EXPORTS TO THE U.S.
(U.S. Dollars)



Sources: 1992 - 2000 estimates derived from company filings with FE; 1986 - 1991 estimates from *Natural Gas Monthly,* [DOE/EIA - 0130 (97/08), table SR7, page XIV].

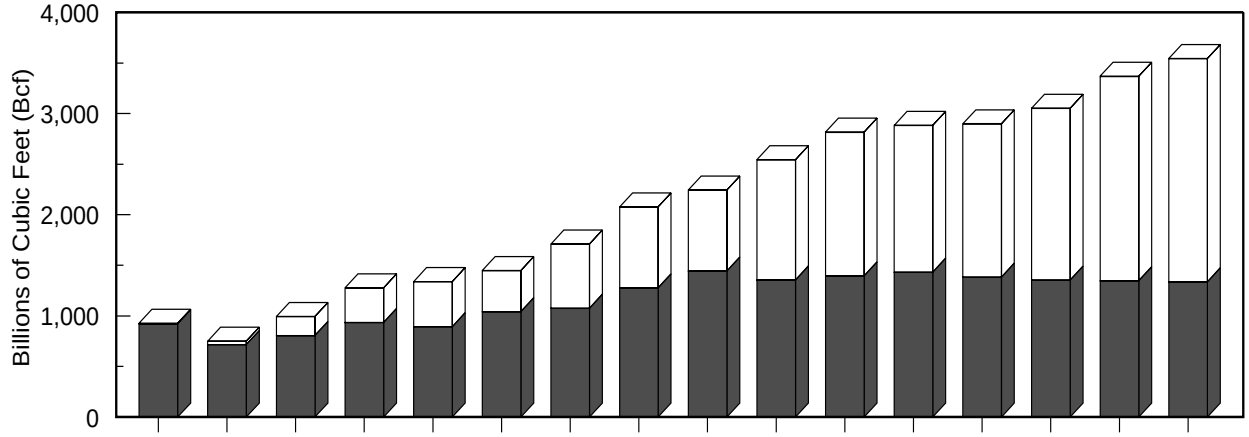
During 2000, 110 companies imported Canadian natural gas under short-term authorizations (for gas purchase contracts of two years or less), and 90 companies used 210 gas purchase contracts to import volumes under long-term arrangements (for gas purchase contracts longer than two years). These companies imported a record volume of 3,544 Bcf of natural gas during the year. This represented an increase of 176.5 Bcf, or 5.2 percent over the 1999 total of 3,367.5 Bcf. Almost two-thirds of this incremental gas was sold in the Northeast, as the Maritimes & Northeast Pipeline, which began operation in January, brought in new supplies from the Sable Island Offshore Energy Project, located on offshore Nova Scotia.

Of the 3,544 Bcf of Canadian gas imported in 2000, 62.3 percent (2,208 Bcf) was imported under DOE's short-term import authority, while 37.7 percent (1,336 Bcf) was imported under its long-term authority. This was the fifth straight year in which more Canadian natural gas was imported under short-term than under long-term import authorizations. Comparing 2000 and 1999 Canadian imports by type of authorization used, gas imported under short-term contractual arrangements rose approximately 9 percent or by188 Bcf, and imports this year under long-term contractual arrangements fell slightly by 12 Bcf.

Figure 3 below illustrates the steady growth in the use of short-term import authorizations over the past 16 years (1985-2000). For the past seven years, gas imports under long-term import authorizations have remained relatively constant and virtually all of the growth in Canadian gas imports during this period have come from increased sales under short-term import authorizations. This trend is expected to continue even though certain importers likely will continue to utilize long-term contractual arrangements, e.g., cogeneration facilities.

Figure 3

CANADIAN NATURAL GAS IMPORTS BY TYPE OF IMPORT AUTHORIZATION 1985 - 2000



	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Long-Term Imports*	923	716	805	935	893	1,041	1,076	1,278	1,443	1,355	1,396	1,432	1,389	1,354	1,348	1,336
Short-Term Imports**	3	33	188	341	446	407	634	798	801	1,189	1,420	1,451	1,510	1,699	2,020	2,208
TOTAL IMPORTS	926	749	993	1,276	1,339	1,448	1,710	2,076	2,244	2,544	2,816	2,883	2,899	3,053	3,368	3,544
Short-Term Imports as a % of Total Imports	*0.3*	*4.4*	*18.9*	*26.7*	*33.3*	*28.1*	*37.1*	*38.4*	*35.7*	*46.7*	*50.4*	*50.3*	*52.1*	*55.7*	*60.0*	*62.3*

* Imports made under gas purchase contracts longer than 2 years.
** Imports made under gas purchase contracts which are 2 years or less.

Under DOE's short-term authorizations, the average border price of gas supplies imported from Canada in 2000 was $4.05 per MMBtu, which was 90 percent over last year's average price of $2.13 per MMBtu. Under DOE's long-term authorizations, the average border price was $3.65 per MMBtu, or an increase of 71 percent over last year's average price of $2.14 per MMBtu.

The increase in the average price for Canadian natural gas imports during 2000 was consistent with what occurred in the entire industry, particularly during the latter part of the year. However, based on preliminary data from EIA, the price for Canadian supplies at the international border rose faster than the price for domestic supplies at the wellhead. EIA reports that the average domestic wellhead price for natural gas in 2000 was $3.60 per Mcf, which was $1.43, or 65 percent more than the 1999 average price of $2.17 per Mcf [*Natural Gas Monthly* (April 2001), p. 14]. As mentioned previously, this compares with an average price of $3.90 per MMBtu for Canadian gas supplies and a 78 percent year-to-year increase in price.

Table 1 shows the monthly international border prices for Canadian natural gas imports, by region, for 1999 and 2000. The three principal marketing regions for Canadian gas are the West, the Midwest, and the Northeast. The prices for these regions are derived by combining the international border prices at the two principal entry points serving each of the three regions. As illustrated in **Table 1**, all three regions experienced significant price increases in 2000 compared to 1999. The price of Canadian natural gas marketed in the West rose by $1.64 or by 80.4 percent. The Midwest and Northeast each saw increases of $1.58 per MMBtu or by 75.6 percent and 62.9 percent, respectively.

International Border Import Prices ($/MMBtu) **Table 1**

	WEST				MID-WEST				NORTHEAST			
Month	Eastport, Idaho		Sumas, Washington		Port of Morgan, Montana		Noyes, Minnesota		Niagara Falls, New York		Waddington, New York	
	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000	1999	2000
January	$1.86	$2.19	$2.46	$2.33	$1.63	$2.15	$1.92	$2.38	$2.39	$2.66	$2.13	$2.76
February	$1.68	$2.21	$1.83	$2.38	$1.59	$2.32	$1.94	$2.60	$2.34	$2.92	$2.08	$3.02
March	$1.62	$2.33	$1.63	$2.35	$1.44	$2.31	$1.74	$2.63	$2.17	$2.97	$1.99	$3.01
April	$1.59	$2.64	$1.58	$2.73	$1.58	$2.56	$1.94	$2.88	$2.22	$3.09	$2.10	$3.20
May	$1.89	$2.75	$1.97	$2.80	$1.98	$2.80	$2.27	$3.04	$2.49	$3.37	$2.48	$3.42
June	$1.88	$3.24	$1.97	$3.60	$1.89	$3.79	$2.19	$4.15	$2.45	$4.17	$2.41	$4.33
July	$1.93	$3.69	$2.00	$3.85	$1.98	$3.84	$2.15	$3.79	$2.48	$4.15	$2.46	$4.44
August	$2.02	$3.44	$2.18	$3.05	$2.22	$3.40	$2.44	$3.63	$2.72	$3.96	$2.78	$4.07
September	$2.34	$3.77	$2.41	$3.50	$2.48	$4.08	$2.70	$4.24	$2.86	$4.38	$3.04	$4.73
October	$2.27	$4.56	$2.39	$4.70	$2.28	$6.76	$2.49	$4.36	$2.74	$4.96	$2.83	$5.39
November	$2.66	$5.04	$2.74	$4.86	$2.72	$4.59	$2.85	$4.52	$2.97	$4.94	$2.97	$4.91
December	$2.22	$8.20	$2.33	$12.12	$2.02	$5.90	$2.23	$6.14	$2.58	$6.23	$2.55	$6.51
Average at Entry Point	**$2.00**	**$3.72**	**$2.12**	**$4.20**	**$1.99**	**$3.66**	**$2.25**	**$3.68**	**$2.53**	**$4.03**	**$2.49**	**$4.16**
Average for Region	**Averages for West 1999: $2.04 2000: $3.86**				**Averages for Mid-West 1999: $2.09 2000: $3.67**				**Averages for Northeast 1999: $2.51 2000: $4.09**			

Figure 4 shows the 1999 and 2000 weighted average border price for Canadian natural gas imported under short-term contracts by Census Region. Approximately 99.8 percent of all short-term Canadian gas sales to the U. S. in 2000 were concentrated in six Census Regions (1,2,3,4,8,9). This year, gas sales to customers in Region 1 increased by 345 percent compared to 1999. The percentage of total short-term imports marketed in the Western Region (Census Regions 8 and 9) fell somewhat this year compared to 1999 (43% v. 48%). As indicated, the average border price for **all** short-term imports in 2000 was $4.05 per MMBtu, or 90 percent more the 1999 price of $2.13 per MMBtu.

Although the prices in all Census Regions rose considerably this year, there were some variances within the regions. Region 4 experienced the largest percentage increase in price compared to 1999 (105.4 %), and Region 1 recorded the highest prices of the year ($4.29 per MMBtu). The lowest prices this year were in Census Region 5 ($2.81) and in Census Region 8 ($3.59). Although the price of Canadian natural gas marketed in the western part of the country (Census Regions 8 & 9) continues to be less than the price of Canadian gas going to other parts of the U.S. (due to these regions' proximity to gas production areas), the prices in these areas still jumped by 78.6 percent and 92.7 percent, respectively.

Figure 4

THE WEIGHTED AVERAGE PRICE IN 1999 & 2000 FOR CANADIAN NATURAL GAS IMPORTED UNDER SHORT-TERM CONTRACTS BY CENSUS REGION ($/MMBtu)

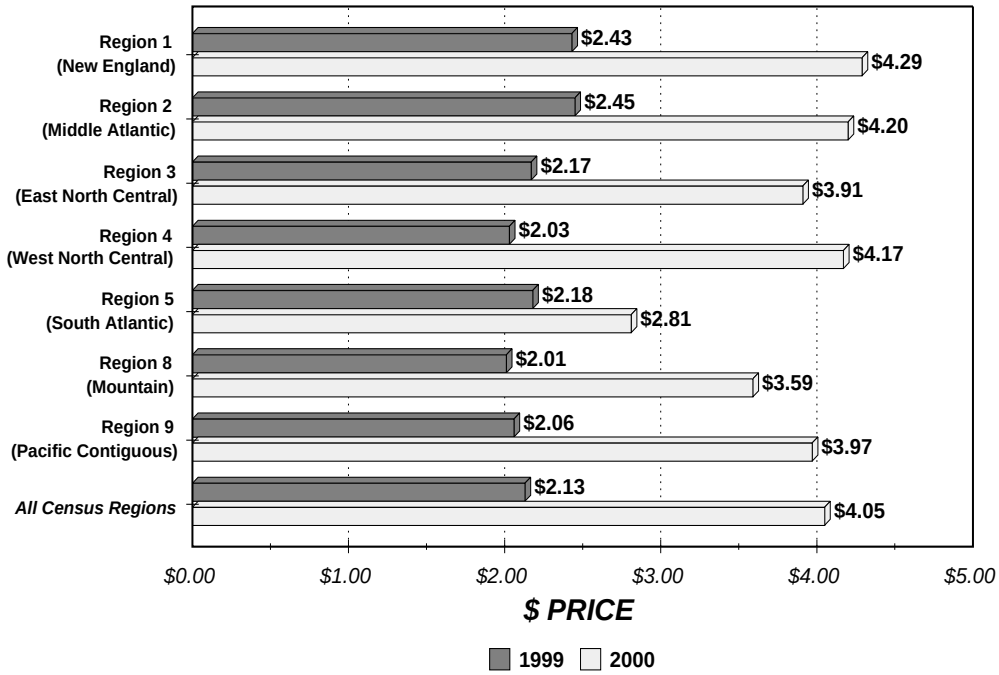


Figure 5 lists the top ten importers of Canadian natural gas for the year. These ten firms imported a total of 1,759.4 Bcf or 50 percent of the total Canadian gas imported in 2000. **Figure 5** also indicates whether the imports were made under short-term or long-term authorizations. About 69 percent of the volumes imported by this group was done under short-term authority and 31 percent was under long-term authority. Eight of these companies were also among the top ten companies listed for 1999. This year's additions to the list were Puget Sound Energy and BP Canada Energy Marketing Corporation. There were only two end-users among the top importers in 2000 -- PG&E, a combined electric/gas utility, and Puget Sound Energy, an LDC. The rest of the importers were marketers, producer affiliates, or gas aggregators. Compared with import levels of 1999, Duke Energy experienced the largest year-to-year volumetric and percentage gains. Natural gas imports by Duke Energy this year grew by 161.9 Bcf or 85 percent. Volumes imported by Engage Energy and TransCanada Gas Services declined by 24 and 13 percent, respectively.

Figure 5

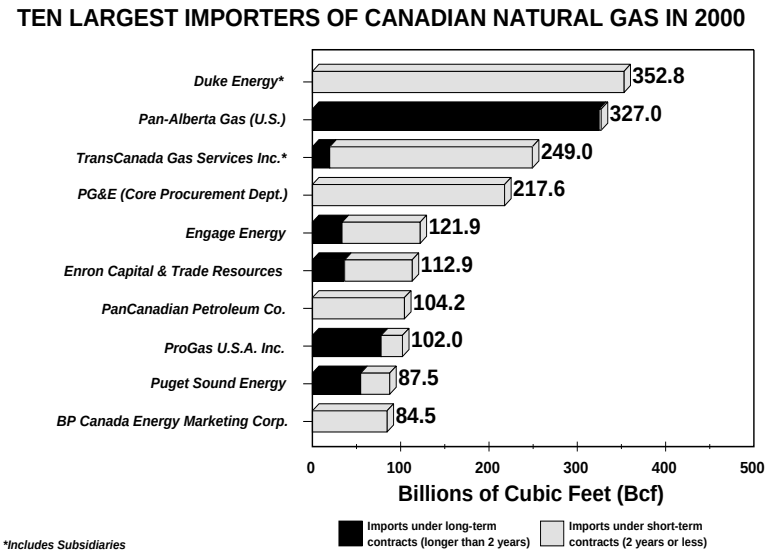


Figure 6 lists the ten largest suppliers of Canadian gas to the U. S. in 2000. The volumes supplied by each company include both short-term and long-term sales. Eight out of ten companies were also on the list of top gas suppliers for 1999. Nexen Marketing and Coral Energy Canada joined the list in 2000, replacing Producers Marketing, Ltd. and PanCanadian Petroleum from the previous year's roster. As shown, most of these top suppliers are gas aggregators. These ten companies supplied approximately two-thirds of all Canadian gas imports during 2000 (2,285.6 Bcf).

Figure 6

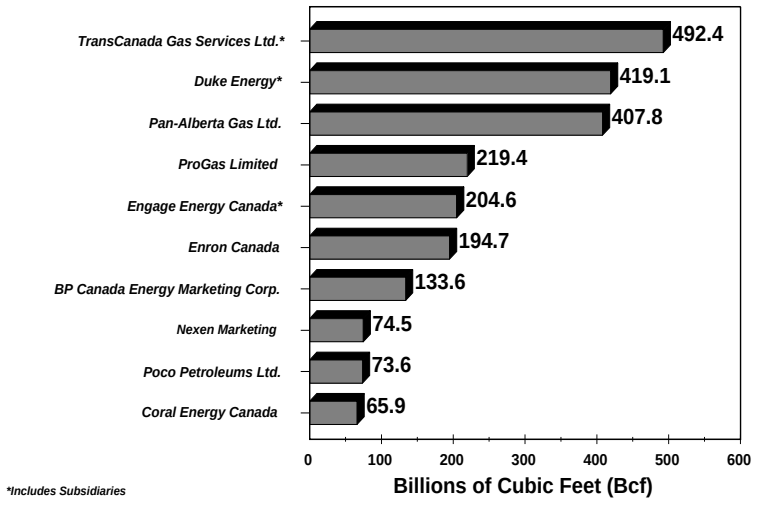
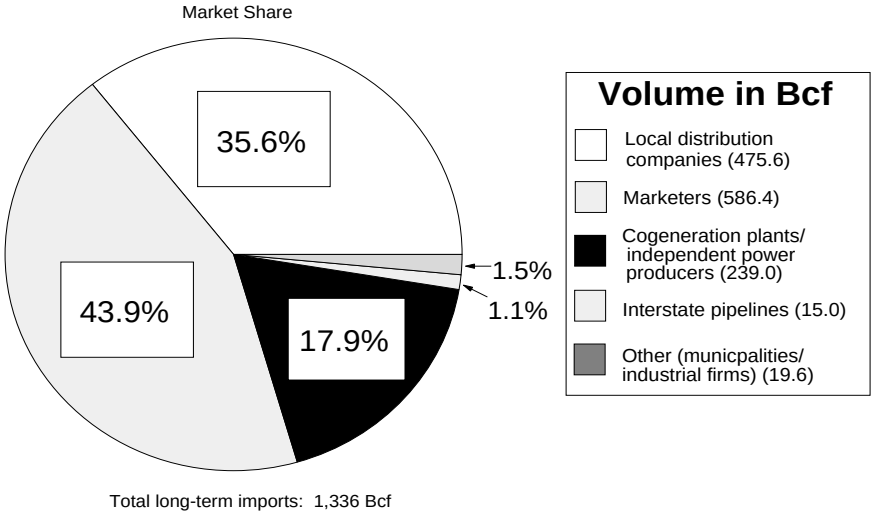


Figure 7 shows the type of importer that purchased Canadian natural gas under long-term supply contracts during 2000. The only import category that experienced growth in terms of volume imported and percentage of market share was cogeneration plants/independent power producers. This category showed an increase of 7.5 percent (239.0 v. 222.3) over 1999. All other importer categories remained constant or experienced declines in purchases of Canadian gas under long-term contracts. These include: local distribution companies (LDCs), down 4 percent (475.6 v. 494.7 Bcf); marketers, down 0.6 percent (586.4 v. 589.8 Bcf); interstate pipelines, down 12.8 percent (15.0 v. 17.2 Bcf); and municipalities/industrial firms, down 18.3 percent (19.6 v. 24.0).

Figure 7 **2000 CANADIAN NATURAL GAS IMPORTS UNDER LONG-TERM IMPORT AUTHORIZATIONS BY TYPE OF IMPORTER**



Notes:

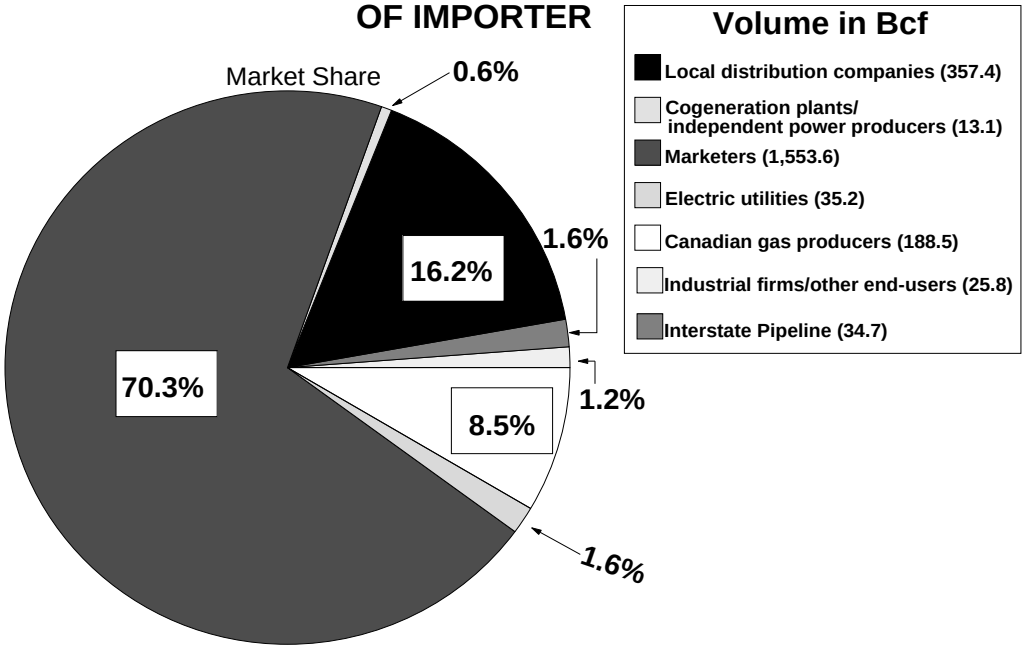
Long-term Canadian gas imports totaled 1,336 Bcf in 2000. Imports by Northwest Alaskan Pipeline Company were included in the "marketers" category; imports by combined gas/electric utilities were included in the "local distribution companies" category.

Figure 8 identifies, by class of importer, the market share of those who imported Canadian natural gas in 2000 under short-term authorizations. There were three principal types of short-term importers: marketers, LDCs, and Canadian gas producers or their U.S. affiliates. These three types of importers brought in over 95 percent of all short-term Canadian gas imports in 2000. The remaining smaller categories also experienced growth in this area.

The following is a comparison of total short-term import volumes for 2000 and 1999: marketers (1,553.6 v. 1,480.6); Canadian gas producers (188.5 v. 174.3); industrial firms/other end-users (25.8 v. 21.6.); cogeneration plants/independent power producers (13.1 v. 12.5); and local distribution companies (357.4 v. 294.1). The only category that experienced a decrease in volumes this year was electric utilities (35.2 v. 36.9). A category that was not represented last year, interstate pipelines, registered 34.7 Bcf of short-term imports by Alliance Pipeline.

During 2000, 14 companies exported 74.8 Bcf of natural gas to Canada at an average price of $3.62 per MMBtu. This was an increase of 76.4 percent over the 1999 level of 42.4 Bcf. All of these export transactions were accomplished under gas sales contracts of two years or less. Like previous years, most of the gas exports to Canada occurred at the Michigan exit points of Detroit (36 Bcf) and St. Clair (29.6 Bcf), accounting for almost 88 percent of all gas exports to Canada during the year. [The 2000 natural gas exports of 74.8 Bcf reflect exports to Canada on an equity (sales) basis rather than on a custody (physical movements) basis. Total gas exports on a **custody only basis** equaled 72.6 Bcf for the year.]

Figure 8 **2000 CANADIAN NATURAL GAS IMPORTS UNDER SHORT-TERM IMPORT AUTHORIZATIONS BY TYPE OF IMPORTER**



Total short-term imports: 2,208 Bcf

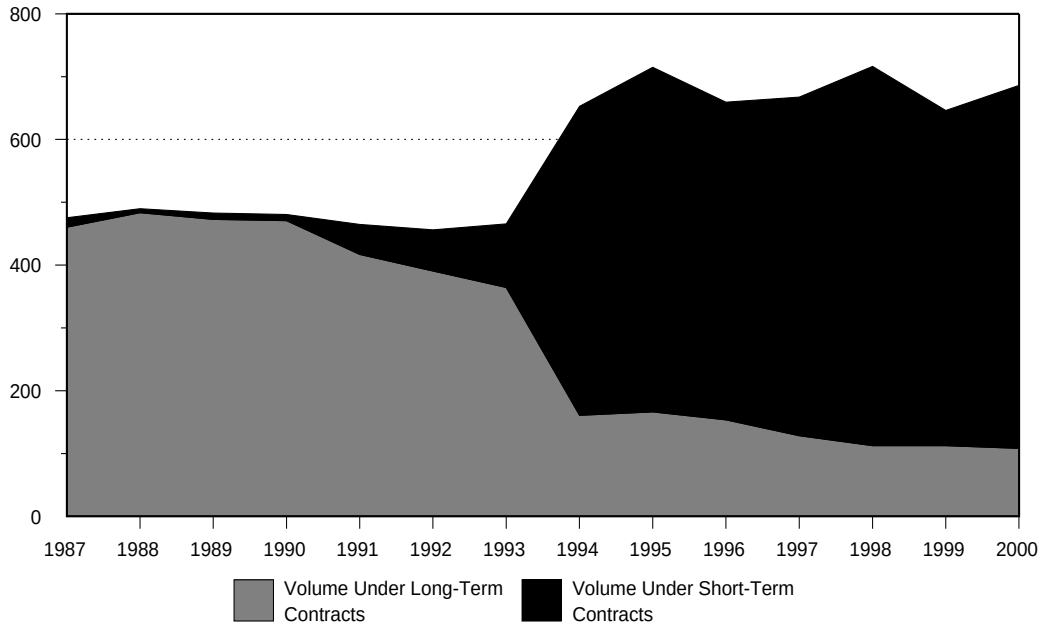
Canadian Gas Marketed in California

Figure 9 shows the volume of Canadian natural gas marketed in California under both short-term and long-term contracts during the past 14 years (1987-2000). Most Canadian gas sales to California consumers prior to 1993 were transacted under long-term supply contracts. However, beginning in 1994 and in every subsequent year, most Canadian gas volumes marketed in California were imported under short-term supply arrangements. During 2000, a total of 686.2 Bcf of Canadian gas was marketed in California. This represents an increase of 40.2 Bcf, or 6.2 percent from the 1999 level of 646 Bcf. Approximately 84 percent of these volumes were imported under short-term supply contracts.

The average international border price for these imports was $3.81 per MMBtu in 2000, compared with $1.99 in 1999. In 2000, sales to California under short-term authorizations had an average international border price of $3.84 per MMBtu, compared to $2.04 in 1999. Sales under long-term authorizations had an average international border price of $3.64 per MMBtu, compared to $1.76 in 1999. In comparing 2000 and 1999, the international border price for short-term sales to California increased $1.80 per MMBtu or over 88 percent, while the price under long-term sales increased $1.88 per MMBtu or over 106 percent.

Figure 9

CANADIAN NATURAL GAS EXPORTS TO CALIFORNIA UNDER LONG-TERM AND SHORT-TERM CONTRACTS OVER THE PAST TWELVE YEARS: 1987 - 2000 (Bcf)



Notes: Long-term contracts are defined as supply contracts which are over two years in length and short-term contracts are defined as supply contracts which are two years or less in duration. The data are from filings submitted by natural gas importers to the Office of Fossil Energy.

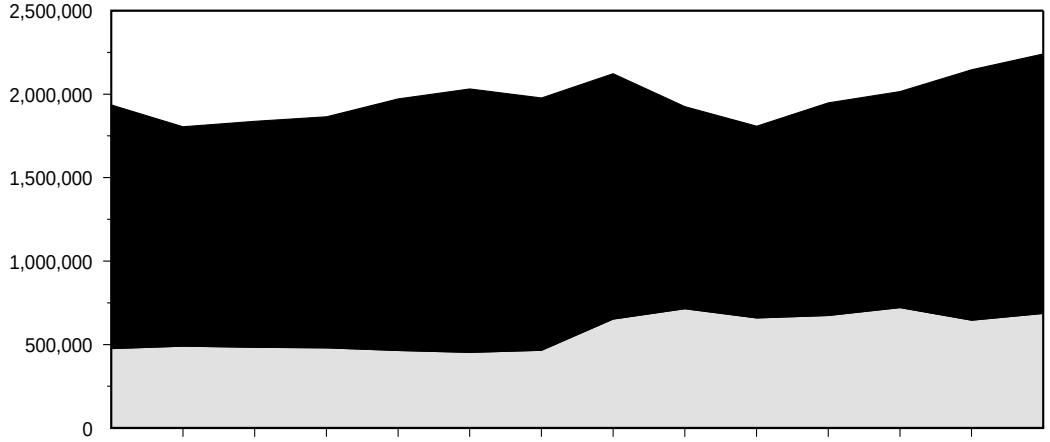
Based on preliminary figures published by EIA in its *Natural Gas Monthly* [DOE/EIA-130 (April 2001), Tables 15-19], total natural gas deliveries to California in 2000 increased by 94.1 Bcf, or 4.4 percent from the 1999 level (2240.0 v. 2145.9 Bcf). The overall modest growth in gas demand during 2000 currently exceeds the supply and demand forecasts found in the *2000 California Gas Report (2000 Report*). The *2000 Report*, which is the most current in a series of reports prepared by the California gas and electric utilities in accordance with a directive issued by the California Public Utilities Commission, forecasts that natural gas demand will grow at an annual average rate of 0.5 percent from 2000 to 2020.

EIA's preliminary demand breakdown by sector shows that gas consumption increased in the industrial sector but decreased in the residential, commercial and electric utility sectors. Gas consumption increased in the industrial sector by 243.8 Bcf, or 22 percent over the 1999 level (1353.1 v. 1109.4 Bcf). Gas consumption in the residential sector decreased by 52 Bcf or 10 percent from the 1999 level (516.5 v. 568.5). There were additional declines in the electric utility and commercial sectors, which decreased 11.5 percent and 3 percent, respectively.

Figure 10 shows Canadian natural gas marketed in California as a percentage of total gas consumption for the State during the past fourteen years (1987-2000). This figure merely displays the estimated annual market shares during this time period. Canada's share of the California gas market was 30.6 percent in 2000, compared to 30.1 percent in 1999, representing a slight increase of 0.5 percent.

Figure 10

CANADIAN NATURAL GAS MARKETED IN CALIFORNIA AS A PERCENTAGE OF TOTAL STATE GAS CONSUMPTION (MMCF)



	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Canadian Gas Supplies to CA	475,449	489,807	482,935	480,493	464,676	452,642	465,561	652,628	714,695	659,435	673,804	721,411	645,976	686,184
Total Gas Consumption	1,934,909	1,804,452	1,837,831	1,864,057	1,970,709	2,030,564	1,976,397	2,123,310	1,925,110	1,807,314	1,946,945	2,014,839	2,145,900	2,240,287
% Share of the CA Market	24.6	27.1	26.3	25.8	23.6	22.3	23.6	30.7	37.1	36.5	34.6	35.8	30.1	30.6

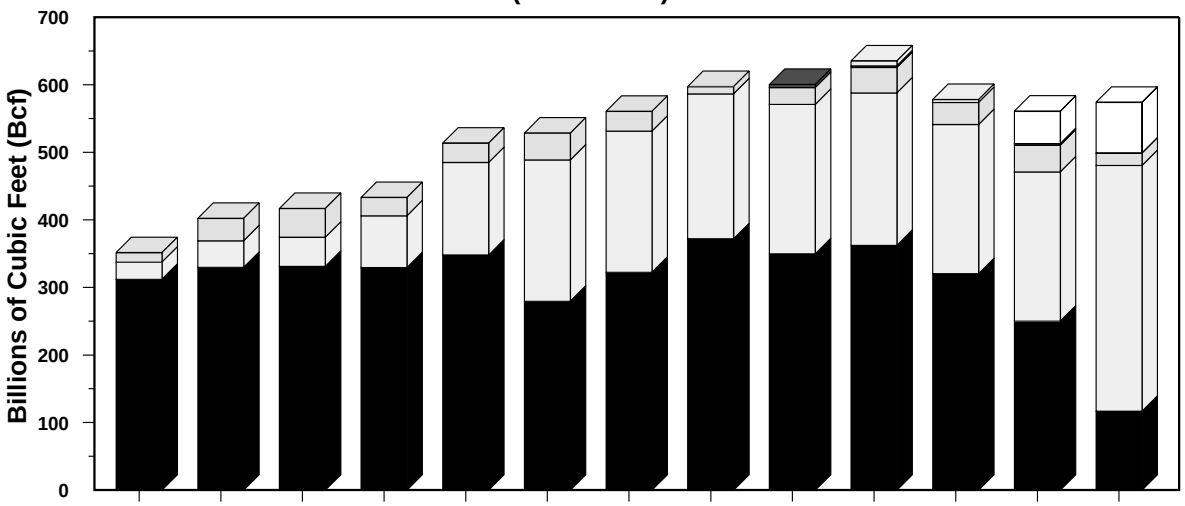
Sources: Consumption data for 1987 thru 1999 obtained from the ***Natural Gas Annual*** (DOE/EIA-0131); 2000 consumption figure is an FE estimate based on preliminary EIA data. Canadian natural gas supplies marketed in California are from reports filed by importers with FE.

Natural Gas Imports Into New England

Natural gas use in New England traditionally has been limited due to the region's geographical location at the end of the domestic interstate transmission system. However, gas consumption in this region has increased dramatically over the past 13 years (1988 - 2000) due to ongoing improvements to and expansion of the gas pipeline infrastructure, particularly to facilities allowing additional imports from Canada. In spite of this, New England still lags behind the rest of the country in gas consumption. Natural gas represents about 18 percent of New England's primary energy consumption, compared to the national average of 24 percent [*2001 Statistical Guide* of the New England Gas Association (NEGA)]. As shown in **Figure 11**, gas consumption in New England had declined somewhat from 1998-1999, largely due to warmer than normal weather. In 2000, demand for natural gas rose modestly (by 13 Bcf), yet imports as percentage of total consumption grew to 79.6 percent. This was due to the start-up of the Maritimes & Northeast Pipeline (Maritimes). The project has been a major improvement to natural gas pipeline infrastructure in the Northeast, and it contributed to the significant increase in Canadian supplies to New England this year. The Maritimes pipeline, which became operational on the last day of 1999, transports gas from the Sable Island Offshore Energy Project in offshore Nova Scotia to markets in the Atlantic Provinces and New England. The pipeline, with a current capacity at the international border of about 440 MMcf per day, shipped about 338 MMcf per day to New England in 2000. This year, total Canadian volumes supplying this region increased by 64.7 percent and LNG volumes increased by 4 percent. LNG volumes imported from Trinidad and Tobago increased by 27.1 Bcf, or 57 percent.

Figure 11

Sources of Natural Gas Marketed in New England
(1988 - 2000)

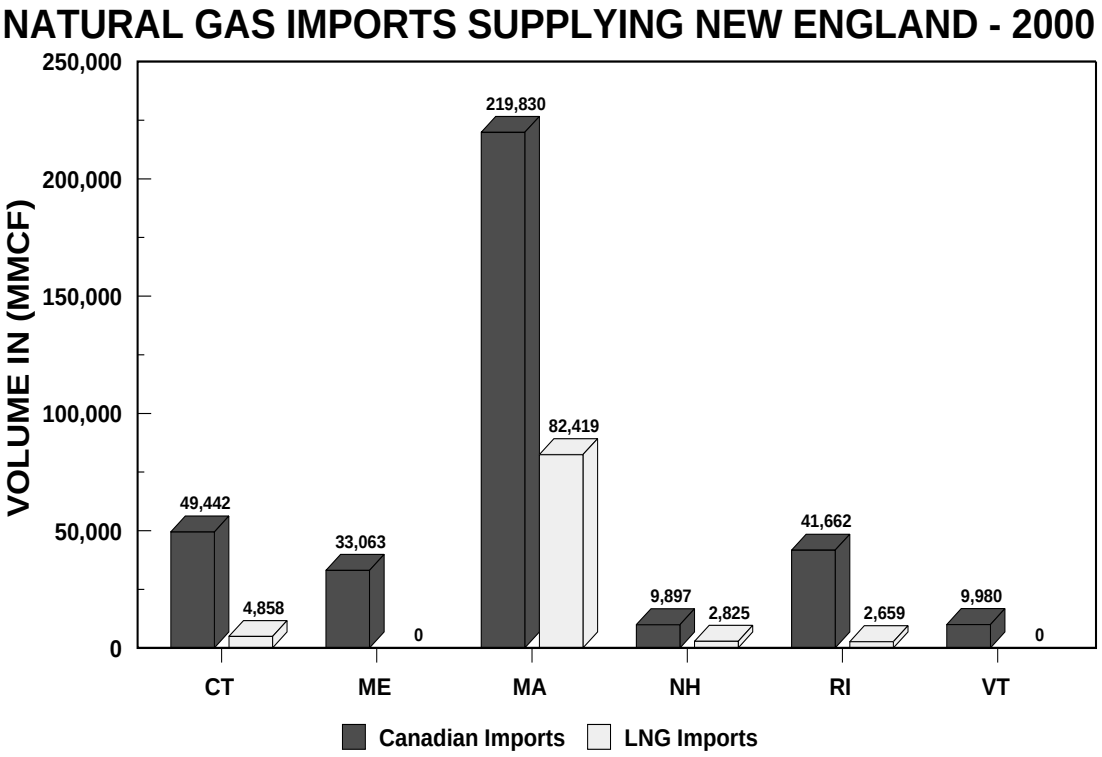


	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
Domestic Supplies ■	312.3	322.9	331.4	329.6	348.2	279.8	322.6	372.2	350.0	362.4	320.6	250.4	116.9
Canadian Supplies □	25.4	39.3	43.1	76.6	137.0	209.1	209.0	214.6	221.1	225.8	220.8	220.9	363.9
Algerian Supplies □	13.9	33.0	42.5	27.1	28.5	39.6	29.1	10.5	25.0	37.6	32.7	39.4	18.2
U. Arab Emirates ■	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.4	2.4	0.0	0.0	0.0
Australian □	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.2	4.1	2.3	0.0
Trinidad □	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	47.9	75.0
TOTAL SUPPLIES	351.6	402.2	417.0	433.3	513.7	528.5	560.7	597.3	600.5	635.4	578.2	560.9	574.0
Imports as a % of Total Consumption	11.2	18.0	20.5	23.9	32.2	47.1	42.5	37.7	41.7	43.0	44.6	55.4	79.6

Sources: Natural gas consumption data from 1988 - 1999 came from EIA's *Natural Gas Annual* **(DOE/EIA - 0131); 2000 consumption figure is an estimate from FE based on EIA data; Import data are derived from company filings made with FE.**

Figure 12 shows the type and distribution of natural gas imports marketed during 2000 in the 6 states comprising New England. As shown, the majority of total imports or 66 percent was sold in Massachusetts. Specifically, 60 percent of the Canadian volumes supplying New England were marketed in Massachusetts. Furthermore, in 2000, over 88 percent of the LNG volumes imported into New England from Algeria and Trinidad were also marketed in Massachusetts. In addition, Canadian supplies delivered to markets in Maine increased 425 percent compared to 1999 (33.1 Bcf v. 6.3 Bcf). In 2000, 64 percent of the volumes supplying New England were imported using long-term arrangements and 36 percent were imported using short-term arrangements.

Figure 12



Source: Quarterly filings by natural gas importers to FE. These figures represent sales rather than imports; therefore, data differs slightly from import total.

Mexican Gas Trade

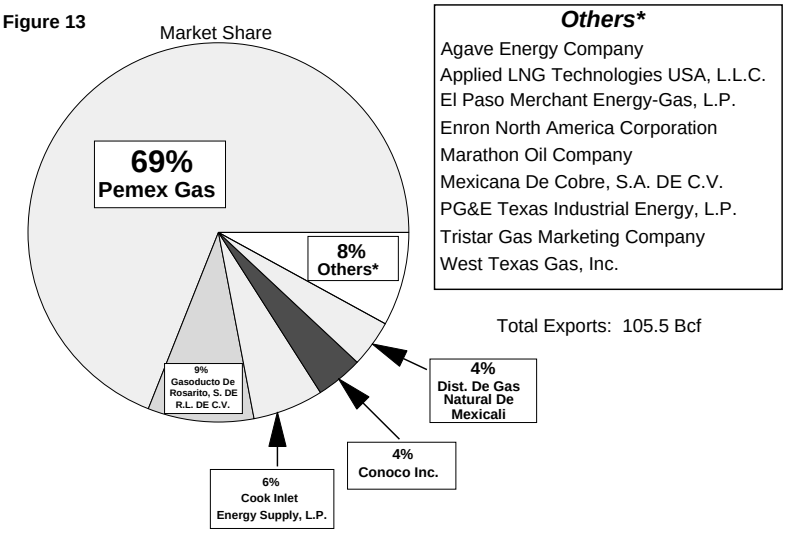
The last six graphs provide information on Mexican gas trade during 2000. **Figure 13** identifies the 14 firms that exported a record 105.5 Bcf of natural gas to Mexico in 2000, and indicates the market share of the five largest exporters. Pemex Gas was the year's largest exporter of natural gas to Mexico, increasing their market share substantially from last year (56% v. 10%). Although the number of exporters totaled 14 in 2000, Pemex Gas and the other top five gas exporters represented over 91 percent of the Mexican import market.

Figure 14 shows the 3 companies that imported 11.6 Bcf of Mexican gas into the U.S. Volumes from Mexico entering the U.S. this year were down 276 percent from the 1999 level (54.5 Bcf). In 2000, 72 percent of the gas entered the U. S. on the Tennessee Pipeline at Alamo, Texas, and 18 percent was brought in on the Texas Eastern Pipeline at Hidalgo, Texas. The remaining 10 percent was imported on the newly operational Coral-Mexico Pipeline, located near McAllen, Texas. Gas began flowing from Mexico on this new pipeline on October 23, 2000. It is interesting to note that the number of companies importing natural gas from Mexico has dropped significantly over the last two years even as volumes reached record levels. This is the direct result of Pemex Gas holding a larger share of this market. Mexican sources predict that exports to the U. S. will continue to grow even though Mexico is expected to be a net importer of gas during the foreseeable future.

Figures 15 and **16** provide monthly volume and price information with regard to natural gas exports to Mexico over the past three years (January 1998 - December 2000). Gas exports to Mexico this year were the highest since 1992, when volumes reached 94.1 Bcf. The 2000 annual weighted average price for these exports was $4.27 per MMBtu, an increase of more than 86 percent from last year's price of $2.29 per MMBtu. **Figures 17 and 18** show monthly volumes and prices for imports from Mexico from 1998 through 2000. Monthly prices rose to a record high in December 2000, when the weighted average price reached $8.73 per MMBtu.

Figure 13

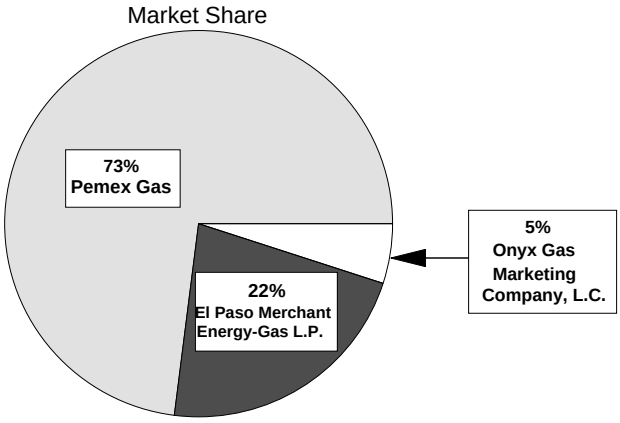
FIRMS THAT EXPORTED NATURAL GAS TO MEXICO IN 2000



Total Exports: 105.5 Bcf

Figure 14

FIRMS THAT IMPORTED NATURAL GAS FROM MEXICO IN 2000



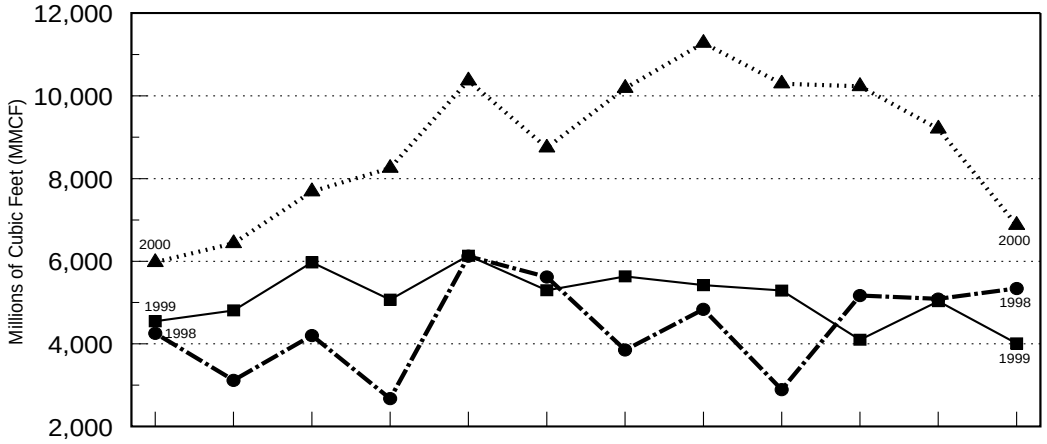
Total Imports: 11.6 Bcf

Figure 15

NATURAL GAS EXPORTS TO MEXICO

1998 - 2000

MONTHLY VOLUMES



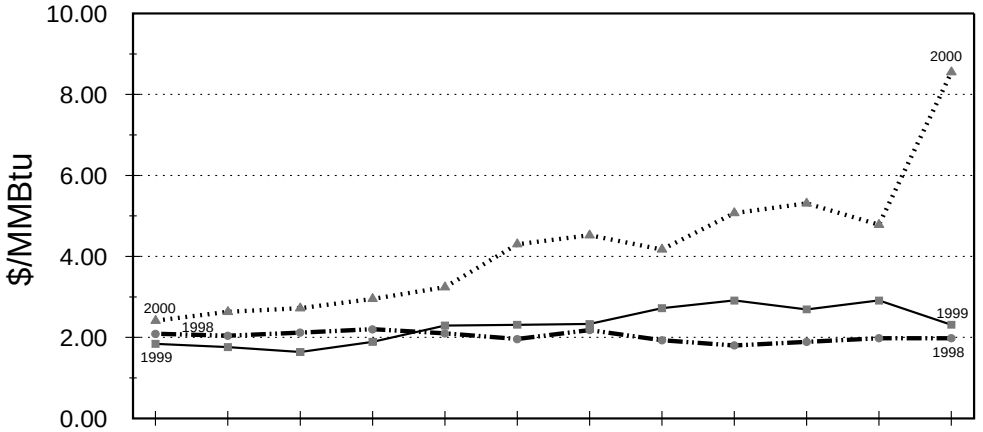
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1998	4,257	3,117	4,202	2,675	6,119	5,617	3,852	4,835	2,892	5,170	5,088	5,342	***53,165***
1999	4,548	4,809	5,971	5,068	6,133	5,296	5,632	5,419	5,289	4,099	5,031	4,009	***61,304***
2000	5,973	6,432	7,685	8,252	10,369	8,744	10,186	11,277	10,294	10,231	9,204	6,872	***105,519***

Figure 16

NATURAL GAS EXPORTS TO MEXICO

1998 - 2000

WEIGHTED AVERAGE PRICE



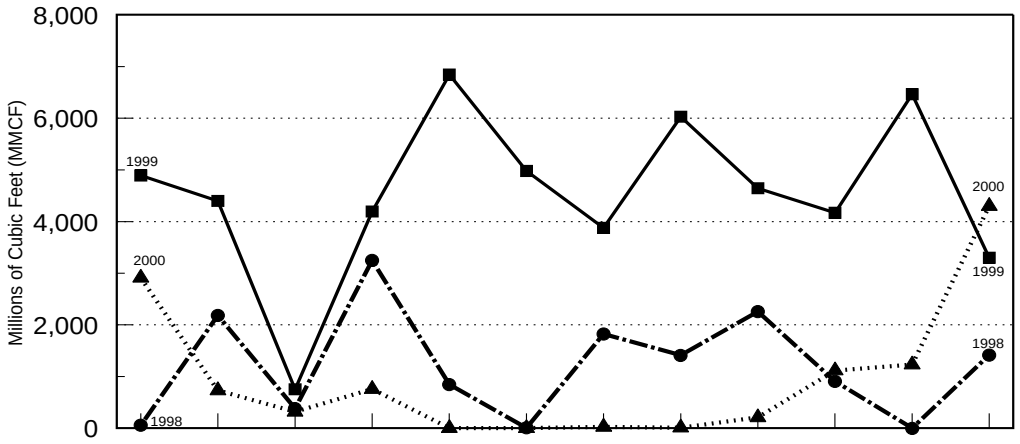
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
1998	2.09	2.04	2.12	2.20	2.10	1.96	2.18	1.93	1.80	1.89	1.98	1.98	2.02
1999	1.84	1.76	1.64	1.89	2.29	2.31	2.33	2.72	2.91	2.69	2.91	2.31	2.29
2000	2.41	2.63	2.72	2.95	3.24	4.30	4.52	4.17	5.07	5.31	4.78	8.55	4.27

Figure 17

NATURAL GAS IMPORTS FROM MEXICO

1998 - 2000

MONTHLY VOLUMES



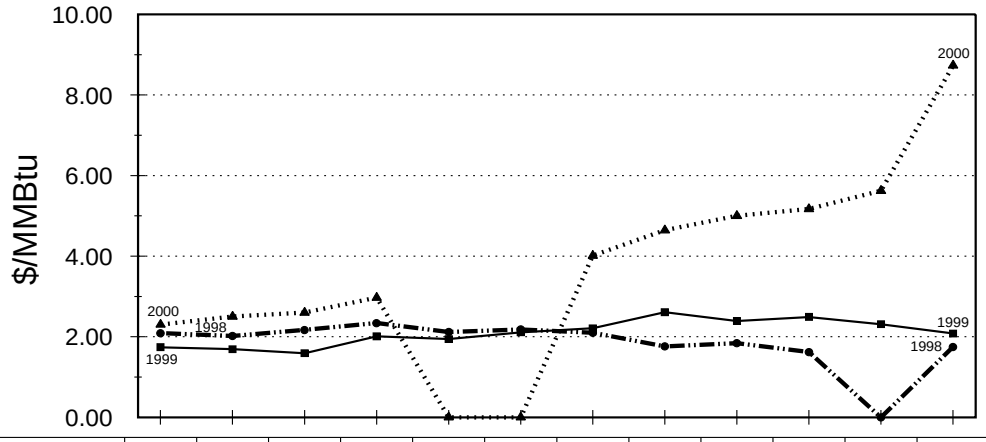
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	***TOTAL***
1998	55	2,183	380	3,248	845	5	1,820	1,412	2,257	905	0	1,417	***14,532***
1999	4,891	4,397	751	4,193	6,843	4,978	3,876	6,028	4,643	4,168	6,463	3,297	***54,528***
2000	2,910	730	315	756	0	0	26	9	209	1,115	1,230	4,297	***11,601***

Figure 18

NATURAL GAS IMPORTS FROM MEXICO

1998 - 2000

WEIGHTED AVERAGE PRICE



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	***AVG***
1998	2.09	2.02	2.17	2.34	2.12	2.18	2.10	1.76	1.84	1.62	0.00	1.75	***2.01***
1999	1.74	1.69	1.59	2.01	1.94	2.11	2.21	2.61	2.39	2.49	2.31	2.08	***2.15***
2000	2.30	2.50	2.60	2.97	0.00	0.00	4.01	4.64	5.00	5.17	5.62	8.73	***5.43***