

Graphical Summaries, Comparisons, and Trend Analysis

2012 Year in Review

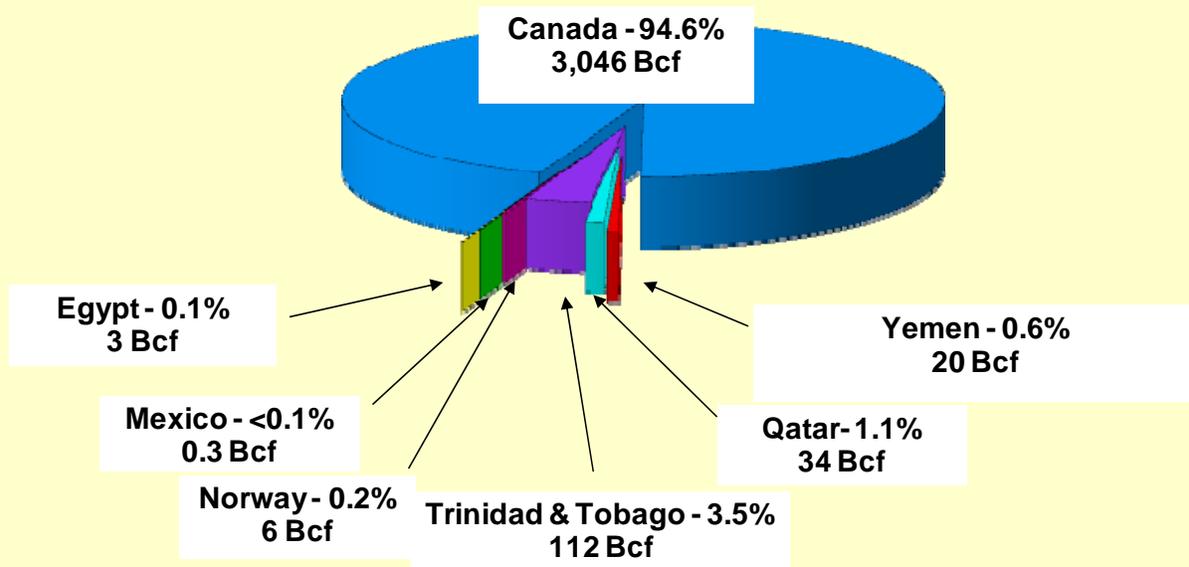
2012 vs. 2011

Long-Term Trend Analysis

2012 Year in Review

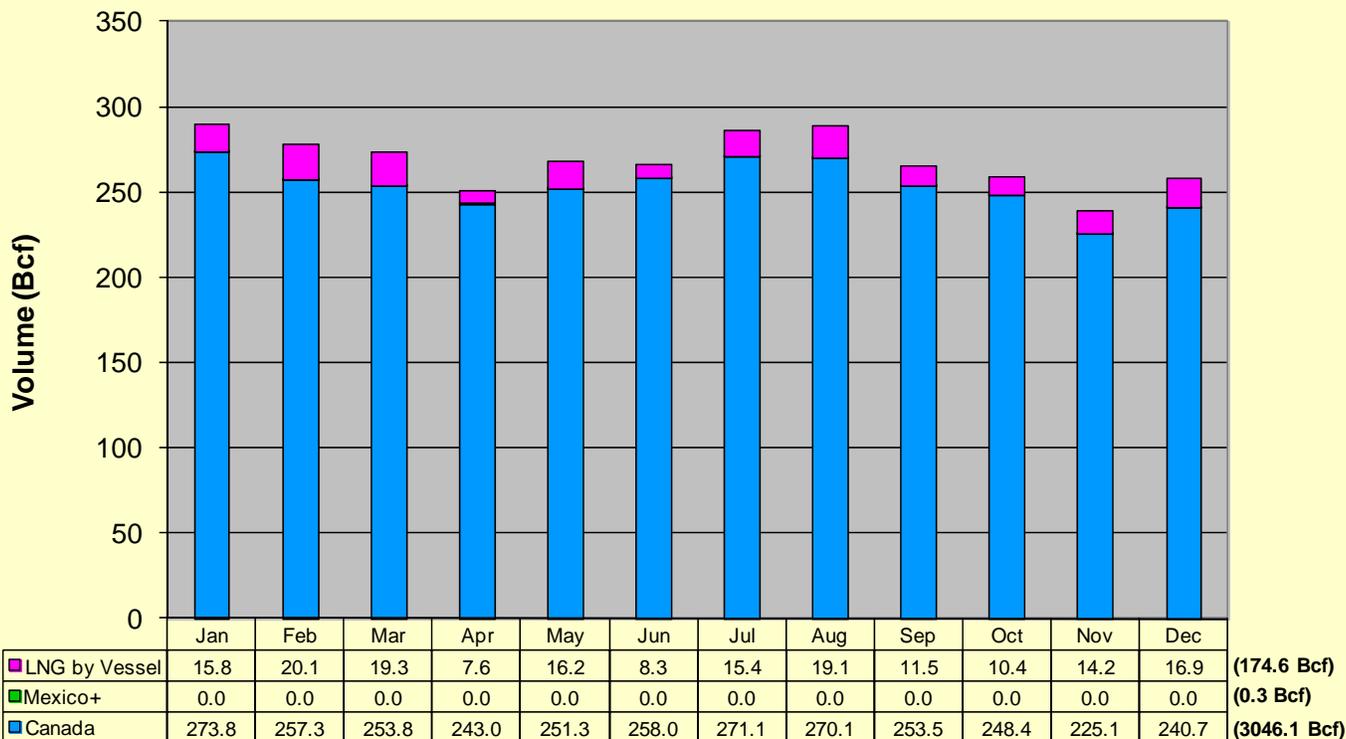
Natural Gas Imports, 2012

Total Imports - 3,221 Bcf



- In 2012, the U.S. imported more than 3.2 trillion cubic feet of natural gas.
- The vast majority of imports originated in Canada, continuing a long-term trend.
- Trinidad & Tobago was the next-largest supplier, providing 3.5% of imports, in the form of LNG.
- Qatar was third, with 1.1% of imports. The remaining volumes were supplied by four countries, each contributing less than 1% to the total: Yemen, Mexico, Norway, and Egypt.

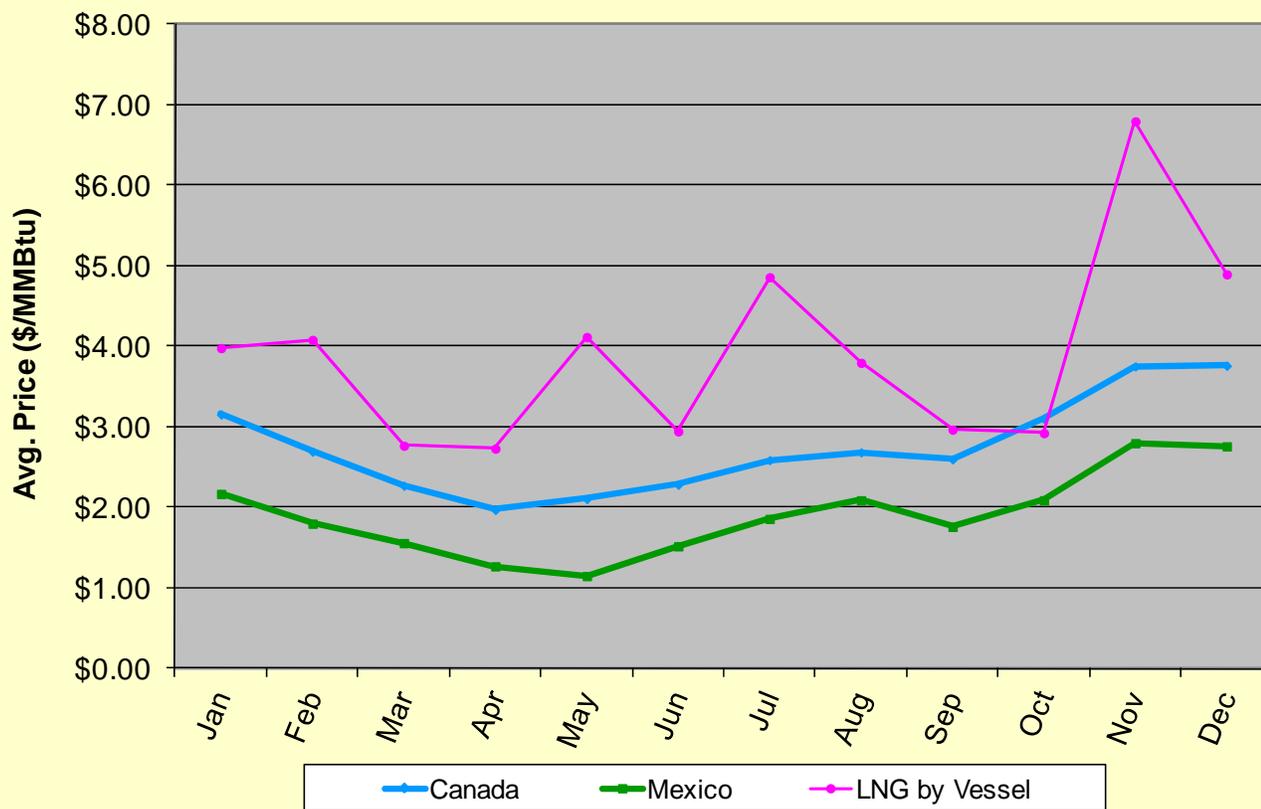
Imports by Origin, 2012



+Import volumes to Mexico are too small to be shown

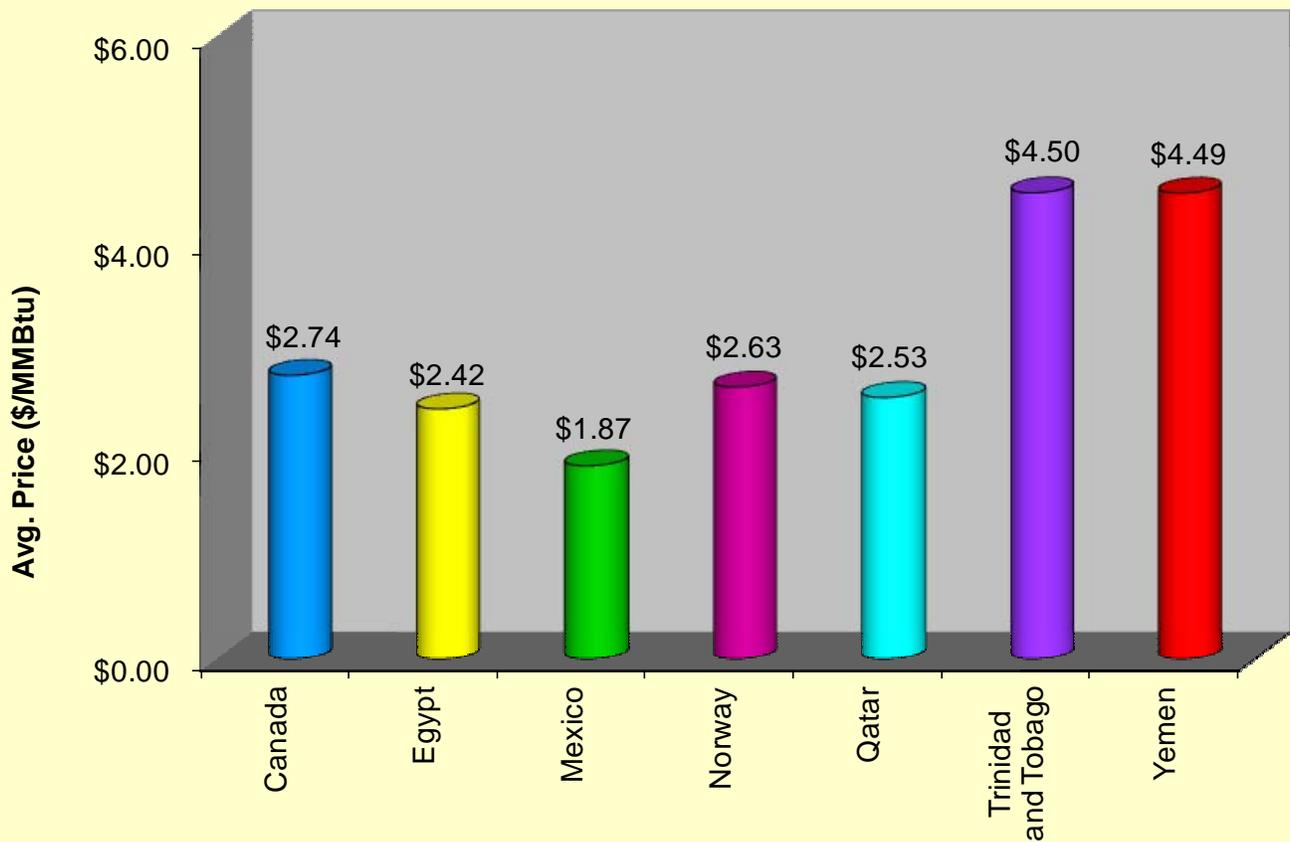
- Canada supplied the vast majority of imports not only for the year as a whole, but consistently throughout 2012.
- LNG, from all world suppliers, was the second-largest source of imports in every month of 2012.
- Imports from Mexico were nearly zero for the entire year.

Sales Prices of Imports, 2012



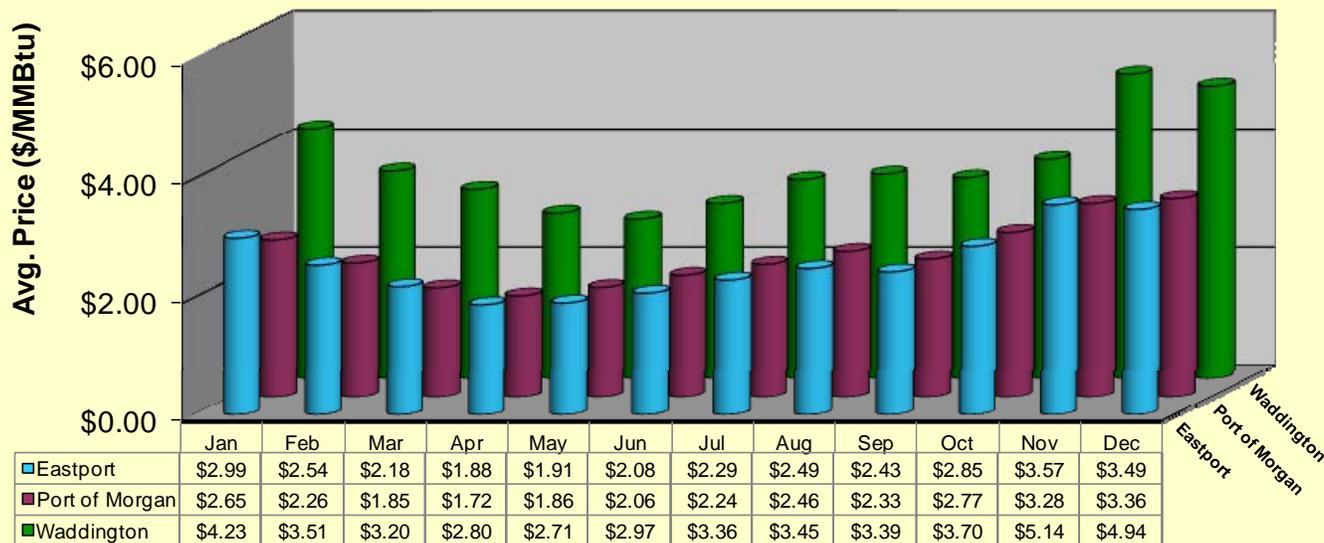
- Average prices from Canada and Mexico were relatively close to one another throughout the year (although it should be noted that Mexican imports constituted a very small volume).
- LNG import prices moved up and down, with some higher prices especially in the latter part of the year.

Avg. Import Prices, 2012



- Canadian and Mexican pipeline imports and LNG imports from five other countries averaged in the range of \$1.87 to \$4.50 per MMBtu in 2012.
- Prices of LNG imports from Trinidad and Tobago and Yemen were much higher than prices of imports from other countries.

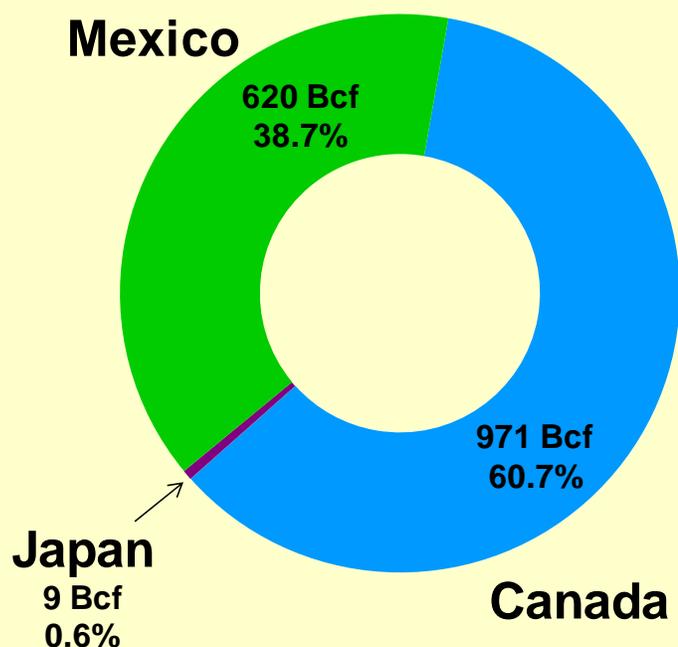
Prices of Canadian Imports for Selected Points, 2012



- Prices of imports from Canada for these three major entry points showed a seasonal pattern in 2012, with prices falling in the spring and summer and rising again in the fall and winter.
- Among these three points, Waddington, NY (associated with the Iroquois Gas Transmission System) had consistently higher import prices throughout the year.

Domestic Natural Gas Exports 2012

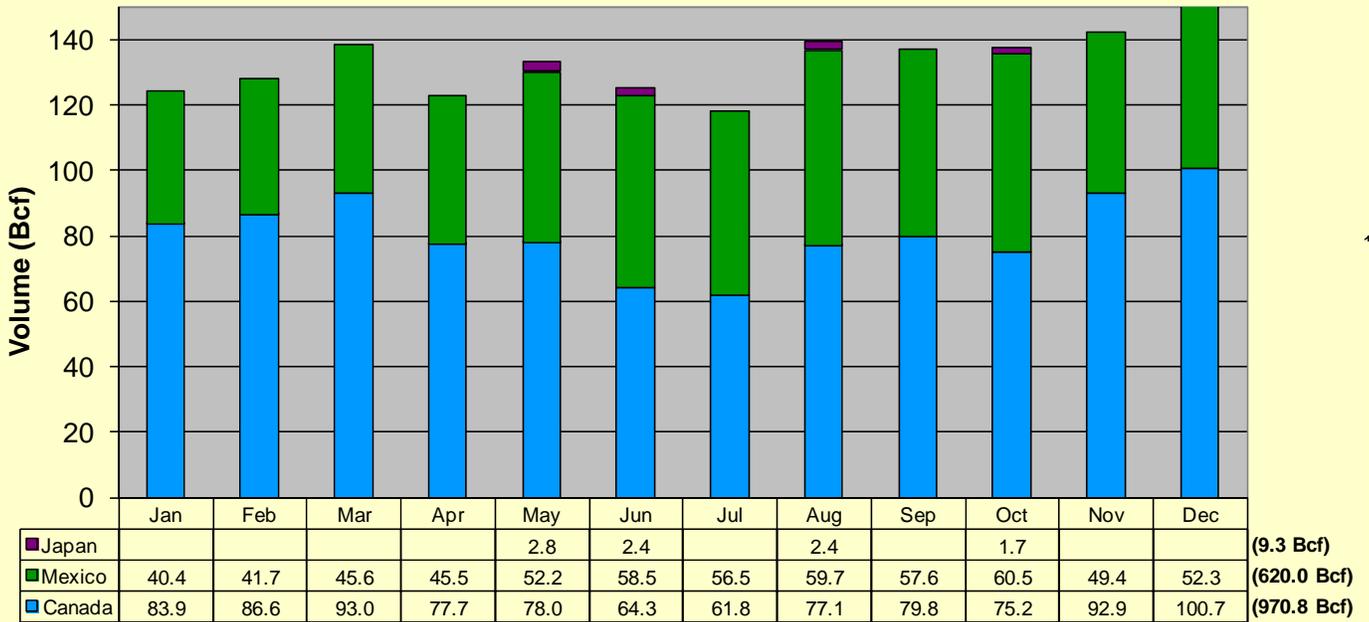
Total Domestic Natural Gas Exports - 1,600 Bcf



Canada and Mexico prices are at the U.S. border.
The price of U.S. gas exported to Japan is a delivered prices.

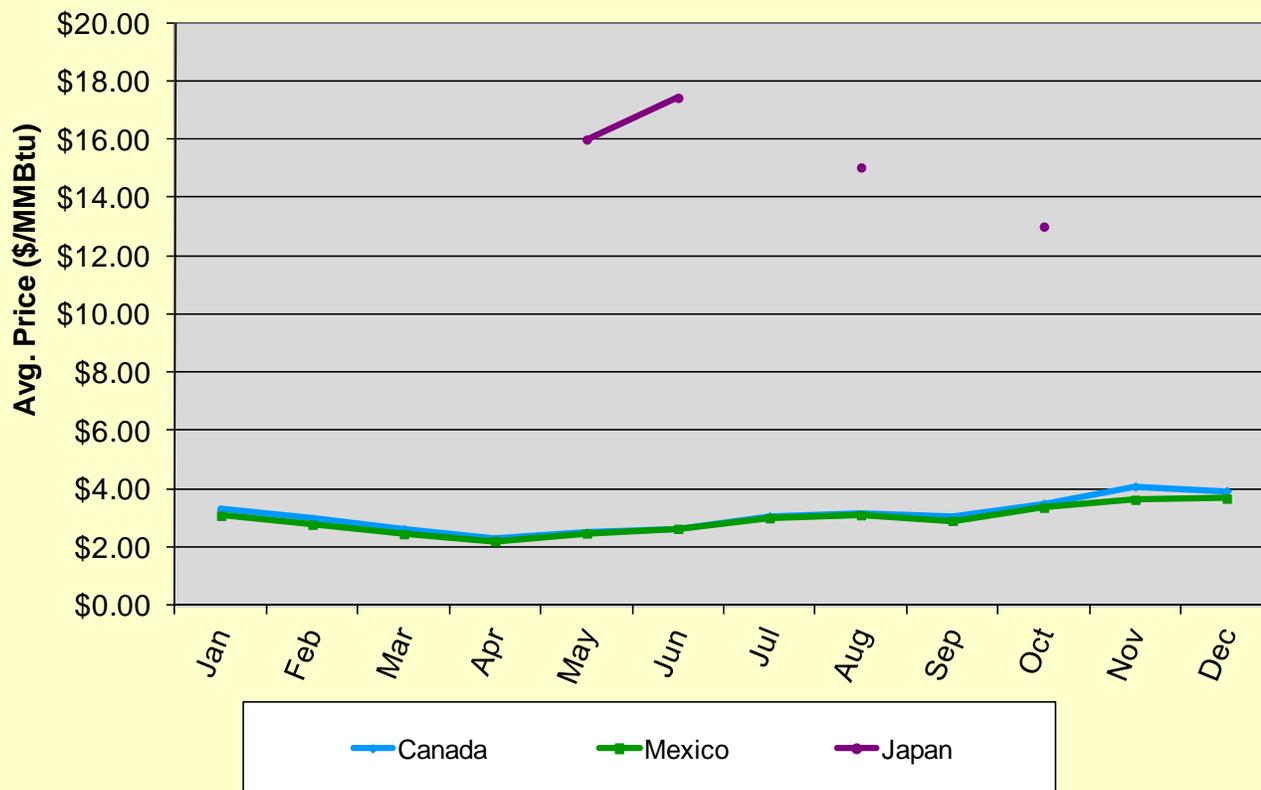
- The single largest destination for U.S. gas exports in 2012 was Canada, although export volumes were far smaller than volumes of imports from Canada to the U.S.
- The U.S. also exported a significant amount of natural gas to its other North American neighbor, Mexico.
- Japan continued to be a destination for LNG exports from Alaska, though these volumes constituted less than 1% of total domestic exports.
- Annual average prices for exports to Canada and Mexico were much lower than (delivered) LNG export prices, which is consistent with international gas market prices that are much higher than North American prices (in addition to the inclusion of shipping costs in delivered LNG prices).

Domestic Exports by Country of Destination, 2012



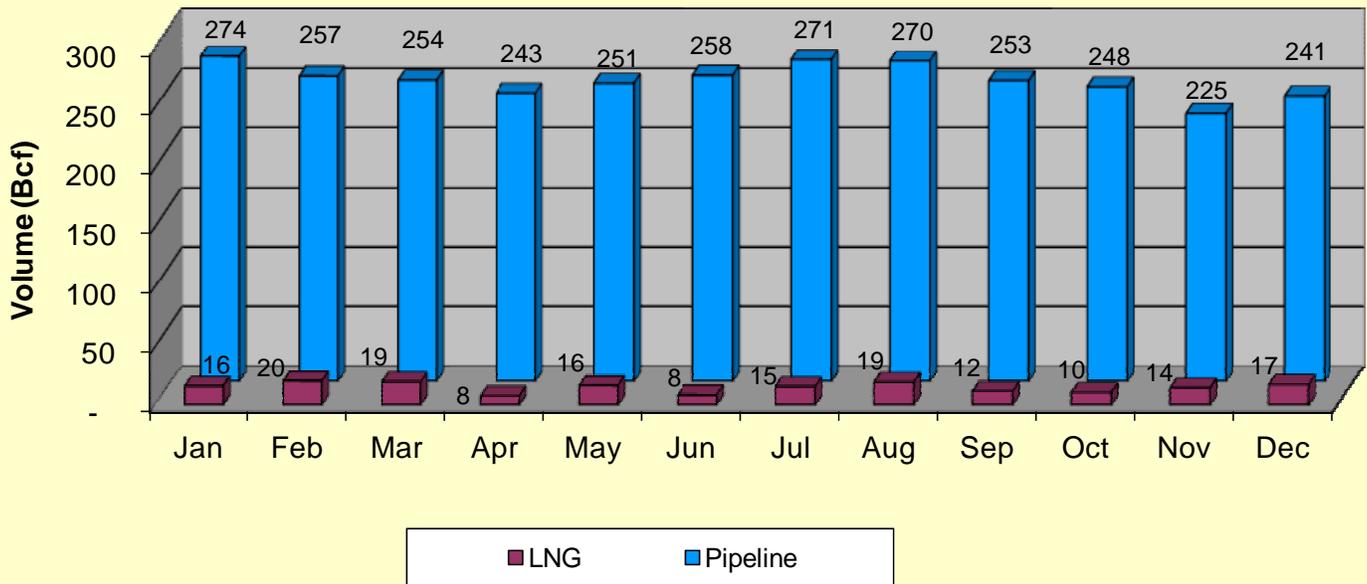
- Exports to Canada fell during the summer and increased through the fall and winter, ending the year 20% higher in December 2012 compared to January 2012.
- Exports to Mexico in 2012 generally increased through October, before falling at the end of the year.
- There was only a moderate volume of exports of domestically-produced natural gas from Alaska to Japan, in only four months of the year.

Sales Prices of Domestic Exports, 2012



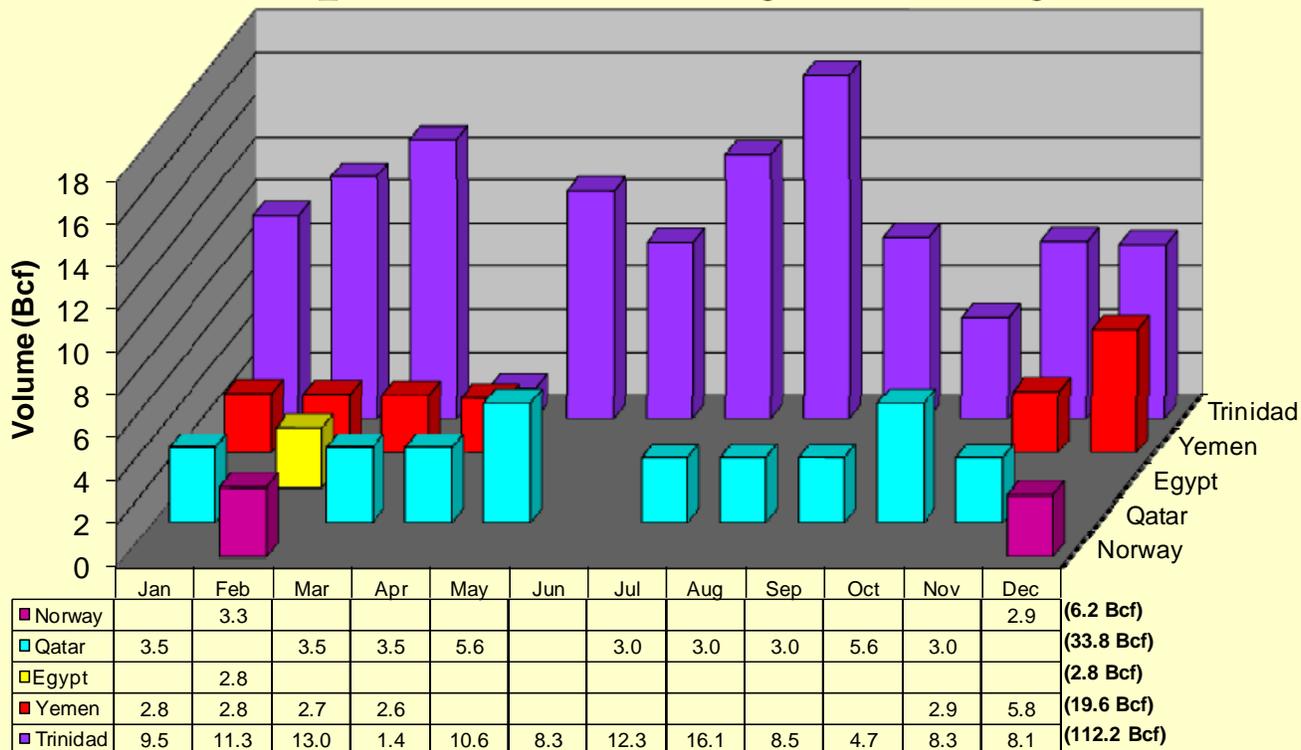
- Prices for pipeline exports to Canada and Mexico tracked very closely throughout the year.
- Prices of LNG exports to Japan were much higher than pipeline export prices throughout 2012. The discrepancy was large – frequently in excess of ten dollars per MMBtu, and reaching \$14.80 in June. The discrepancy is consistent with the disconnect between North American and foreign market prices for natural gas (as well as the inclusion of shipping costs in prices of LNG exports to Japan).

Imports, Pipeline vs LNG, 2012



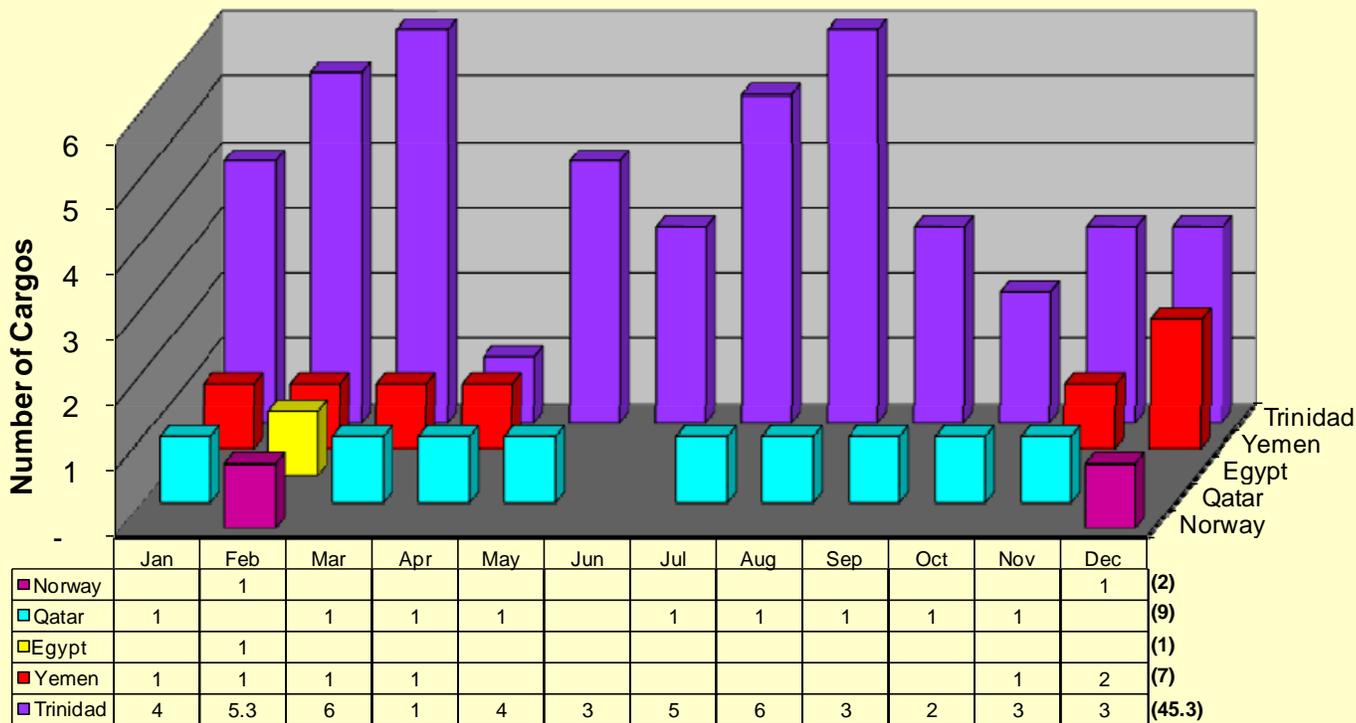
- Pipelines continued to be the major avenue for imports, with pipeline volumes far exceeding volumes of LNG, especially in light of a fall in LNG imports.
- Pipeline imports showed a slight seasonal pattern, with higher imports in January and during the summer months.

LNG Import Volume by Country, 2012



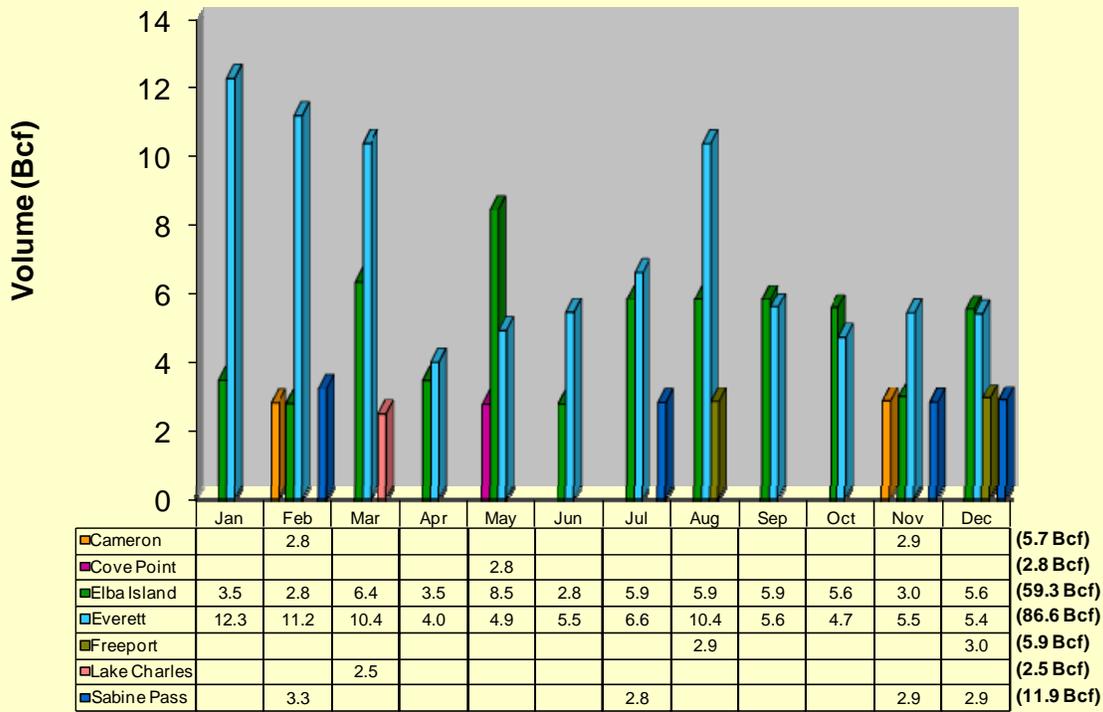
- Five countries supplied LNG to the U.S. in 2012.
- Trinidad & Tobago was the main supplier of LNG to the U.S. in 2012, providing 112 Bcf, and was the leading LNG supplier in all but two months.
- Trinidad & Tobago was the only country providing LNG to the U.S. in each month of 2012.

Number of LNG Import Cargos by Country, 2012



- Trinidad & Tobago was the source of the largest number of LNG cargoes (45 full cargoes and 1 partial cargo) to the U.S. in 2012, originating more than five times as many shipments as any other country, and more than double the number of all other countries combined.
- Qatar had the second largest number of cargoes in 2012, followed closely by Yemen.

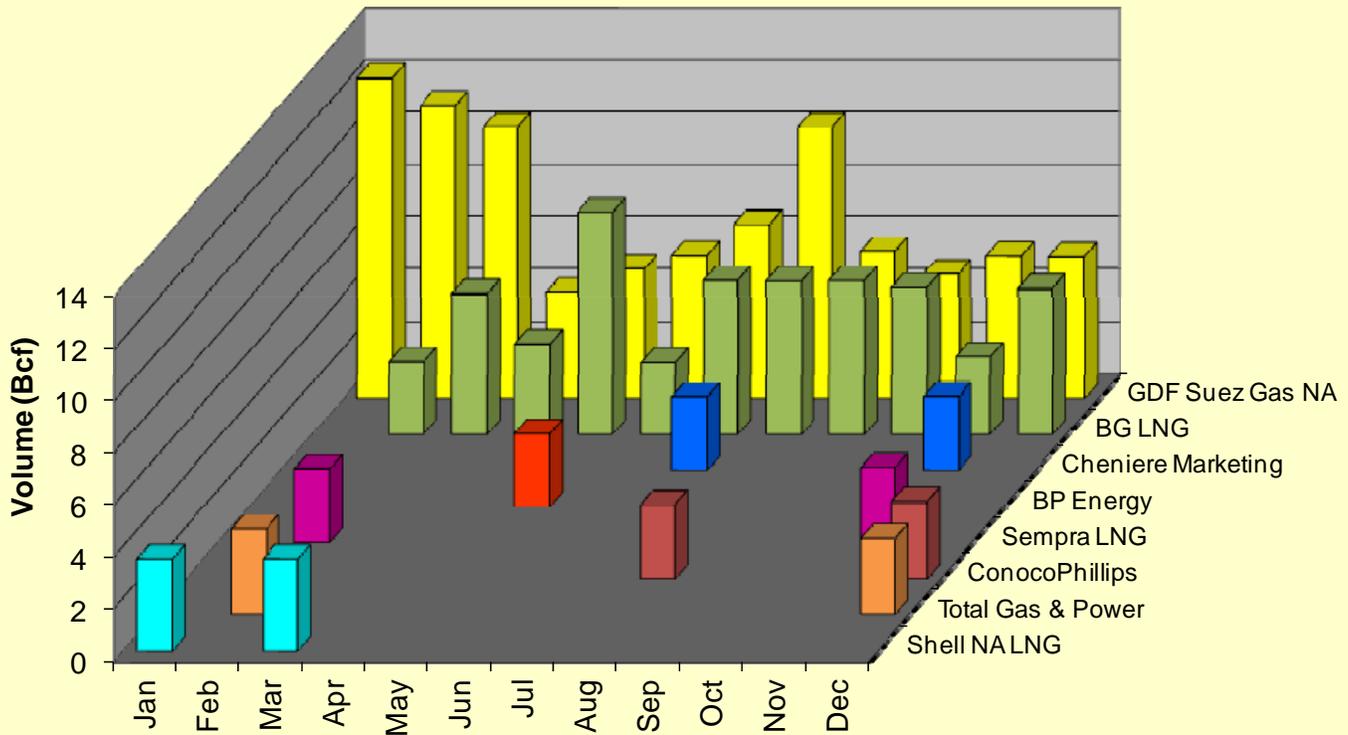
LNG Imports by Terminal, 2012



- Seven of the twelve active U.S. LNG terminals* received at least one cargo during the year. Everett and Elba Island received the most LNG of all U.S. terminals in 2012. Both also received volumes in each month of the year.
- Five other terminals received shipments during 2012, but none of these received cargos consistently on a monthly basis.

*Excellerate has announced plans to decommission one of the twelve terminals, the Gulf Gateway offshore terminal.

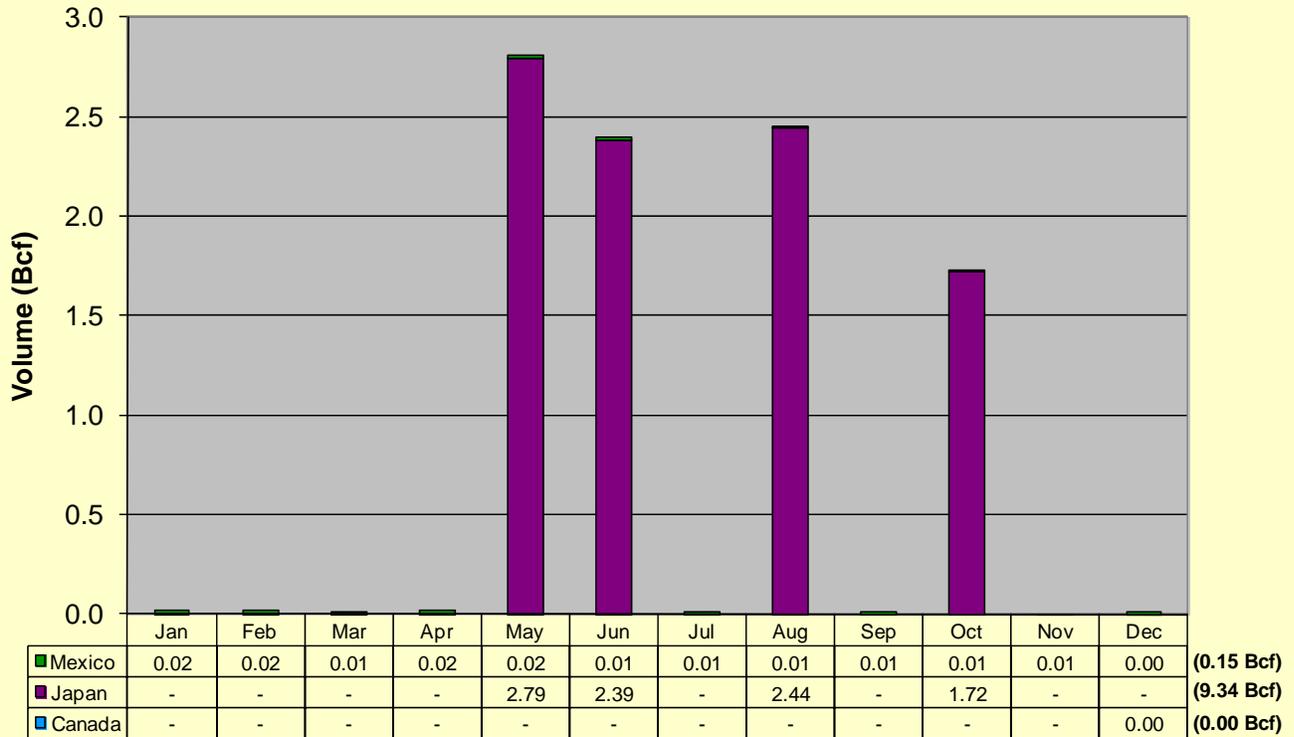
LNG Imports by Company, 2012



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
GDF Suez Gas NA	12.3	11.2	10.4	4.0	4.9	5.5	6.6	10.4	5.6	4.7	5.5	5.4	86.6
BG LNG		2.8	5.4	3.5	8.5	2.8	5.9	5.9	5.9	5.6	3.0	5.6	54.7
Cheniere Marketing							2.8				2.9		5.7
BP Energy					2.8								2.8
Sempra LNG		2.8									2.9		5.7
ConocoPhillips								2.9				3.0	5.9
Total Gas & Power		3.3										2.9	6.2
Shell NA LNG	3.5		3.5										7.0

- Eight companies imported LNG, and GDF Suez was the largest LNG importer again during 2012. It was also the only company that received cargoes in each month of the year. BG LNG was the second largest importer. Six other companies imported at least one cargo during 2012. GDF Suez and BG LNG were responsible for the majority of imports under long-term contracts, and each imported more than the other six companies combined.

Exports of Domestic LNG, 2012

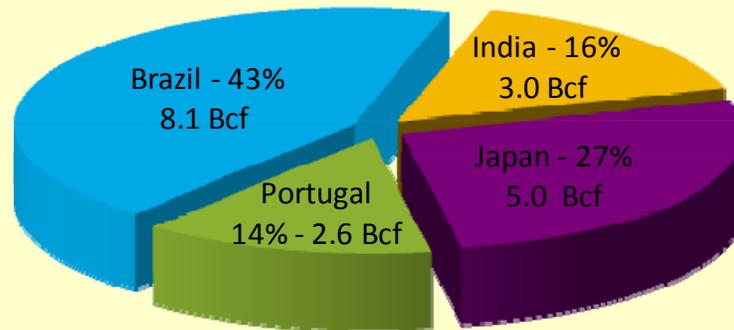


Note: December exports to Mexico and Canada are too small to be shown

- LNG exports from Alaska to Japan continued in 2012, although intermittently.
- Exports of LNG by truck to Mexico remained low but steady throughout the year.
- A small amount of LNG was exported by truck to Canada in December 2012.

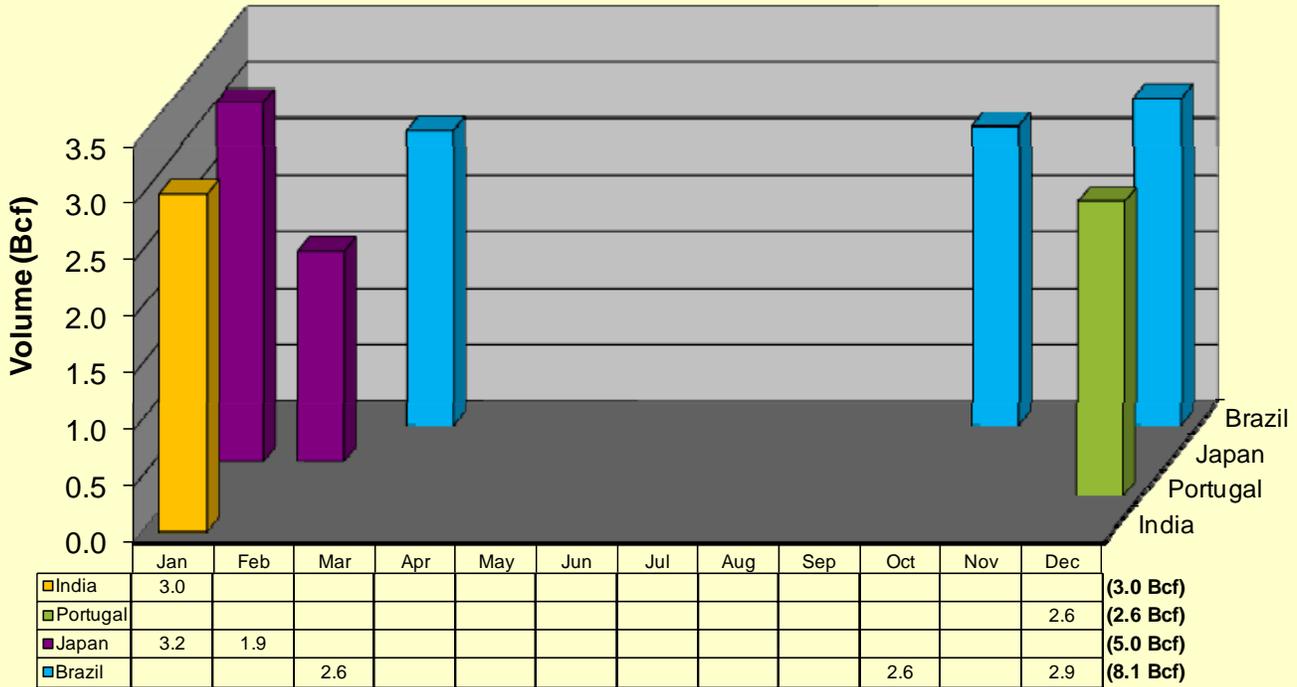
LNG Re-Exported from the U.S., 2012

Total Re-Exports - 18.8 Bcf



- Beginning late in 2009, some LNG imported into the U.S. was stored and then re-exported. During 2012, 18.8 Bcf of LNG was re-exported to Asia, Europe, and Latin America. This volume was almost double the amount of domestically-produced LNG that was exported (9.5 Bcf).
- More re-exported LNG was shipped to Brazil (8.1 Bcf) than any other single country, followed by Japan (5.0 Bcf), India, and Portugal.

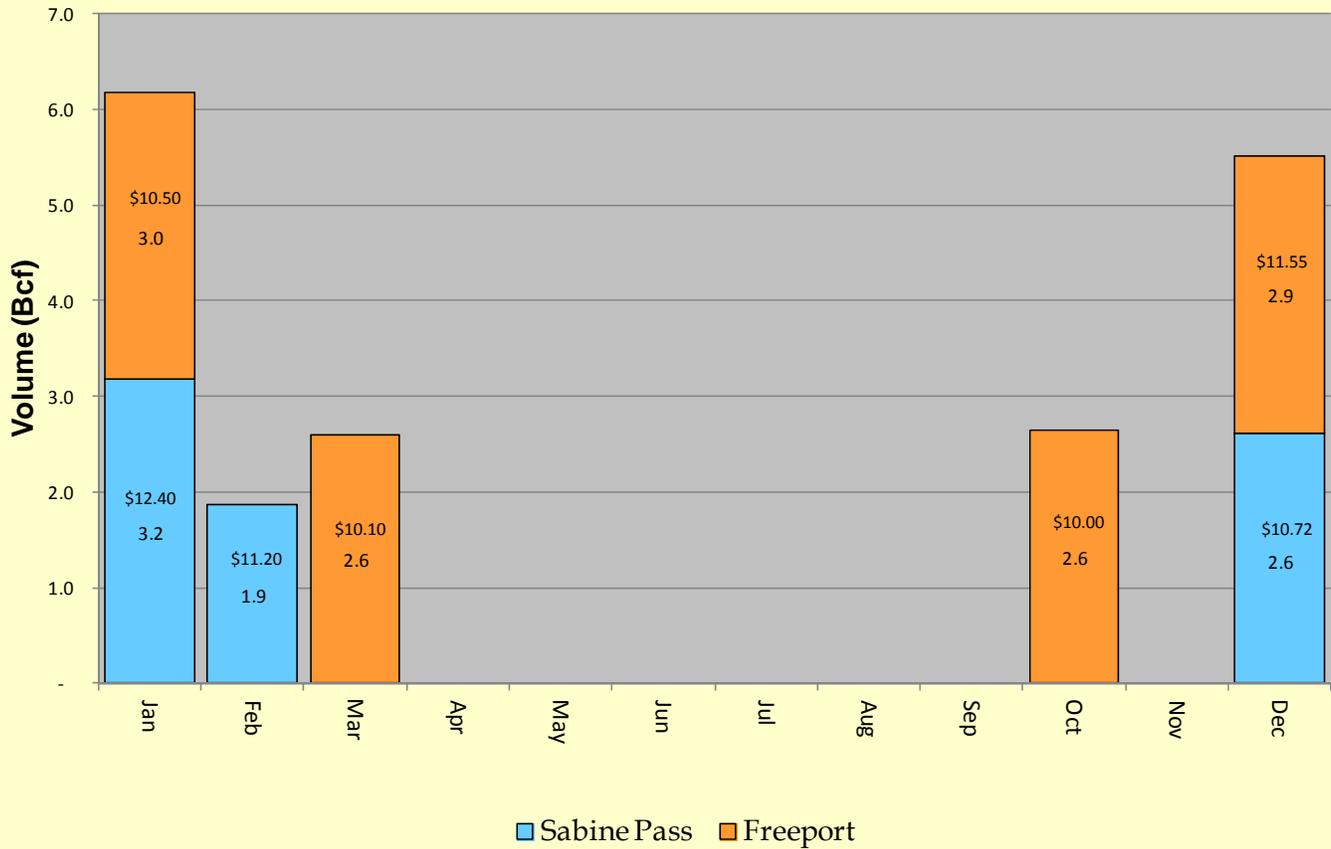
LNG Re-Export Volume by Country, 2012



- The largest number of re-export cargos went to Brazil, which received re-exported LNG from the U.S. in three different months of 2012. Japan received cargos in two different months.
- Re-exports occurred only at the beginning and end of the year, with no cargos of re-exported LNG from April through September.

LNG Re-Exports from the United States, 2012

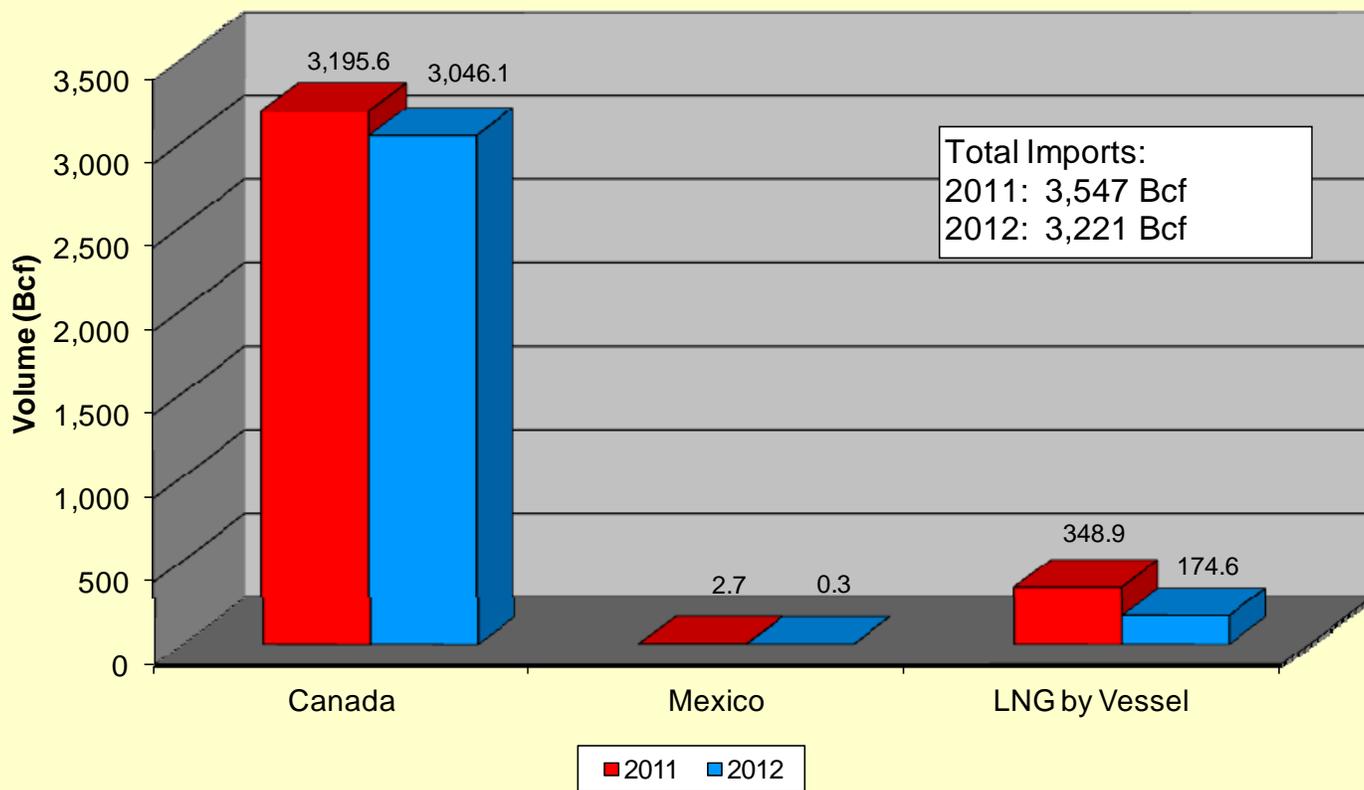
By Month, Export Terminal, Cargo Volume & Cargo Price



- The Sabine Pass and Freeport terminals participated in re-exports in 2012.
- Re-exports occurred in 5 of the 12 months in 2012, and occurred only in the first quarter and the fourth quarter of the year.
- The lowest re-export price (all are on an FOB basis, which does not include shipping) was \$10.00 per MMBtu. Prices ranged up to \$12.40 per MMBtu.

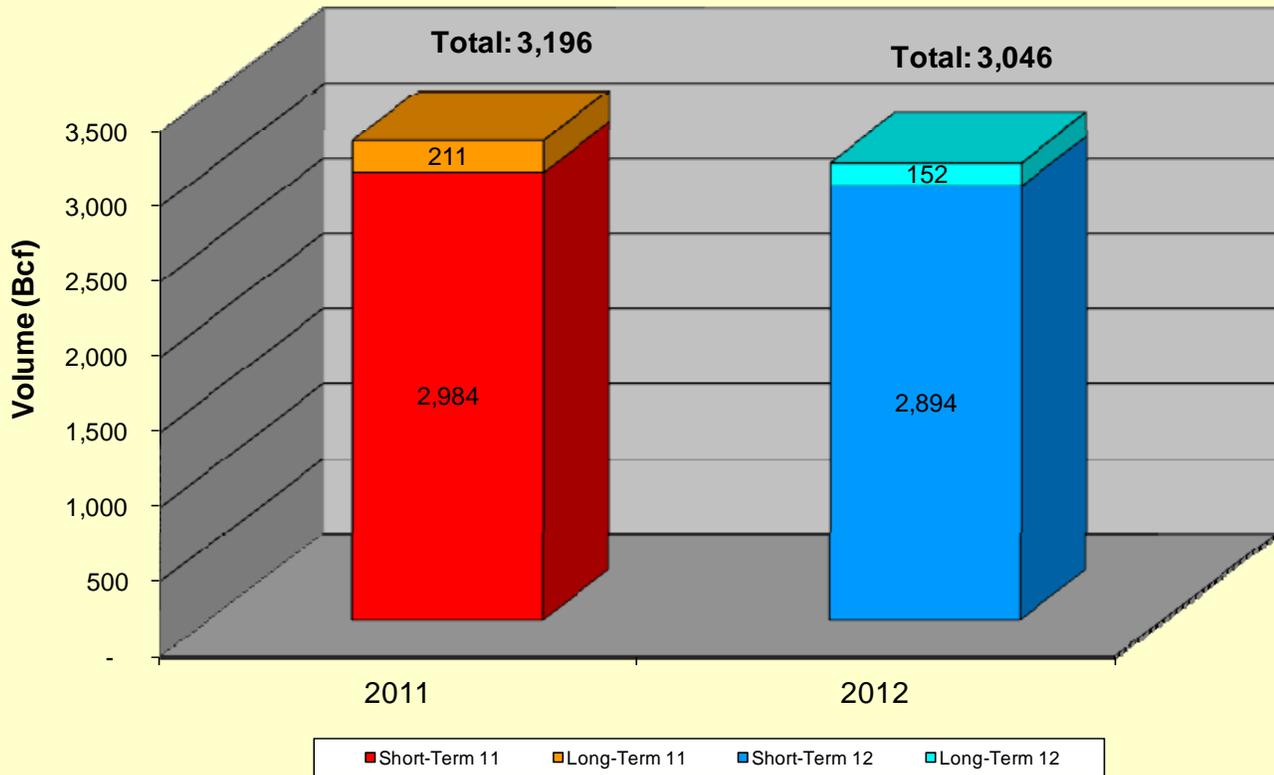
2012 vs. 2011

Natural Gas Imports by Source



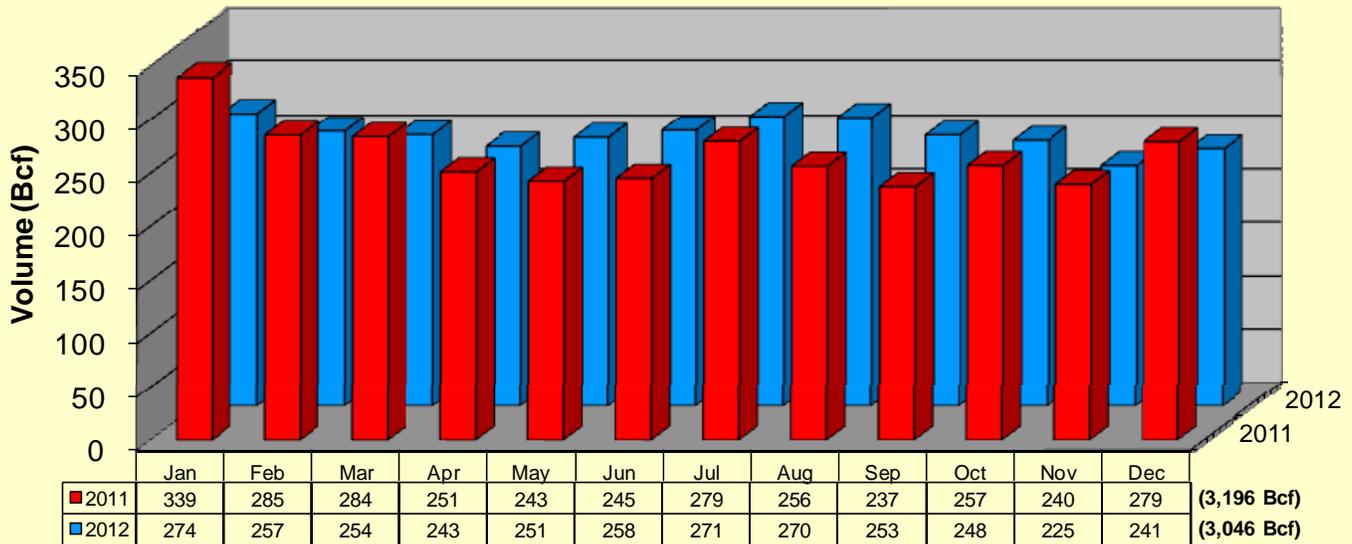
- In 2012, as in previous years, Canada was the leading source for imports into the U.S., followed by LNG by vessel, and Mexico.
- Total imports were lower in 2012 than 2011. Imports from Canada were slightly lower. LNG imports in 2012 were about half the amount of LNG imports in 2011. Imports from Mexico dropped from an already low level to only 0.3 Bcf in 2012.

Imports from Canada by Type



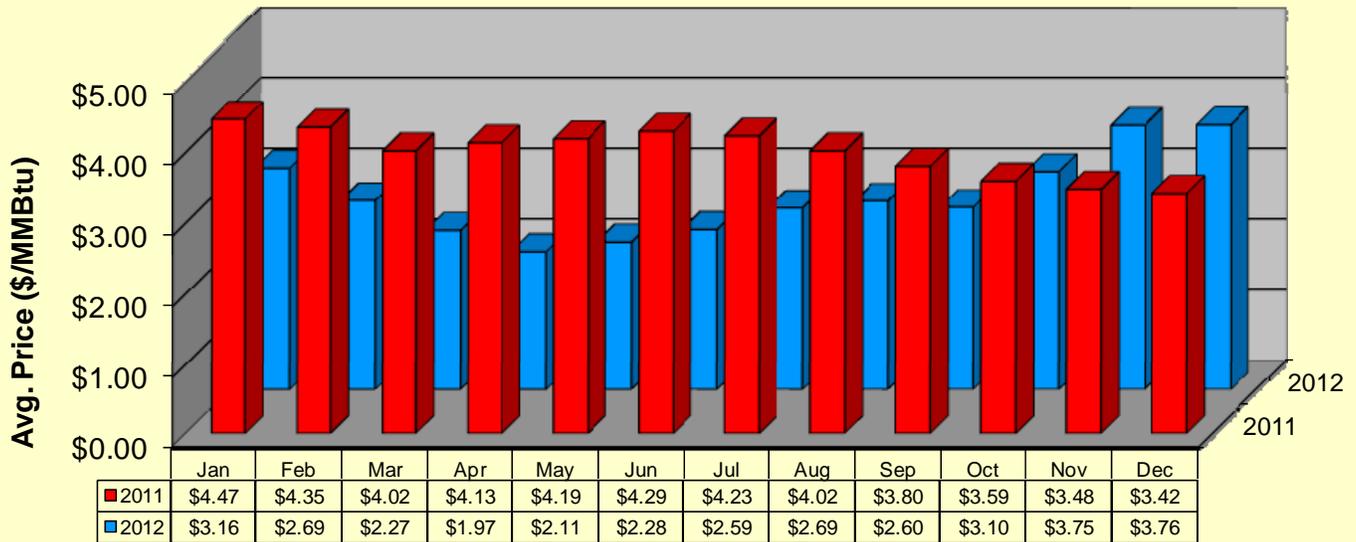
- Both long-term and short-term imports from Canada were lower in 2012 than in 2011.

Imports to Canada by Month



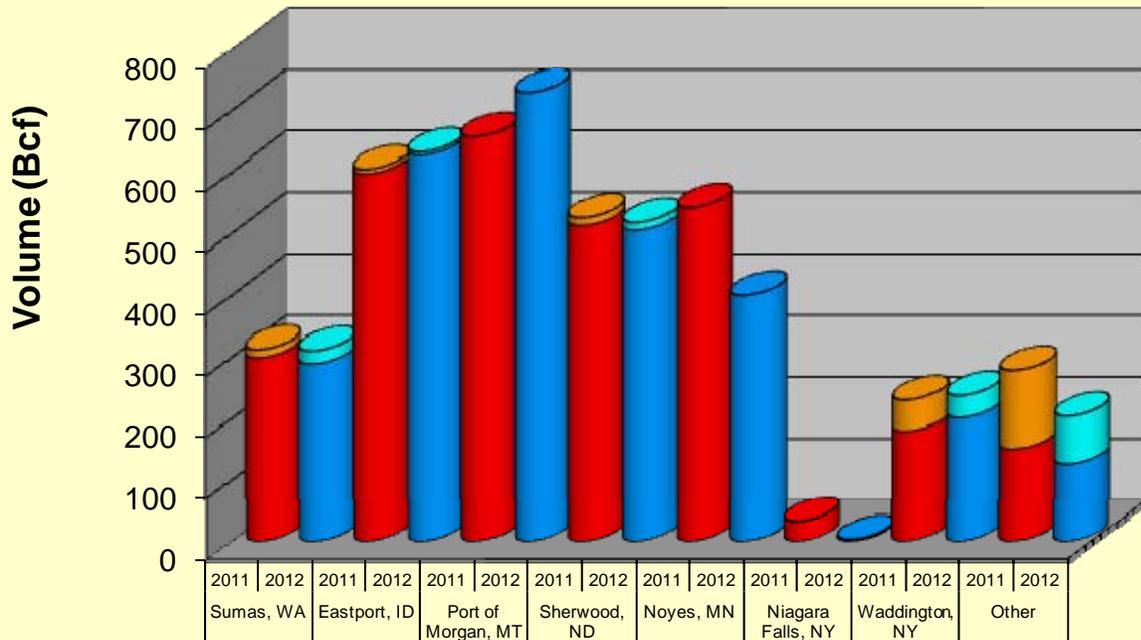
- The drop in annual imports from 2011 was spread out over the course of the year. Import volumes in 2012 were lower in almost every month than in the corresponding month of 2011.

Prices of Canadian Imports by Month



- The average prices of imports from Canada were lower in almost every month of 2012 than in 2011, rising above year-ago levels only at the end of the year. Whereas prices fell from midsummer to year-end in 2011, they rose during the comparable period in 2012.

Imports from Canada by Entry Point

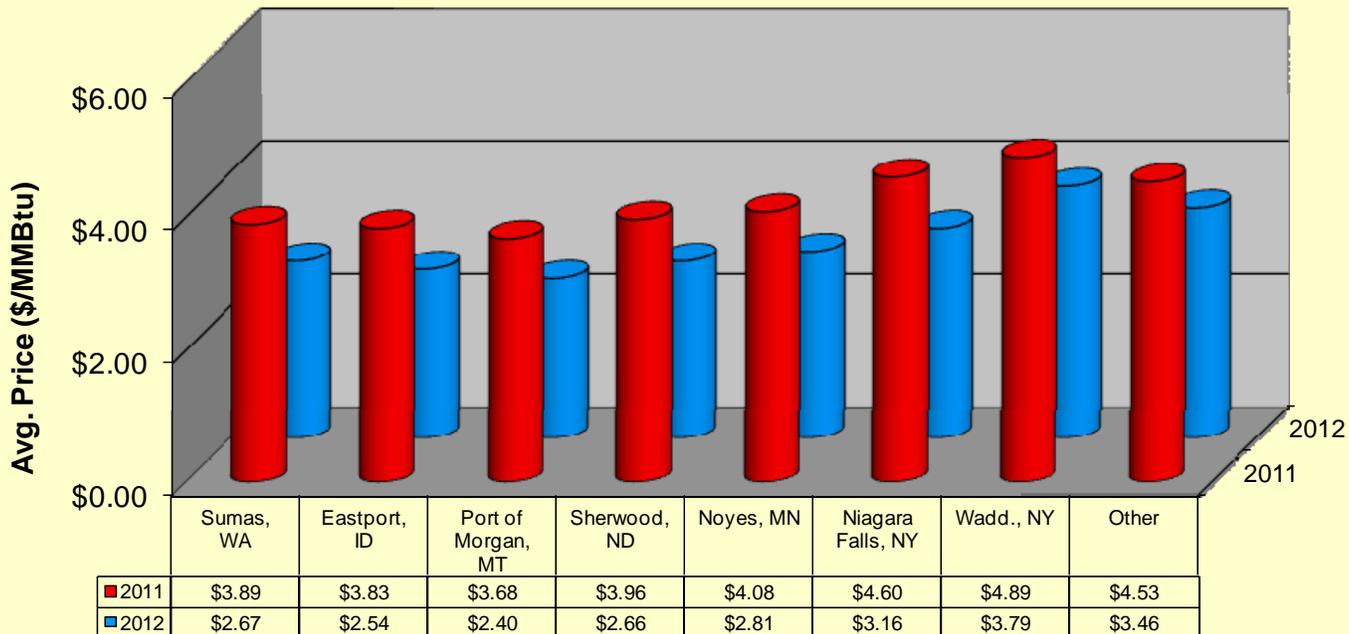


■ Short-Term 11 ■ Long-Term 11 ■ Short-Term 12 ■ Long-Term 12

		Sumas, WA	Eastport, ID	Port of Morgan, MT	Sherwood, ND	Noyes, MN	Niagara Falls, NY	Waddington, NY	Other
2011	Short-Term	300.6	598.8	658.9	514.8	544.1	32.8	181.5	152.5
	Long-Term	13.3	7.3	0.0	12.7	0.0	0.0	50.3	127.9
	Total	313.9	606.1	658.9	527.5	544.1	32.8	231.8	280.4
2012	Short-Term	290.9	629.0	731.0	506.7	401.7	3.2	203.1	128.1
	Long-Term	21.3	5.2	0.0	12.7	0.0	0.0	36.0	77.2
	Total	312.1	634.2	731.0	519.4	401.7	3.2	239.1	205.3

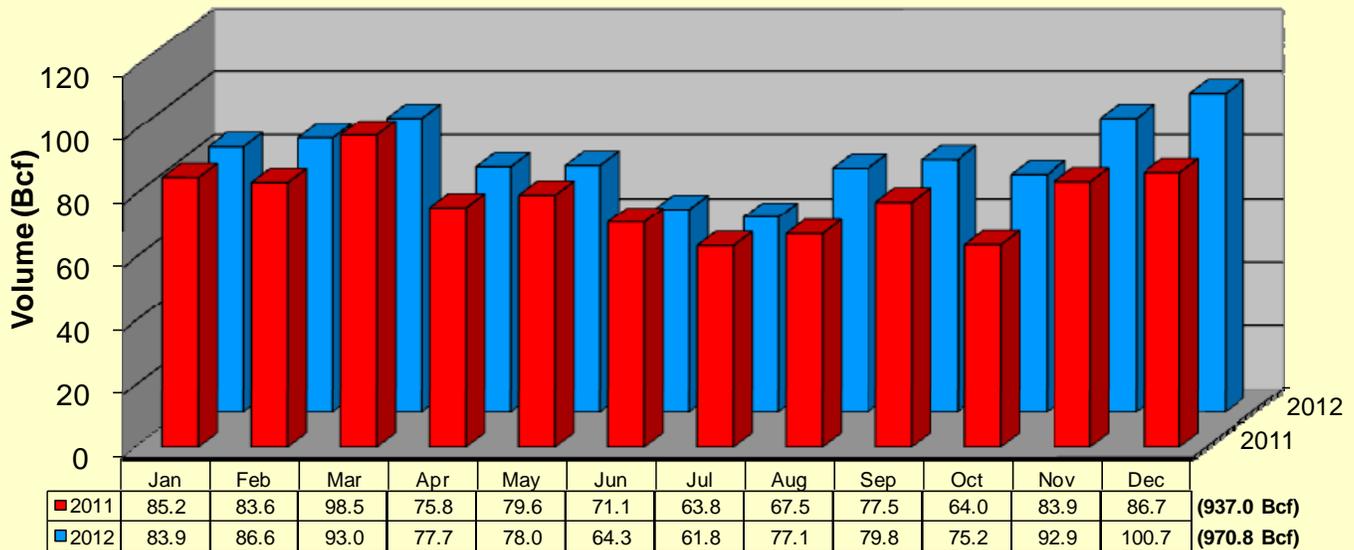
- Total import volumes were typically slightly lower or higher at each entry point in 2012 as compared to 2011. There was a moderate increase at Port of Morgan, and significant percentage drops at Noyes and Niagara Falls, as well as at several other smaller points considered collectively.
- Short-term imports dominated long-term flows from Canada at all entry points, but some points had more significant long-term traffic than others. Of those featured above, Waddington had the greatest percentage of long-term imports (15%) in 2012, as did other, smaller entry points (over 37%), collectively. Port of Morgan, Noyes, and Niagara Falls had none.

Prices of Candian Imports by Entry Point



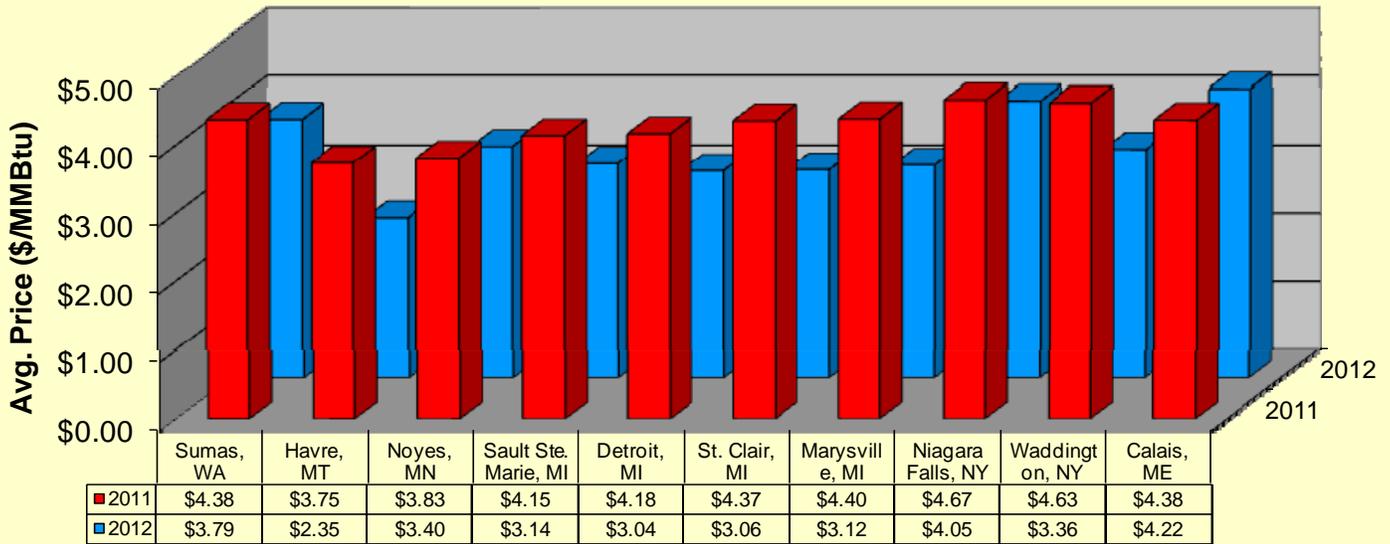
- Annual average prices were lower in 2012 than in 2011 at each entry point shown.

Exports to Canada by Month



- Volumes of exports to Canada were fairly close for most months in 2012 to the corresponding month in 2011. However, by the end of the year, the 2012 volumes were much higher than in 2011.

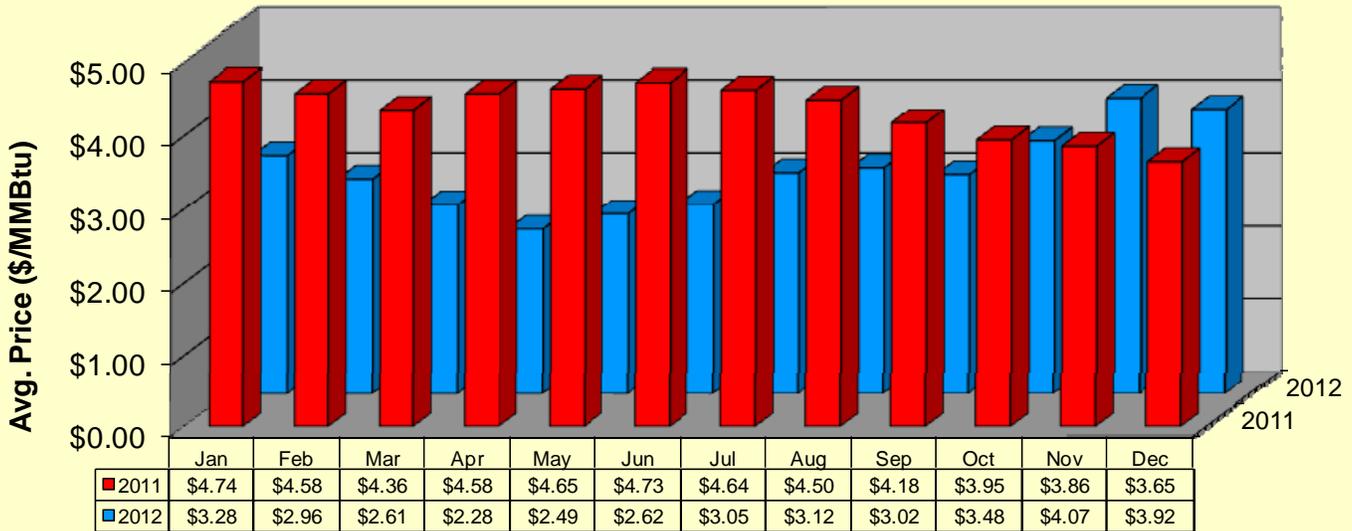
Prices of Exports to Canada for Selected Exit Points



Note: These selected export points handle 99% of US gas exports to Canada.

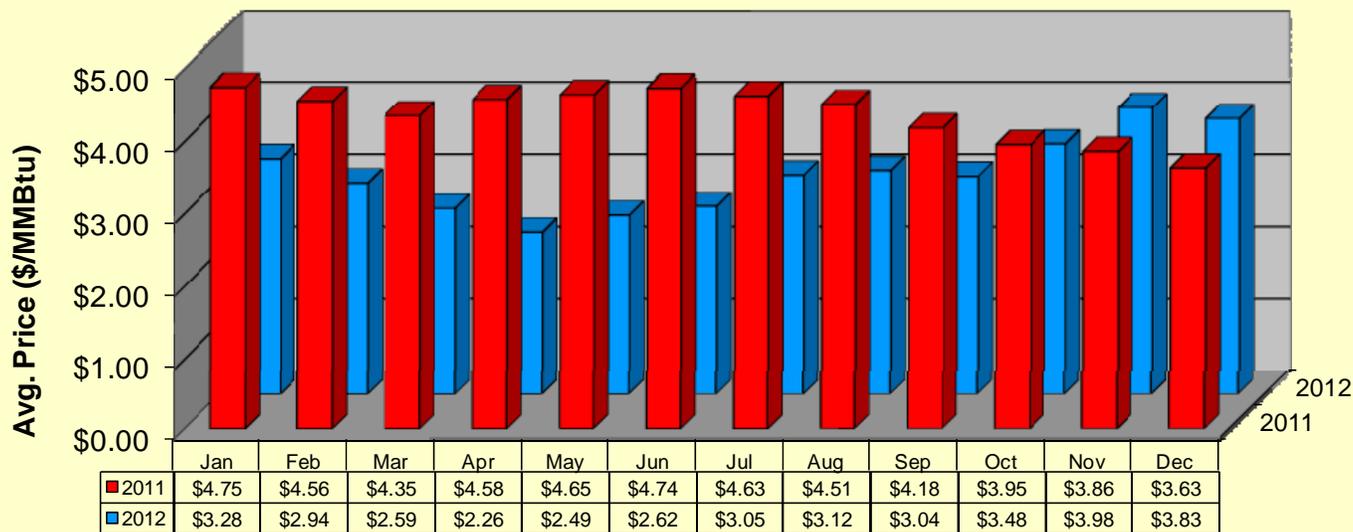
- Annual average export prices at all of the selected exit points featured above were lower in 2012 than in 2011.
- Export prices were down by over 37% at Havre and down by about 30% at St. Clair.

Prices of Exports to Canada by Month



- Average monthly prices of exports to Canada were lower for most of the year than the corresponding months in 2011, until November and December, when they were slightly higher. The difference was largest in the second quarter of the year when prices were lower by over \$2.00 per MMBtu.

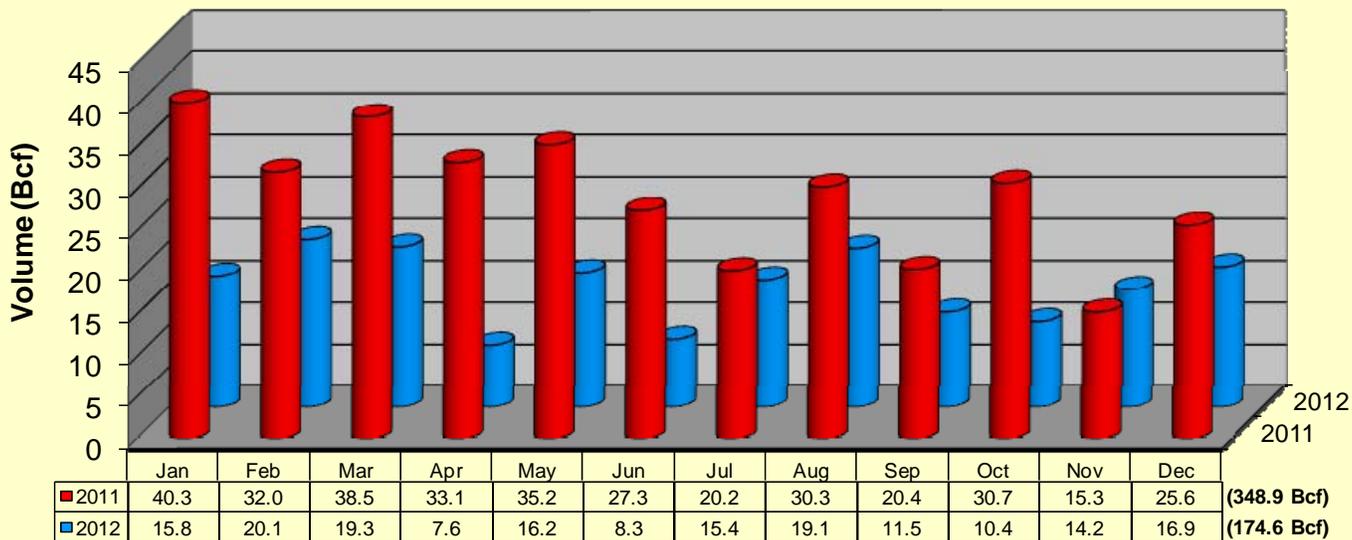
St. Clair, MI Export Prices



Note: The St. Clair export point handles over 75% of US gas exports to Canada.

- St. Clair dominates U.S. exports to Canada, handling over 75% of those flows.
- As with prices of exports to Canada overall, average prices of exports to Canada through the St. Clair, Michigan exit point were lower than the corresponding months in 2011, until the end of the year, when they were slightly higher.

LNG Imports by Month



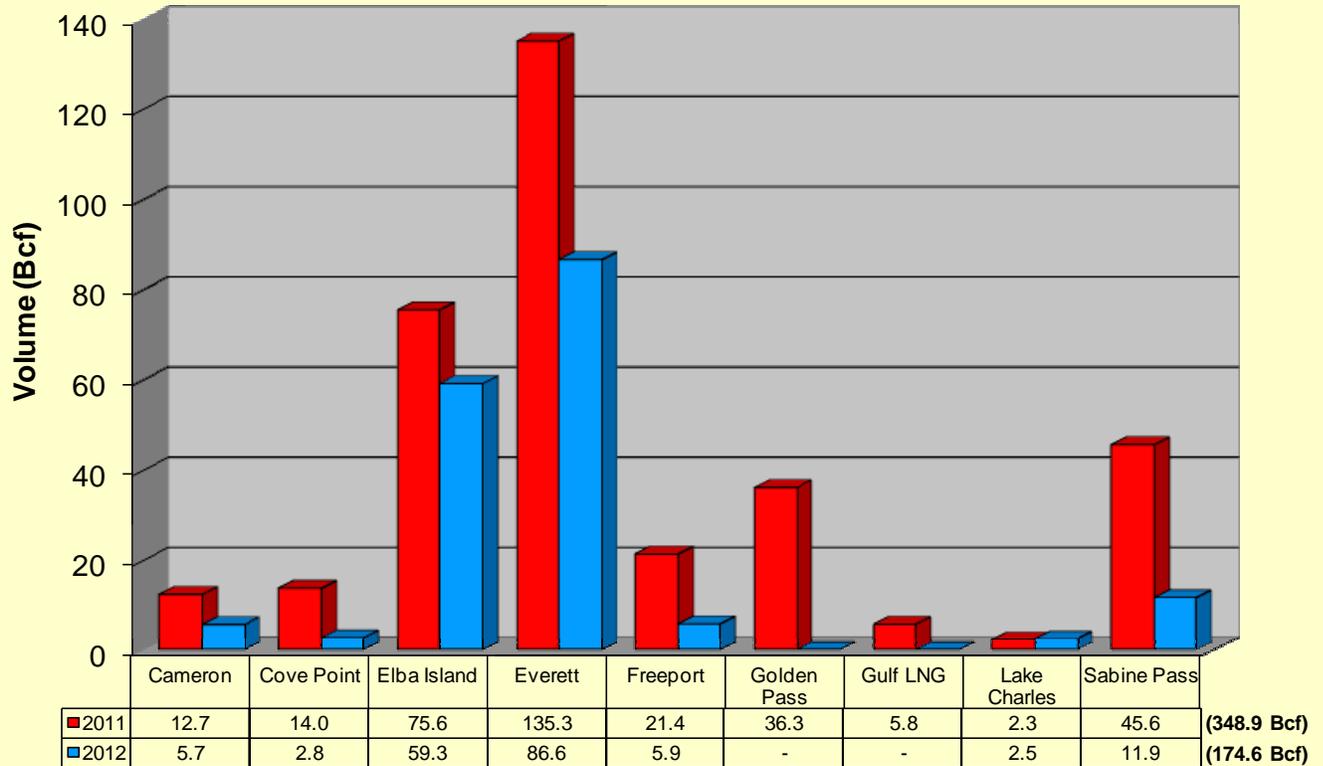
- LNG imports were lower in all twelve months of 2012 than in the corresponding months of 2011.

Prices of LNG Imports by Month



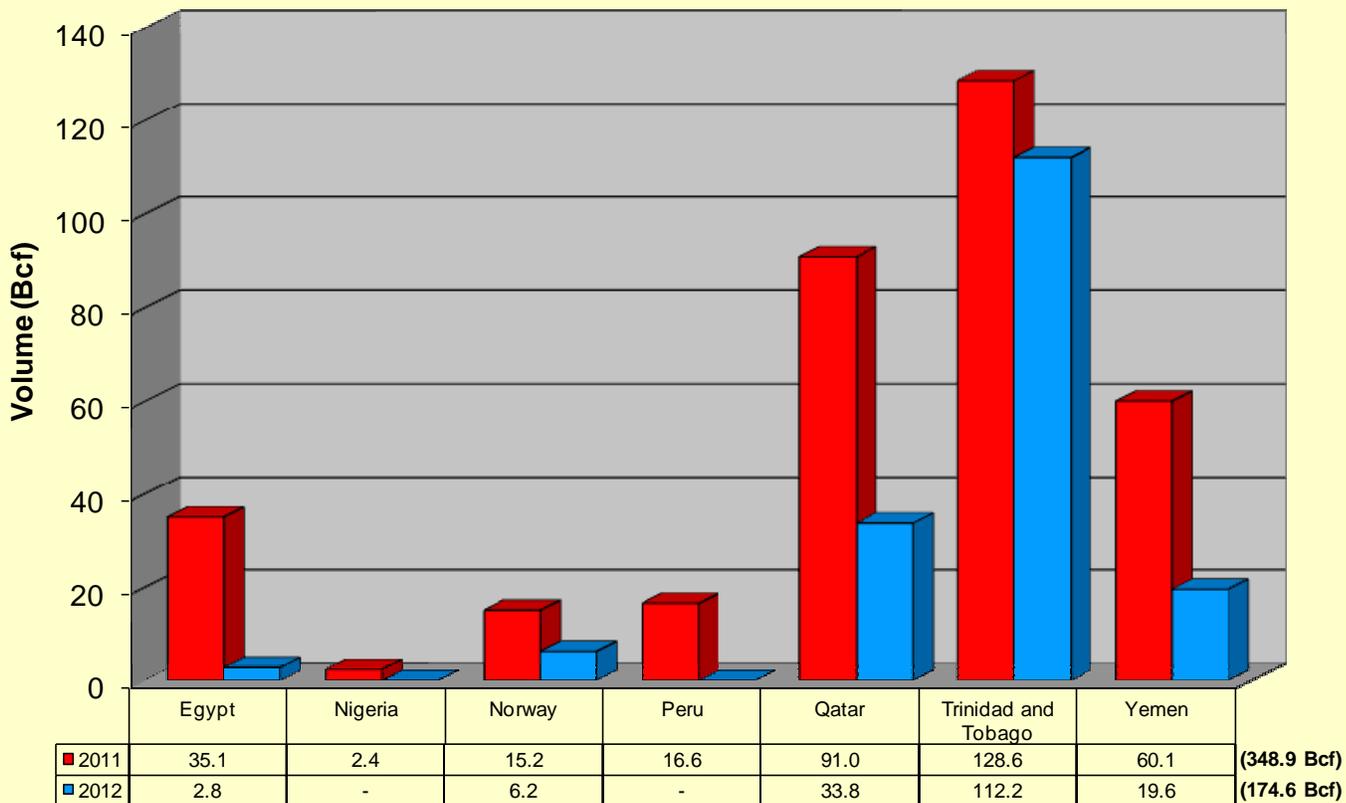
- Average monthly LNG import prices were lower in all months in 2012 compared to the corresponding months in 2011, with the exception of November. The differences were as small as \$0.08 per MMBtu and as high as \$3.96 per MMBtu.

LNG Imports by Receiving Terminal



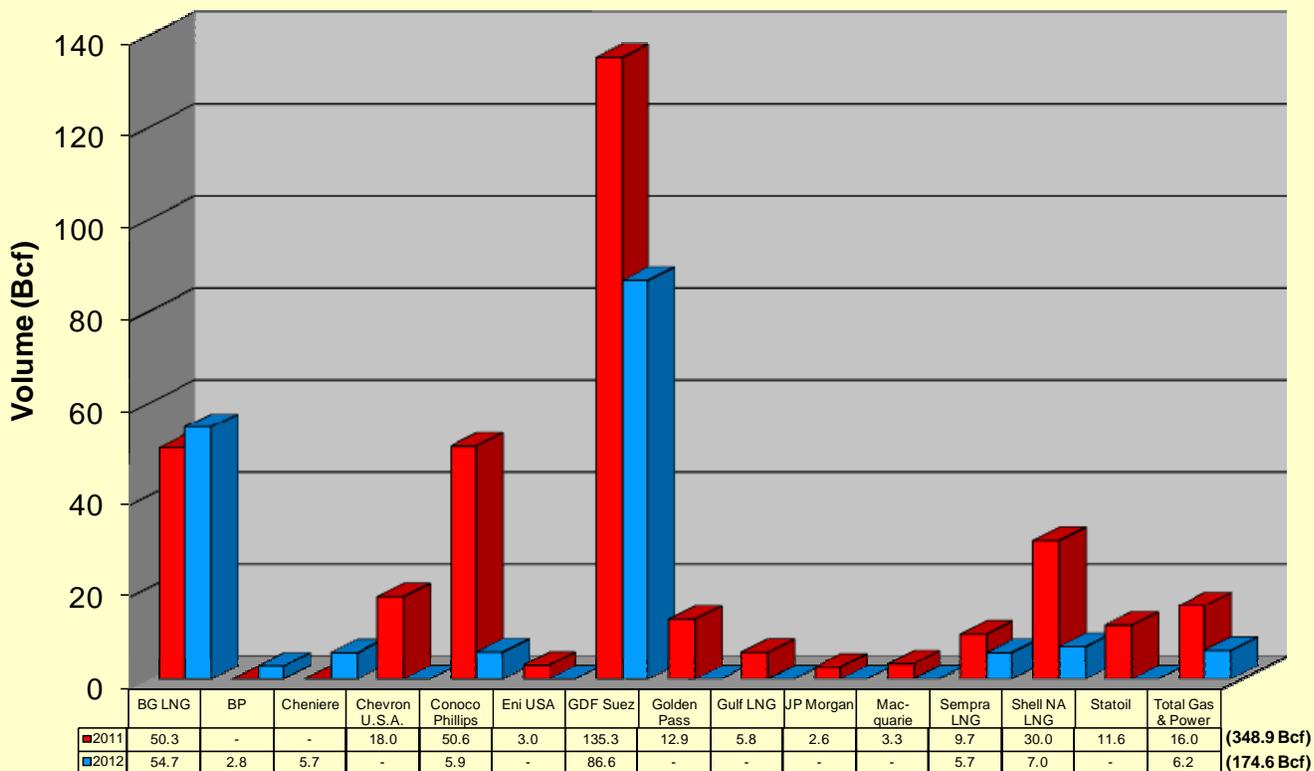
- All LNG terminals experienced lower LNG import volumes in 2012 than in 2011, with the exception of Lake Charles, which had a slightly higher volume in 2012.
- Everett experienced a large drop in volume between 2011 and 2012, falling 36% or 48.7 bcf.

LNG Imports by Country of Origin



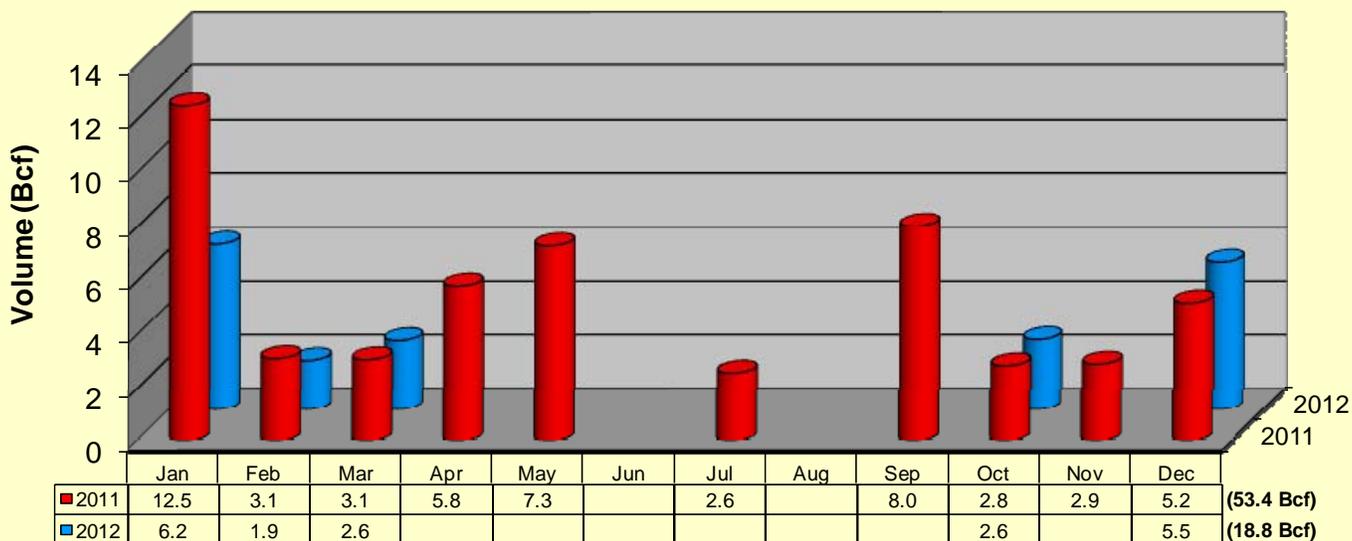
- LNG Imports decreased between 2011 and 2012 from all countries. Qatar had the largest decrease, with imports falling 57.1 bcf from 2011 to 2012.

LNG Imports by Company



- Only 8 companies imported LNG in 2012, compared to 13 companies in 2011.
- GDF Suez and BG LNG were again leaders in LNG imports. GDF Suez did, however, experience a significant decrease in imports from 2011 to 2012, with a decline of 36% or 48.7 bcf.

LNG Re-Exports* by Month



*LNG re-exports are exports of foreign-source LNG that was previously imported into the U.S.

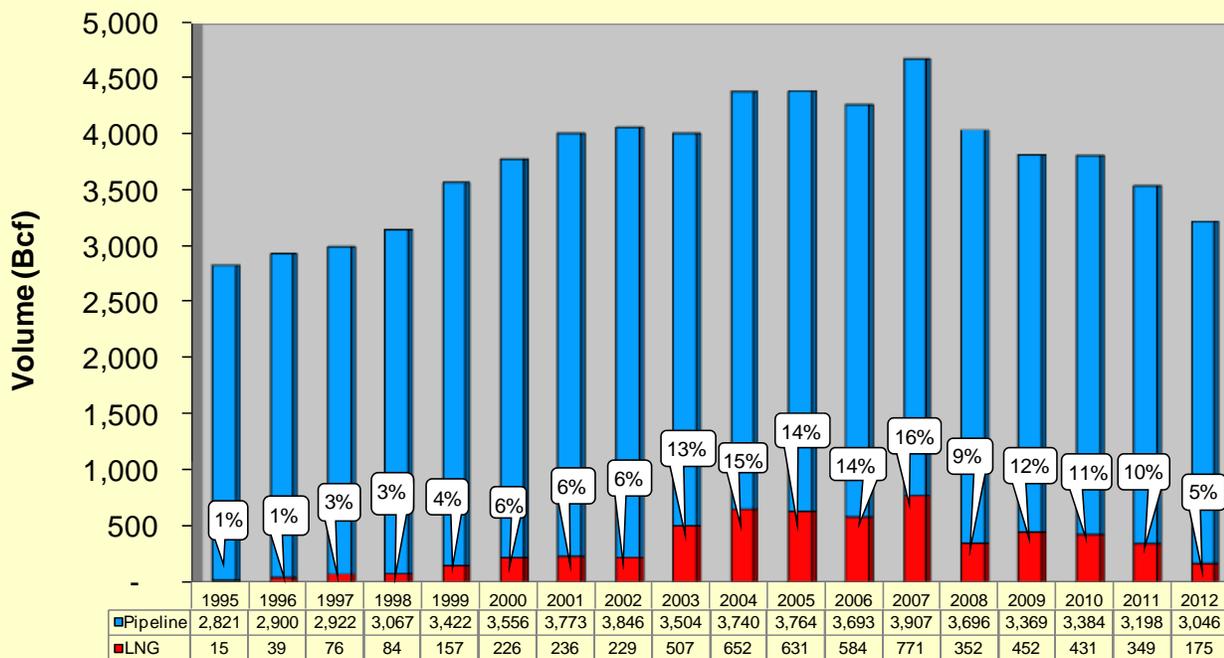
- LNG re-exports, which began at the end of 2009, decreased significantly in 2012 compared to 2011, a drop-off of 64.8% or 34.6 bcf.

Long-Term Trend Analysis

Imports, Pipeline vs LNG

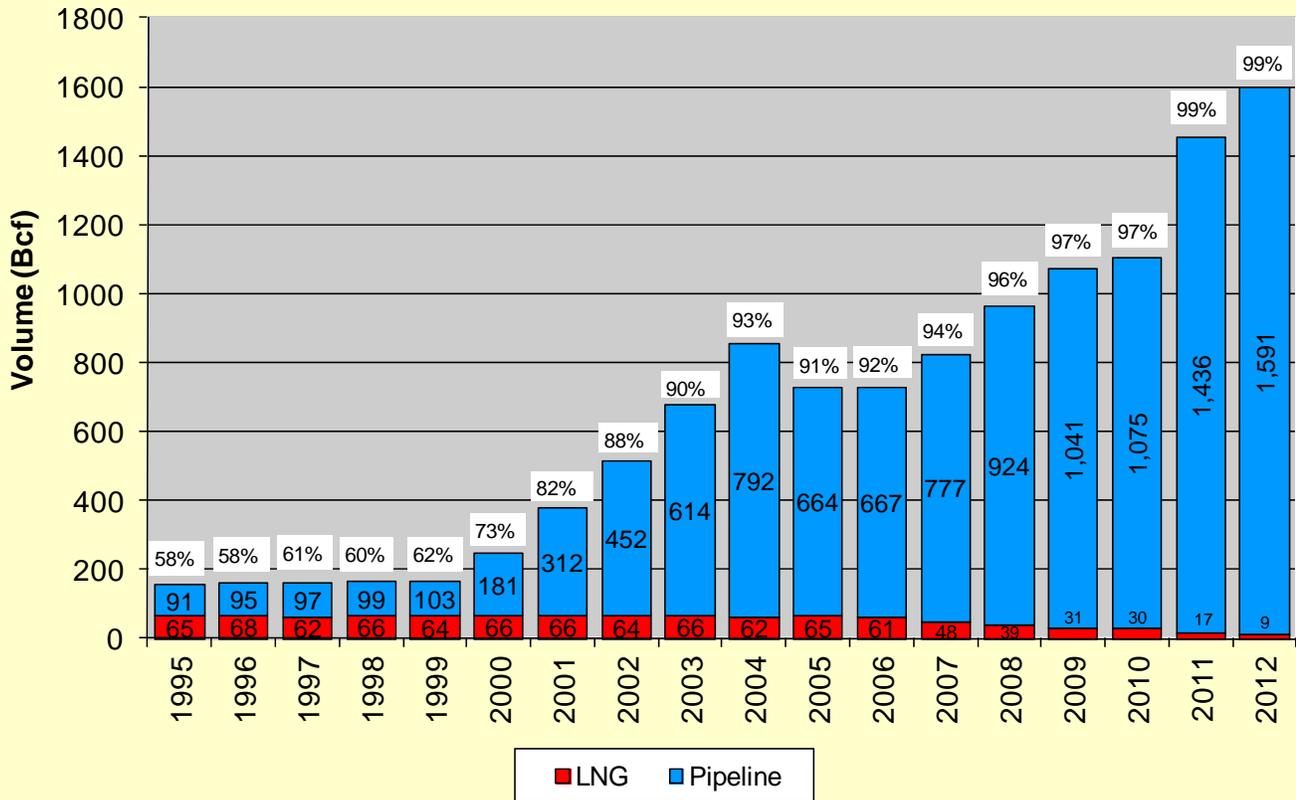
& LNG as Percentage of Imports

1995-2012



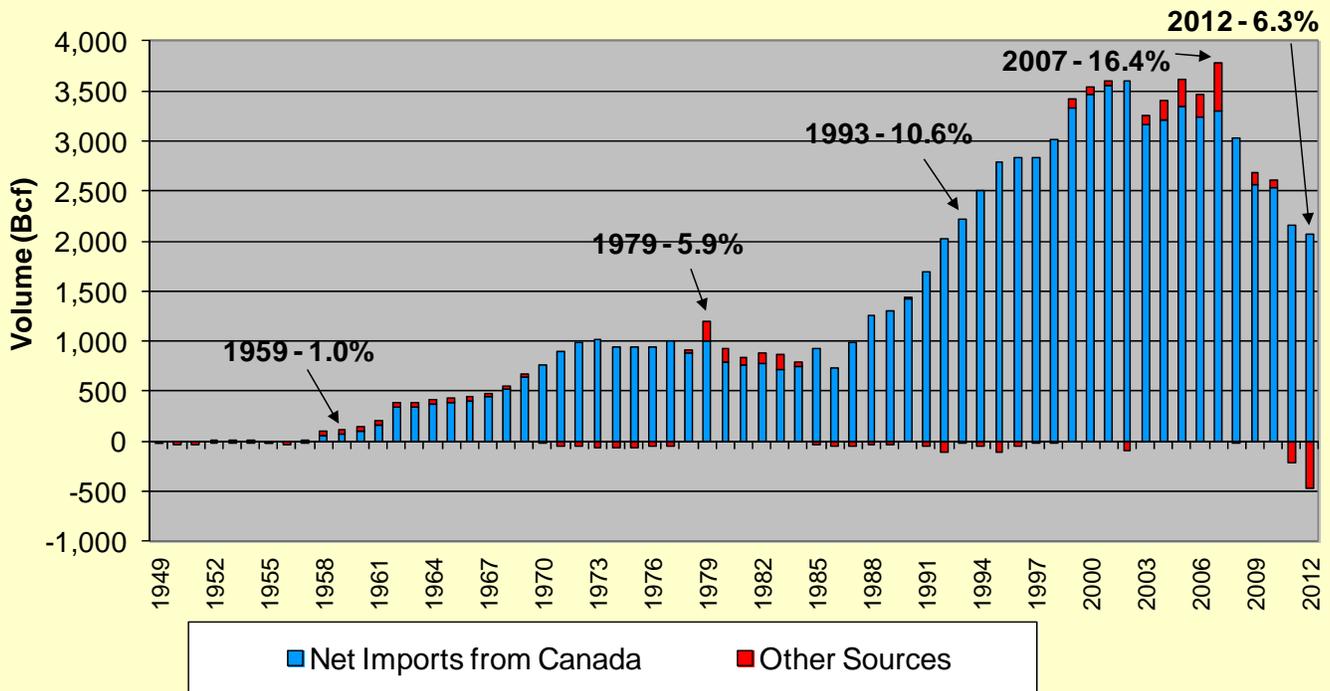
- In 2012, LNG represented just 5% of U.S. natural gas imports. This figure was half of its 2011 value. This continues a recent trend of lower LNG import percentage compared with the peak years of 2003 to 2007. With substantially increased domestic production from shale formations and much lower prices in North America than elsewhere, the downward trend may continue.

Exports, Pipeline vs Domestic LNG & Pipeline Exports as Percentage of Total



- Only a small percentage of exports of domestically produced natural gas is in the form of LNG. Most LNG has been exported from Alaska, and a small amount is sent to Mexico and Canada by truck.
- Pipeline volumes now constitute about 99% of all exports due to diminishing volumes of LNG sent out from Kenai, Alaska.

Net Imports from Canada and Other Sources & Imports as Percentage of US Gas Consumption, Selected Years

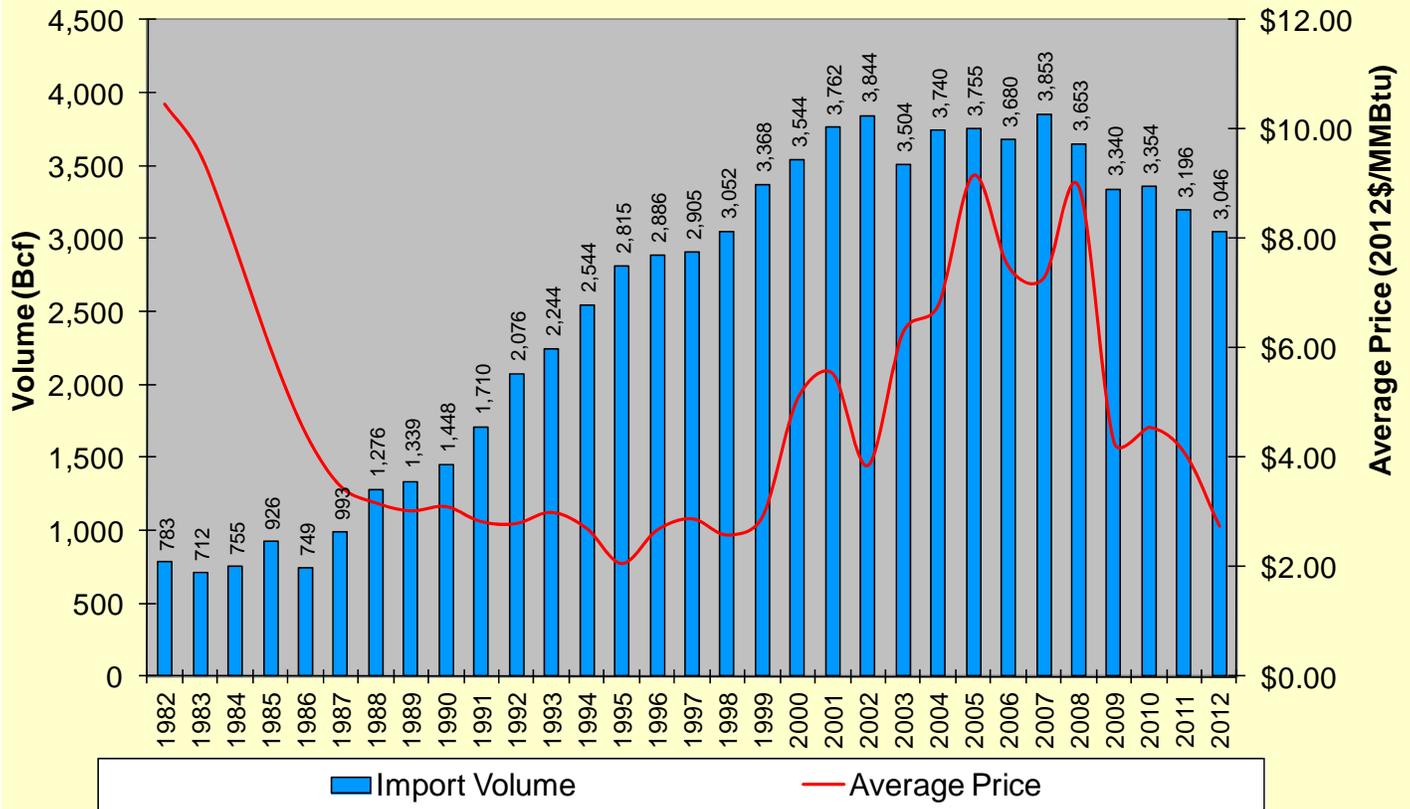


Sources:

Energy Information Administration, Annual Energy Review 2011, Table 6.3, "Natural Gas Imports, Exports, and Net Imports, 1949-2011"
 Energy Information Administration, "U.S. Natural Gas Total Consumption", <http://tonto.eia.gov/dnav/ng/hist/n9140us2a.htm>, accessed 4/12/13
 Office of Fossil Energy, Office of Natural Gas Regulatory Activities.

- This long-term view of imports and exports illustrates the continuing prominence of Canada in American natural gas trade. The U.S. has been a net importer of gas from Canada since the late 1950s. The gas trade with Canada dwarfs all other gas exchange combined.
- 2008 saw the reversal of a recent trend in the importance of gas imports, and this has continued in every year since. In 2007, imports peaked at 16.4% of annual U.S. gas consumption, based largely on increasing LNG imports. In 2012, net imports were a smaller fraction (6.3%) of U.S. gas consumption than at any time since 1987. An important reason for this was increasing net exports to Mexico, due to a significant jump in exports and an almost complete cessation of imports from that country.

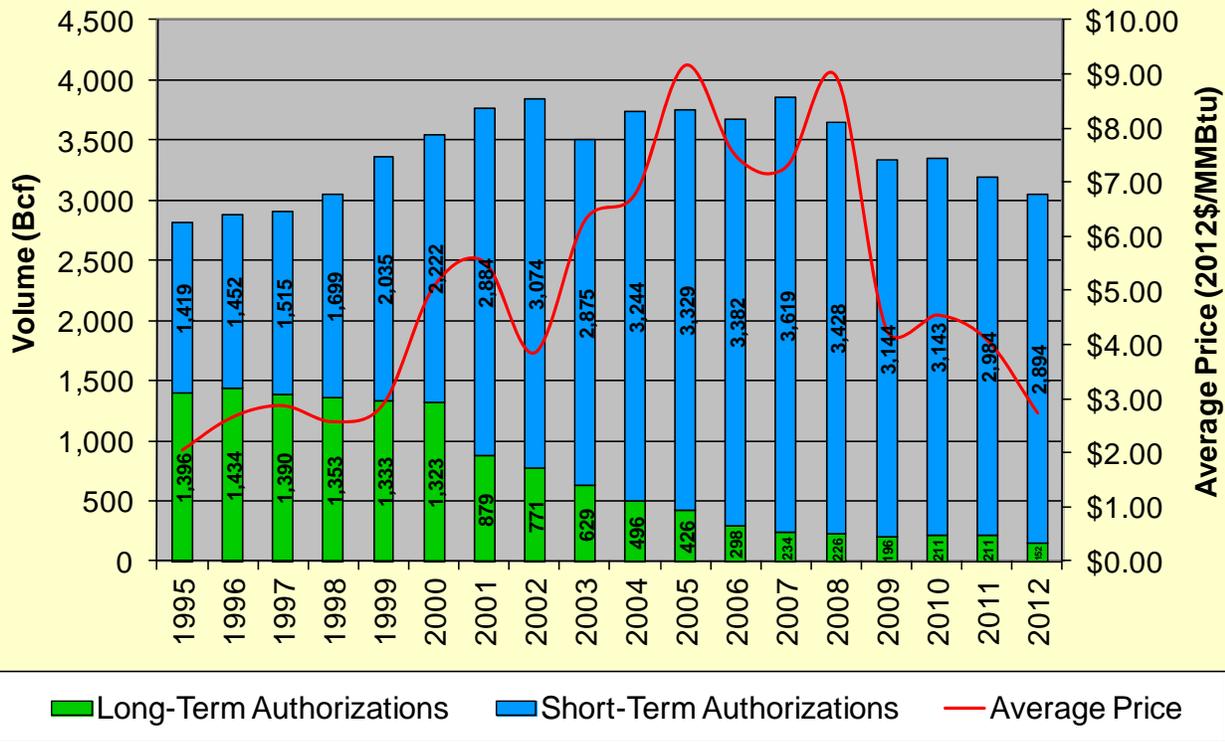
Imports from Canada



- Imports from Canada have grown substantially from the 1980s, reaching an approximate plateau at about the turn of the century, and declining since the peak in 2007. The 2012 import volume was the smallest since 1997. The decline in imports is consistent with the recent increase in U.S. gas production.
- Prices of Canadian imports, in inflation-adjusted dollars, dropped through the 1980s, held roughly constant in the 1990s, and began climbing in the latter part of that decade. There have been up or down swings from year to year, but import prices had remained at an elevated level until 2009, when prices dropped to a level not seen since 2002. 2012 saw a further decline in prices of imports from Canada.

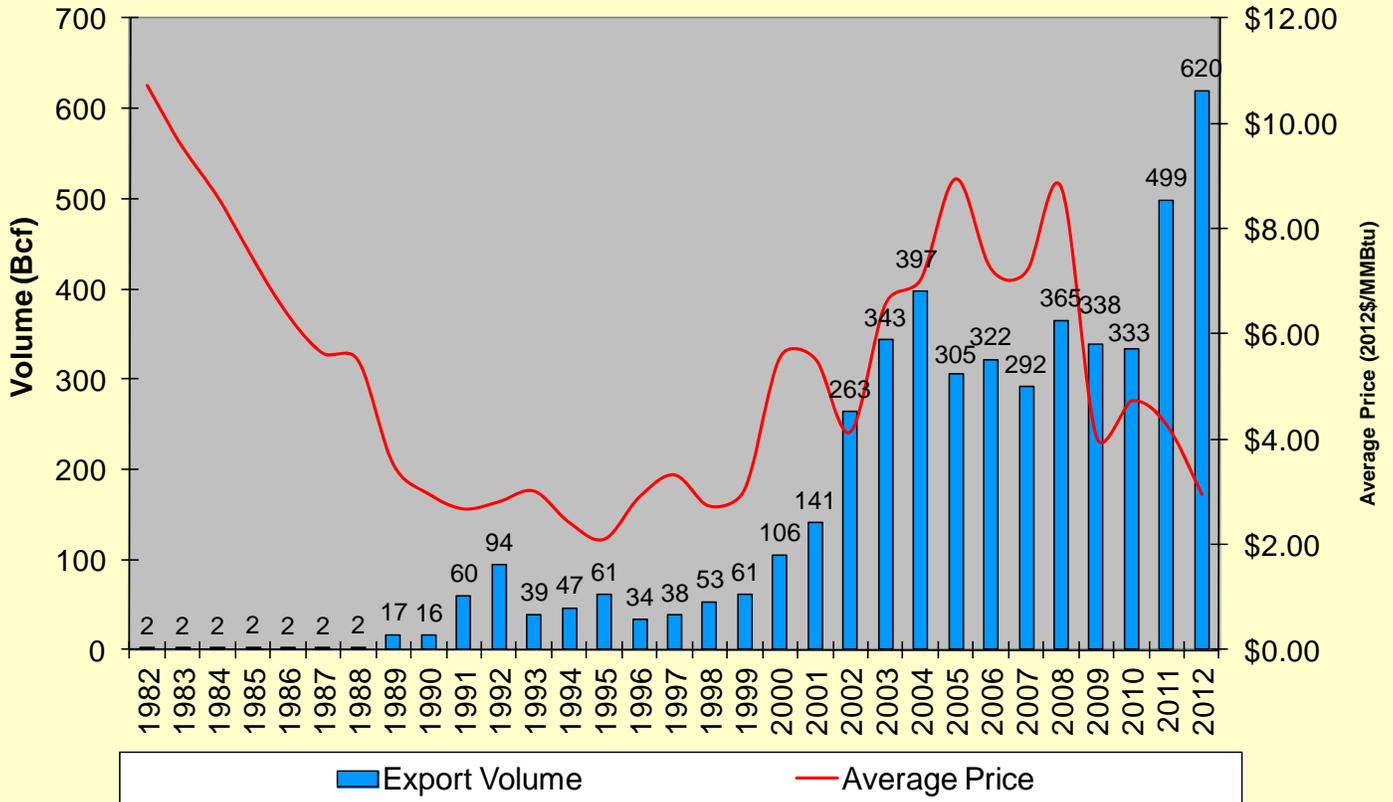
Imports from Canada

Long-Term vs Short-Term Authorizations



- Imports of Canadian natural gas have increasingly been made under short-term authorizations, with the use of long-term authorizations steadily dwindling.
- The average price of imports from Canada in inflation-adjusted dollars continued its decline in 2012.

Natural Gas Exports to Mexico



- From a low level in the early 1980s, U.S. exports to Mexico have grown substantially. While showing fairly large increases and decreases from year to year, the overall level of exports remained on the order of 300 Bcf per year, or higher, for much of the 2000's, and has continued to grow along with increased natural gas production in the United States.
- In 2012, annual exports to Mexico reached their highest level ever, at 620 Bcf. (At the same time, imports from Mexico almost disappeared).