Canadian Natural Gas

›› Monthly Market Update

April 2008

›› Natural Gas Division
Petroleum Resources Branch
Energy Sector

Foreword

The *Canadian Natural Gas: Monthly Market Update* is a monthly working paper prepared by the Natural Gas Division of Natural Resources Canada.

Structure and Format of the Report

This six page report provides the most recently available data on natural gas prices and on key fundamentals affecting prices.

To the right is an Executive Summary, which provides a brief, up-to-date overview of natural gas market fundamentals. For those interested in reading ahead, the remainder of the report consists of graphs, with limited text and comments associated with each. The text provides a short description of the natural gas market fundamental, followed by a simple comparative analysis (i.e., year-over-year or month-over-month) of the data contained within the figure.

Beginning in January 2005, this report has been formatted in landscape orientation to be more easily read on a computer screen.

Sources

Various sources are used in developing this report, including Statistics Canada, Canadian Enerdata, Daily Oil Bulletin, the National Energy Board and GLJ Energy Publications. *Data is subject to revision.*

If you have any comments, suggestions or questions please contact Ryan Creighton at 992-1023, or by email at rcreight@nrcan.gc.ca

Executive Summary

The chart below depicts percentage changes (given the most recently available month of data) in natural gas prices, heating degree days (weather), natural gas domestic sales and exports, imports, storage, drilling, and natural gas production.

Natural Gas Market Fundamental	Percentage Change	
	Year-to-Year	Month-to-Month
Prices	16%	10%
Heating Degree Days	-7%	-3%
Production	-5%	-8%
Sales	1%	-2%
Exports	6%	-7%
Imports	116%	3%
Storage	44%	-29%
Drilling	-8%	-17%

PRICES: CDN $8.16/GJ in April 2008; an increase of 10%

HDDs: 714 in February 2008; a decrease of 3%

PRODUCTION: 478 Bcf in February 2008; a decrease of 8%.

SALES: 314 Bcf in February 2008; a decrease of 2%

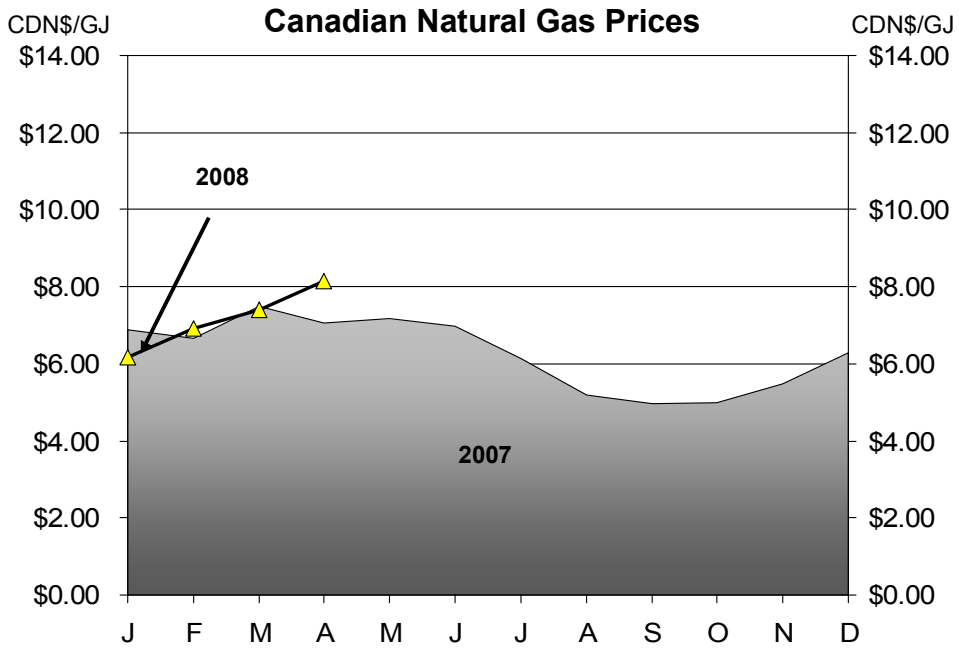
EXPORTS: 336 Bcf in February 2008; a decrease of 7%

IMPORTS: 67 Bcf in February 2008; an increase of 3%

STORAGE: 157 Bcf in April 2008; a decrease of 29%

DRILLING: 902 in April 2008; a decrease of 17%

Figure 1

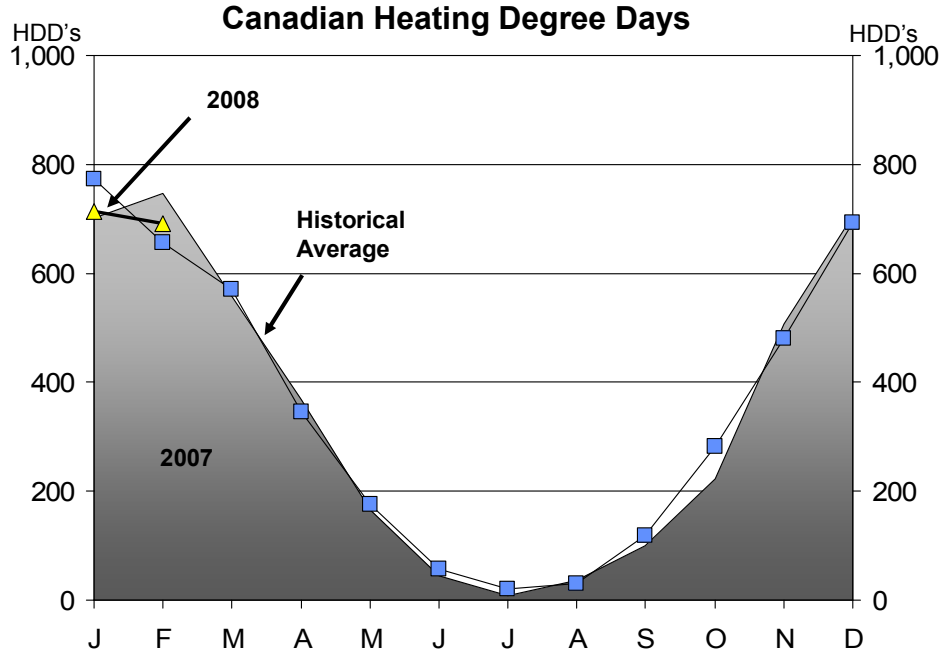


Source: GLJ Energy Publications **Note:** Canadian price is the Alberta price at the AECO hub.

Figure 1 illustrates the price of natural gas at the major Canadian pricing point – the Intra-Alberta market. The price is for gas delivered under a 30-day contract. The Intra-Alberta market is formed by gas delivered to pipelines in Alberta. Gas changes hands via Nova Inventory Transfers (NIT), exchanges at the AECO storage hub, or sales facilitated by the Natural Gas Exchange (NGX). This is a commodity price – a wholesale price in the producing area. Consumer (or "burner tip") prices will also include pipeline transmission and distribution costs, which vary across Canada. Natural gas is commonly measured in gigajoules (GJ) or cubic metres. A gigajoule is an energy unit, which equates to about 27 cubic metres of natural gas.

Canadian natural gas commodity prices were CDN $8.16/GJ in April 2008, 10% higher than the previous month and 16% higher than April 2007.

Figure 2

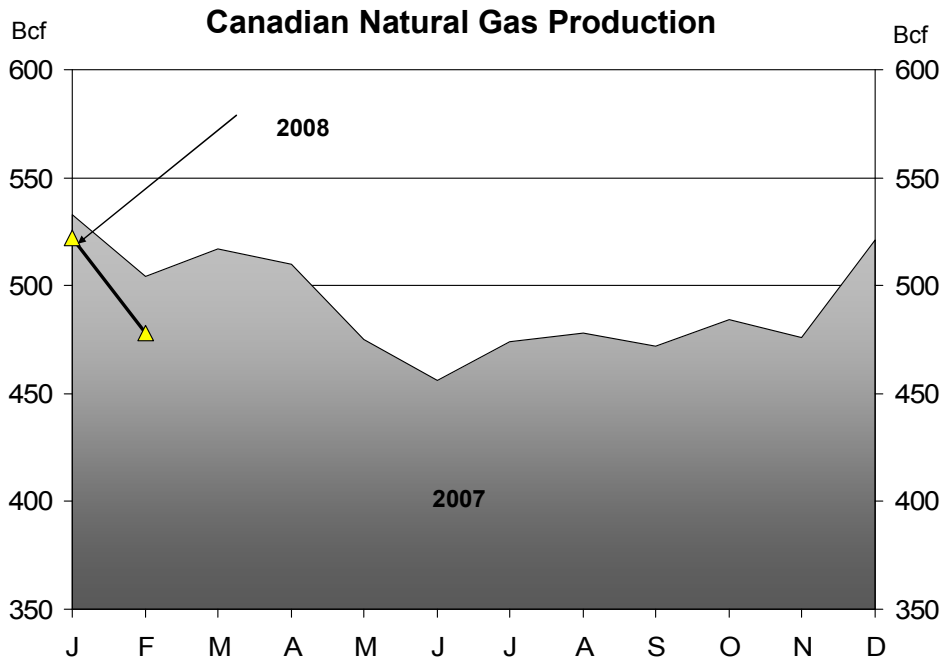


Source: Statistics Canada

Figure 2 shows Canadian heating degree days (HDDs), which are a measure of how cold it is. The more HDDs in any season, the greater is natural gas demand for space heating. If the winter is unusually cold, demand will respond accordingly and natural gas prices will tend to be stronger. However, if the winter is mild, demand will be weaker, which will tend to moderate prices.

In February 2008, there were 692 HDDs, 7% less than February 2007. Temperatures in February 2008 were 5% colder than normal.

Figure 3

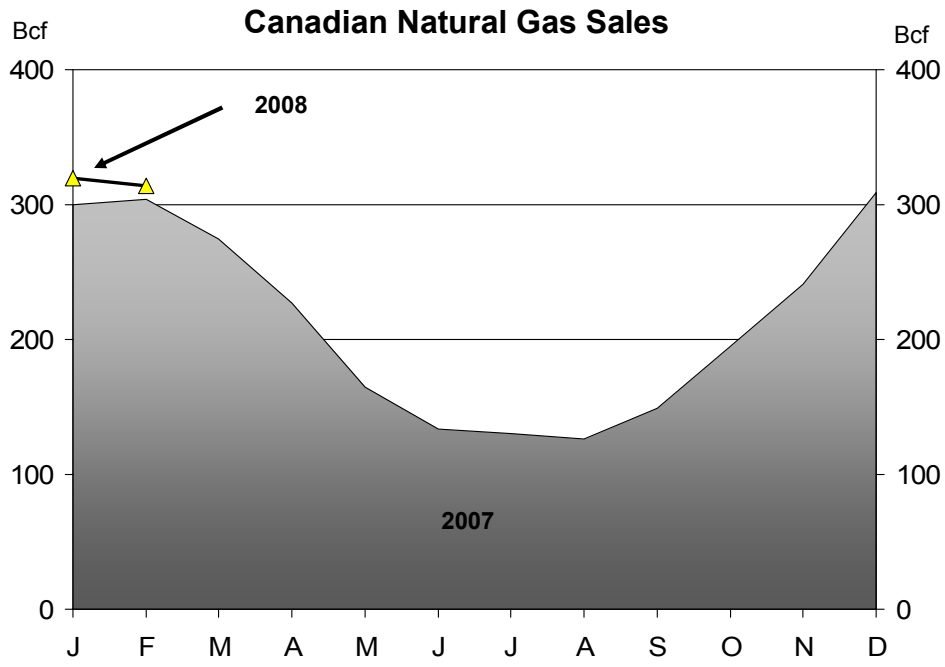


Source: Statistics Canada **Note:** Most recent month is a preliminary figure.

Figure 3 shows marketable natural gas production in Canada. Marketable natural gas is the gas available for consumption after processing and excludes producer or plant uses.

Marketable natural gas production for February 2008 was 478 Bcf, 5% lower than February 2007.

Figure 4



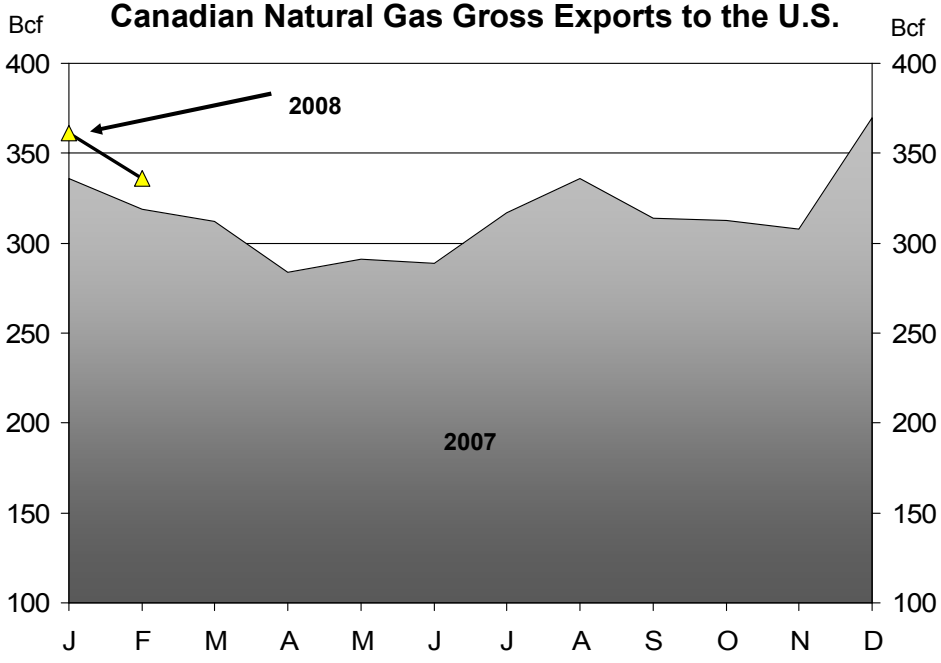
Source: Statistics Canada **Note:** Most recent month is a preliminary figure.

Figure 4 illustrates total Canadian natural gas sales. Sales include all natural gas sold to residential and commercial users (for space and water heating, cooking, etc), industries and electricity generating units in Canada. The totals do not include consumption by the natural gas industry itself (e.g., pipeline compressor fuel).

Natural gas sales to Canadian consumers in February 2008 were 314 Bcf, 1% higher than February 2007.

Figure 5

Canadian Natural Gas Gross Exports to the U.S.



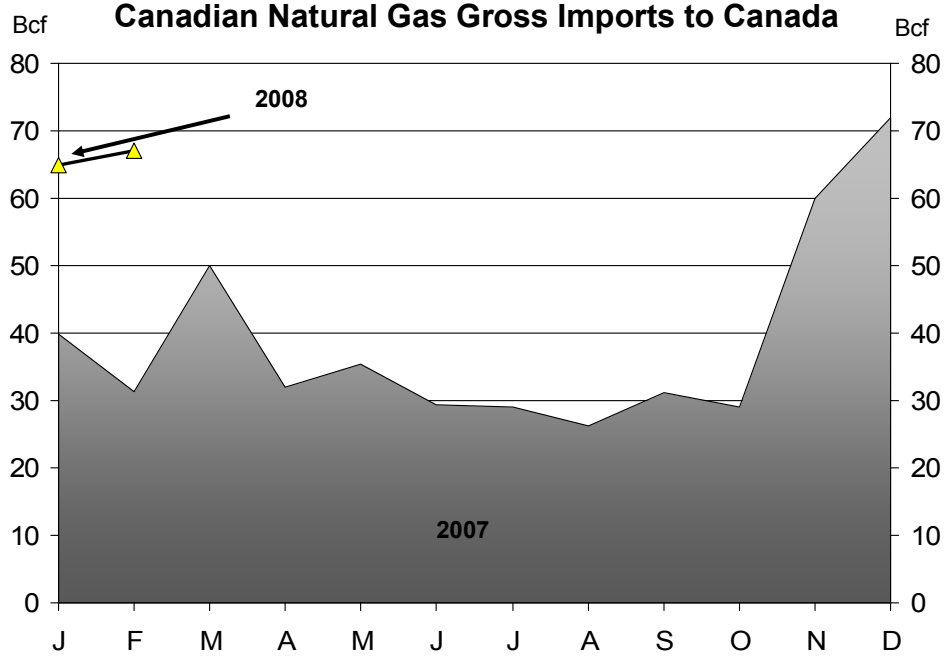
Source: National Energy Board

Figure 5 illustrates natural gas exports to the U.S. Canadian natural gas requirements are met entirely by domestic sources, as Canada produces natural gas in excess of what is required for domestic consumption. In comparison, the U.S. consumes more natural gas than it produces, therefore natural gas imports are required to make up the difference. Typically, Canada exports between 50 and 60 per cent of its gas production.

In February 2008, natural gas exports to the U.S. were 336 Bcf, 6% higher than February 2007.

Figure 6

Canadian Natural Gas Gross Imports to Canada



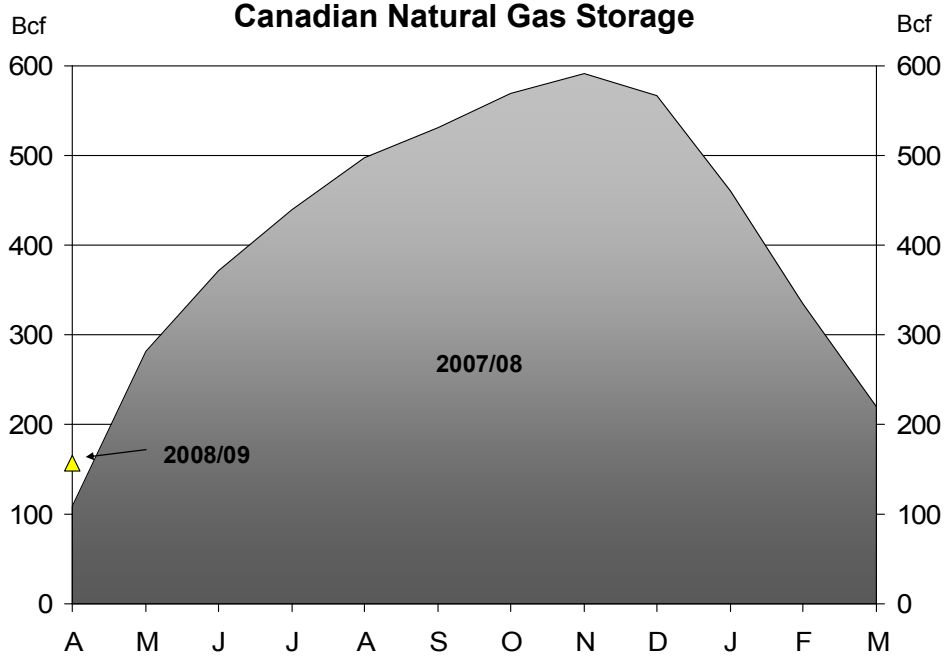
Source: National Energy Board

Figure 6 illustrates natural gas imports to Canada. Most natural gas is imported into Canada through major import points in southern Ontario. Imports into southern Ontario will likely rise in the future, as the province purchases more gas from the rest of North America due to flat production in the Western Canadian Sedimentary Basin. Presently, import volumes are significantly less than export volumes, and Canada remains a net exporter of natural gas.

In February 2008, natural gas imports to Canada were 67 Bcf, 116% higher than February 2007.

Figure 7

Canadian Natural Gas Storage



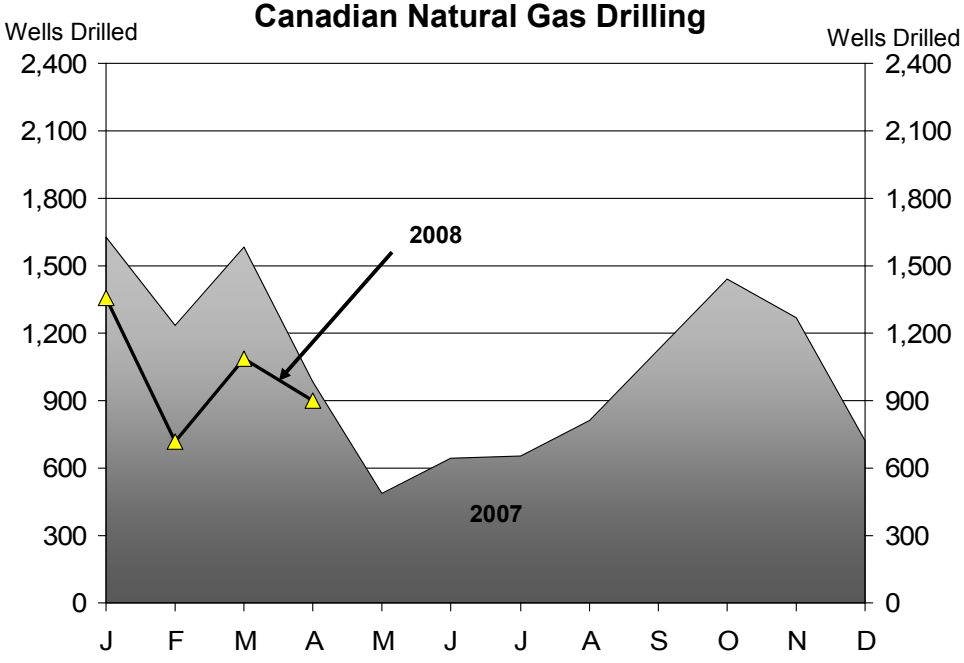
Source: Canadian Enerdata

Figure 7 indicates natural gas storage levels in Canada. The amount of gas in storage generally follows a seasonal pattern. In the summer, when natural gas demand is low, gas is injected into storage. Storage volumes peak in the fall. In winter, volumes are drawn down, reaching a low point in the spring.

Canadian natural gas storage inventories decreased 63 Bcf during the month of March 2008. Storage levels at the beginning April 2008 were 157 Bcf, 44% higher than the year prior.

Figure 8

Canadian Natural Gas Drilling



Source: Daily Oil Bulletin

Figure 8 depicts the number of natural gas well completions in Canada. There is a time-lag between drilling a gas well and starting production, due to the work necessary to connect the new well to the pipeline grid. Drilling is therefore a good indicator of future natural gas supply.

There were 902 natural gas wells drilled in April 2008, a decrease of 8% from April 2007.

Bibliography and Data Sources

1. *Crude Oil and Natural Gas (Preliminary),* Statistics Canada
2. *Natural Gas Transportation and Distribution, 55-002*, Statistics Canada
3. *Supply and Disposition of Crude Oil and Natural Gas, 26-006*, Statistics Canada
4. *Drilling Highlights*, Daily Oil Bulletin website: www.dailyoilbulletin.com
5. Canadian Natural Gas Focus, GLJ Energy Publications Inc.
6. *Natural Gas Storage Survey*, Canadian Enerdata Ltd.
7. *Natural Gas Export Statistics*, National Energy Board website: www.neb-one.gc.ca