

Northeast Natural Gas Winter Outlook

February 2012 Update

KEY POINTS

- *The natural gas supply situation is strong, with new system additions enhancing supply diversity in the Northeast. A secure supply balance and high storage levels are resulting in low commodity prices, which along with milder weather are contributing to lower heating bills this winter.*
- *Natural gas has consistent benefits in terms of deliverability, reliability, cost-effectiveness and environmental advantages.*
- *Natural gas utilities have programs in place to advise their customers on ways to help prepare for, and manage, their heating bills this winter. These include budget billing, efficiency and conservations tips, and advice on eligibility for energy assistance funds for low-income customers and others.*

Strong Supply Situation Leading to Stable Winter Outlook

The natural gas supply situation for the U.S. and the Northeast is stable and secure. Storage for the winter is at record high levels and U.S. production output remains robust, reducing commodity price pressure.

As a result, the commodity price for natural gas was low throughout 2011 and is resulting in projections for stable to lower heating bills this winter for customers. The biggest variable, as always, remains the winter weather. With milder winter weather experienced from November through January, demand has been lower, also supporting lower prices.

This paper by the Northeast Gas Association (NGA) outlines the recent market developments shaping natural gas costs, discusses what local natural gas utilities in the Northeast U.S. are doing to assist customers, and identifies some steps that customers can take to manage home heating bills.

Natural Gas Wholesale Prices Have Been Consistently Low This Year

A stability in commodity prices has characterized the U.S. natural gas wholesale market in recent years. As of February 6, the daily average commodity price nationally was \$2.41 per million Btu (MMBtu), compared to \$4.69 at the same point last year.¹ The U.S. Energy Information Administration (EIA) is projecting that the average natural gas commodity price for all of 2012 will be in the range of \$3.35 per MMBtu.²

Natural gas spot prices (Henry Hub)



Source:
U.S. EIA,
2-2-12

eia Source: Natural Gas Intelligence

Lower Heating Bills Projected for Customers This Winter

It is still early to predict the final impact on customer bills for natural gas home heating this coming winter, but the bills are projected to be lower (depending on weather impacts on consumption levels). EIA is projecting that average expenditures for homes in the Northeast with natural gas this winter will be 13% lower this year compared to last.³ In its winter outlook, the American Gas Association (AGA) stated that consumers should expect "reliable and stable prices" this winter.⁴

The local gas utilities work throughout the year to purchase a reliable, diverse and cost-effective supply of natural gas in advance of the winter heating season.

U.S.—and Northeast—Natural Gas Production on the Rise

In terms of U.S. supply reserves, the news is positive: an era of abundant supplies appears to have arrived, led by recent shale gas developments, starting in Texas and now in the Appalachia region as well. The Northeast U.S., long accustomed to being "at the end of the pipeline," now finds itself located next to - and indeed on top of - one of the largest natural gas basins in the U.S.

Advances in drilling technology, such as horizontal drilling and hydraulic fracturing, have enabled

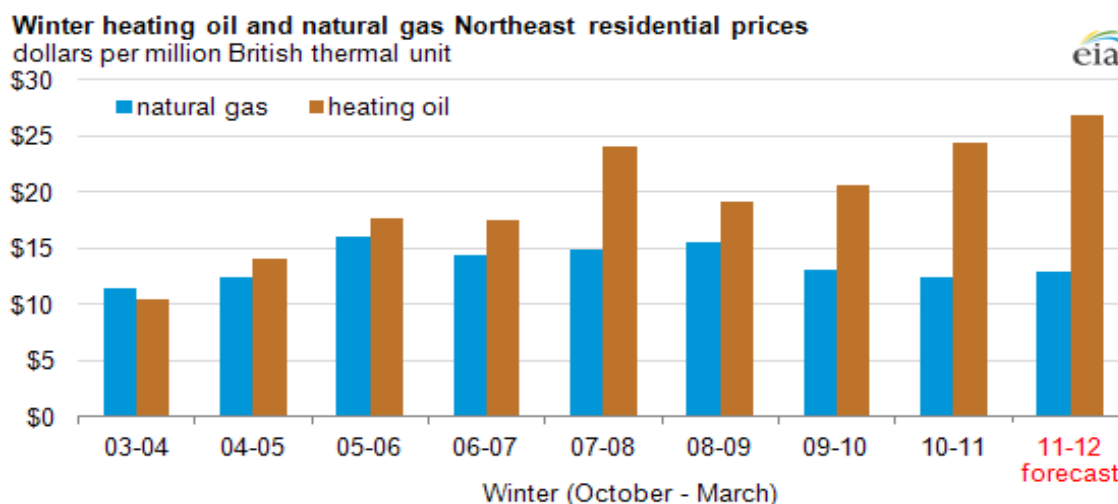
natural gas producers to begin tapping the U.S. shale gas resource in a significant way. U.S. EIA reported in February that "total marketed production grew by an estimated 4.8 Bcf/d (7.8 percent) in 2011, the largest year-over-year volumetric increase in history. This strong growth was driven in large part by increases in shale gas production."⁵

These new supplies are having a positive impact, resulting in lower commodity prices.

Converting to Natural Gas from Other Fuels is a Positive Option

While natural gas is the leading home heating fuel in the U.S. as a whole, it still has room to grow in the Northeast U.S. In New England for instance, natural gas heats only about one-third of all homes in the six-state region. Prices of all fuels can vary and fluctuate over time, but the consistent benefits of natural gas are leading numerous homeowners and businesses to appreciate the value of natural gas systems. These benefits include reliability, ease of delivery, cleanliness, lower environmental impacts (over 30% less CO₂ emissions compared to oil), and cost-effectiveness. The spot price of natural gas compared to that of oil shows a widening divergence—natural gas is about 1/4th the price of oil.

Conversions and new installations continue onto the system, particularly in light of the lower cost of natural gas compared to other heating fuels.



This graphic from the U.S. Energy Information Administration (EIA) compares the residential prices of natural gas (blue) and heating oil (orange) in recent years. Natural gas is well below oil in recent years, and forecast to be much lower again this winter. Source: EIA, October 12, 2011.

Natural gas bills are projected to be over 40% lower than heating oil this winter. Natural gas prices have been consistently below heating oil in recent years, and the outlook for this winter is for gas to continue to be the lowest heating fuel option (see chart on previous page).

Multiple Factors Impact Natural Gas Prices

What are the factors that go into the price of natural gas?

The American Gas Association (AGA) summarized it concisely: "The price paid for natural gas by consumers depends on the price of the gas commodity itself, and the cost of transporting that gas from production areas to customers."⁶

There are many factors that can affect the market price of natural gas:

- Seasonal natural gas demand
- Weather
- Gas storage levels
- Alternative fuel prices
- Producer economics
- Market structure
- Pipeline capacity and costs
- Futures markets
- Market psychology.⁷

The Weather Remains a Key Factor in Supply & Price Fluctuations

Perhaps the greatest factor in determining the ultimate supply and price dynamic remains the weather.

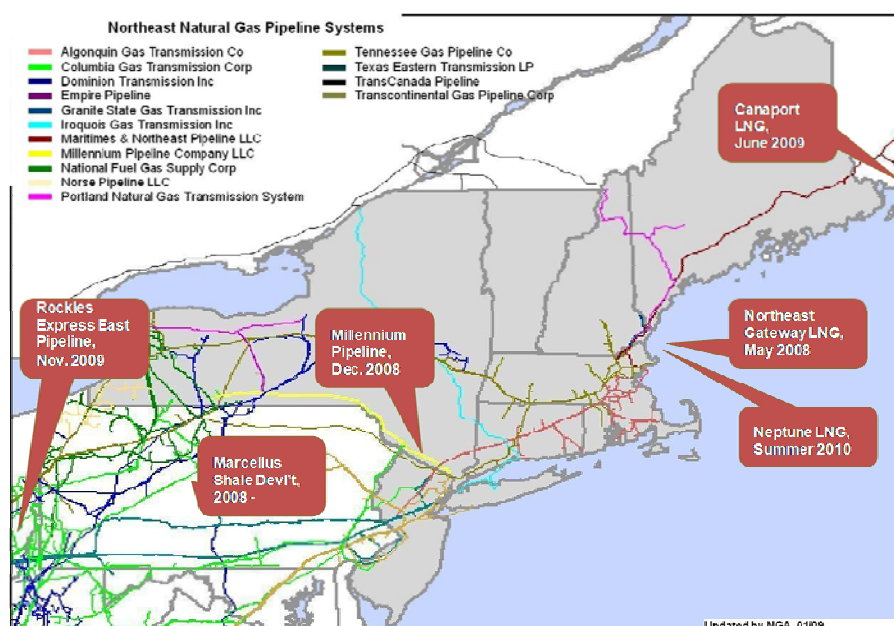
How cold the winter is determines to a great extent how volatile the price for the natural gas commodity might be over time. In its October 2007 winter outlook, the Natural Gas Supply Association observed: "Weather is the largest single factor affecting natural gas demand and customer bills, and it is also the most difficult to predict."

That remains true today, as the weather can have a major impact, generally short-term, on local demand and supply points.

Recent Growth in Pipeline Capability, and Enhanced LNG Links

In recent years, the Northeast region has made substantial additions to its supply and delivery network. These additions have considerably enhanced supply diversity and system reliability. LNG storage has been enhanced with the addition of the Canaport facility in New Brunswick.

The map below illustrates some of the additions. Numerous other infrastructure enhancements are under development in the region, especially to bring fast-growing Appalachian production to regional markets.



This map illustrates the interstate natural gas pipeline system in the Northeast. These pipelines deliver gas supplies to the local gas utilities, who in turn service local customers, from homes to businesses. The pipelines deliver gas from multiple supply points: Gulf Coast, mid-continent, Appalachia, Canada and LNG. In the past few years, new supply enhancements in the region—indicated by the boxes—have greatly expanded the region's supply portfolio.

Utility Bill Components

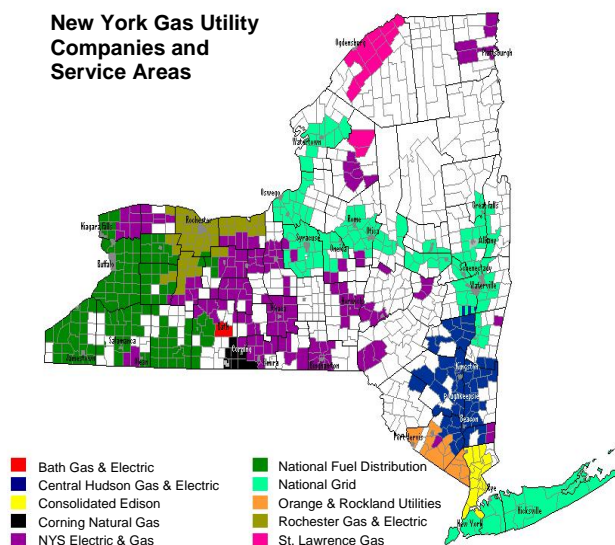
The price of the natural gas commodity at the wellhead makes up generally the largest share of the total price a residential customer pays. Other costs include commodity costs of other supply sources, interstate pipeline capacity (or transpor-

- State regulation of gas cost recovery generally tends to spread out short-term increases or decreases over time.

The U.S. EIA has noted:

"Residential customers see less [price] variation because their bills reflect monthly average prices, which do not fluctuate as much as daily prices. Also, many residential customers stabilize their monthly bills by participating in yearly budget plans provided by their local gas distribution companies."⁹

New York Gas Utility Companies and Service Areas



tation) costs and charges for the LDCs' transportation service.

The gas utility, or LDC, passes on the actual commodity cost to customers; the LDC does not make any margin from the purchasing of the gas commodity and reselling it to retail customers. It is a direct pass-through, subject to regulatory oversight. The residential customer's bill is regulated by the state public utility/public service commission (PUC, PSC, DPU or BPU).

The American Gas Association (AGA) states: "Changes in the prices paid by utilities for gas, whether based on fuel prices, the spot market, or the comparative price of other fuels, do not have an immediate impact on residential gas customers because of the structure of regulation and the industry. This is true for several reasons"⁸:

- Utilities' gas supply portfolios are diversified among spot purchases, long-term contract gas, storage gas, peak-shaving gas and other sources;

State Regulatory Oversight and Coordination Contributes to Customer Protection

State public service / public utility commissions have oversight over the distribution costs of natural gas utilities. Utilities submit cost of gas adjustments to the commissions during the year as appropriate, to reflect different seasonal costs of the gas commodity. If the cost of gas itself rises or falls over a given period, that variation is reflected in the cost of gas adjustment provision. State oversight provides an additional measure of consumer protection.

Steps for Customers on Ways to Prepare to Manage Winter Heating Bills

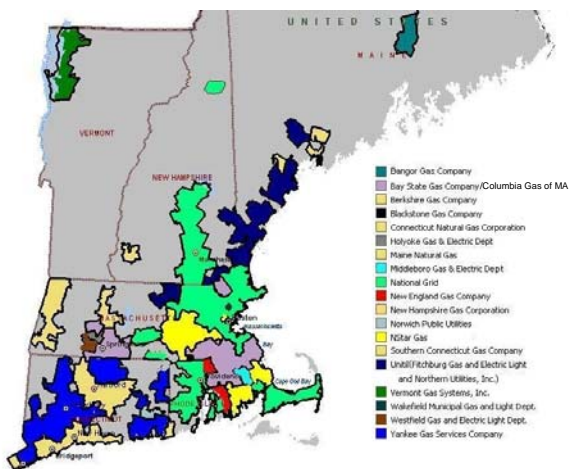
There are steps that customers can take to manage their energy bills.

Customers are encouraged to contact their local gas utility for suggestions on budget-billing and bill payment plans. A budget-billing option allows

There are steps that customers can take today to help manage their energy bills. Contact your local gas utility for suggestions on:

- Budget billing;
- Efficiency and conservation tips;
- Eligibility for low-income assistance.

Look on NGA's web site for links to the gas utilities in the region—www.northeastgas.org.



New England Gas Utility Companies and Service Areas

customers to equalize monthly payments. For example, a customer's annual bill can be estimated based on past energy use and then divided into equal monthly payments. The local utilities also offer tips and have programs in place to help customers reduce their bill through energy-efficiency and conservation measures.

Energy bills are a particular concern for lower-income citizens, who are the most vulnerable to energy costs. They are encouraged to contact their utility to find out how to apply for state and federal energy assistance programs. In addition, many social service agencies and charitable organizations accept energy assistance applications for the winter heating season. A list of providers can be obtained by contacting your local utility.

Importance of Low-Income Home Energy Assistance Program (LIHEAP)

The Low-Income Home Energy Assistance Program – or LIHEAP – has been particularly important to the Northeast region. LIHEAP remains essential, particularly in this difficult economic and jobs climate. The federal appropriation level for the current fiscal year unfortunately fell below the funding of previous years.

Value of Energy Efficiency

Energy efficiency remains a cornerstone of energy policy in the region. Utilities have made considerable investments over the years in offering their customers more efficient equipment and technologies. And efficiency gains have been

achieved. AGA notes that average natural gas use per residential customer has declined by about one-third since 1980.

These gains have been achieved through enhanced appliance efficiency and more energy efficient home construction.

The Northeast states remain at the forefront of state energy efficiency investments and achievements. The benefits are multiple—in terms of helping the environment... and helping consumers manage their energy budgets.

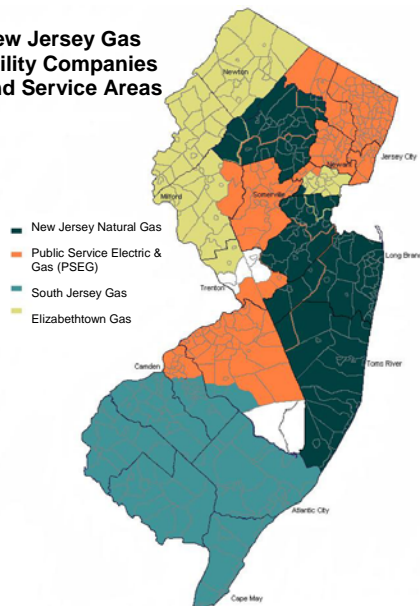
A Word About Transportation Contract Arrangements and the Power Sector

In reviewing winter gas supply, it is important to remember the distinction between "firm" and "non-firm" gas supply transportation contract arrangements, especially as it relates to the power generation sector.

Natural gas is provided under contract terms between a supplier and a customer. The contract terms are considered "firm" or "non-firm"/"interruptible." **Service to residential customers, for example, is firm.**

Larger commercial or industrial customers, such as a power generator, on the other hand, have the option of contracting for either firm or

New Jersey Gas Utility Companies and Service Areas



interruptible transportation service, or buying gas delivered at their facility from a third-party that holds the transportation capacity.

Interruptible transportation service includes in its contract terms the possibility of interruption under certain operational and market conditions. Those customers who elect to take interruptible service in any form often have alternative fuel capability for their operation.

The availability of natural gas for non-firm service customers, such as some industrial and power generation load, will depend upon system conditions and weather. Any interruptions in delivery would be similar to those anticipated by industrial and power generation customers who incorporate the expectation of interruptions in their gas supply and transportation contracts. Such interruptions have been a normal occurrence during peak winter periods. Capacity can be provided for customers willing to sign up for it.

In its "Winter Market Assessment" released in October, the U.S. Federal Energy Regulatory Commission (FERC) noted that the Northeast region can still experience "localized pipeline constraints ...during extreme cold weather periods, as growing gas power generation adds to peak gas demand for space heating."¹⁰ This can result in short-term price spikes of particular impact to the electric power sector where natural gas represents a large percent of the generation fleet. The FERC notes that "this year the markets seem to be accounting for the possibility of similar spikes, but overall, forward prices remain at moderate levels."

New pipeline projects are in development to relieve constraints in the region. At the same time, customers (including the electric power sector) have had the option to contract firm transportation.

Safety

Safety is the industry priority. Be sure to have your heating systems maintained annually. Look for the "Gas Safety Public Awareness" link on the NGA web site for general safety information.



NGA will update this paper periodically to help keep natural gas customers in the region updated on key developments. On the next page are a series of sources for further information on efficiency tips and customer heating assistance.

FURTHER INFORMATION ON EFFICIENCY TIPS & CUSTOMER ASSISTANCE PROGRAMS

For further information, contact the following organizations, or visit their web sites.

Local Distribution Companies:

Contact your local natural gas utility by linking through the NGA web site. From www.northeastgas.org, go to the "Member Companies" link, and select the hyperlink to your local natural gas utility. The utility sites have information on specific programs that the companies offer, as well as, in many cases, links to other energy assistance agencies in their service areas.

Northeast Gas Association

The Northeast Gas Association represents the local natural gas utilities that serve customers in the six New England states, New York, and New Jersey. Visit www.northeastgas.org.

American Gas Association

The American Gas Association represents 201 local energy utility companies that deliver natural gas and serve customers in all 50 states. Visit www.aga.org.

New York State Energy Research and Development Authority (NYSERDA)

The New York State Energy Research and Development Authority (NYSERDA) has extensive information on energy efficiency and "smart energy" tips. Visit www.nyserda.ny.gov

National Energy Assistance Directors' Association

The National Energy Assistance Directors' Association (NEADA) is the primary educational and policy organization for the state and tribal directors of the Low-Income Home Energy Assistance Program (LIHEAP). LIHEAP is a federal program providing formula grants to states to help low-income families pay their heating and cooling bills. Its site is: www.neada.org

GasNetworks

Several natural gas utilities in the region have formed a collaborative that promotes natural gas energy efficiency and provides information to customers on energy-efficient equipment. The information is located at: www.gasnetworks.com.

U.S. Department of Energy (DOE)

The U.S. Department of Energy has a helpful web link providing energy-saving tips for homeowners and others. The information is located at: www.energysavers.gov.

U.S. Energy Information Administration (EIA)

The EIA is the statistical agency of the U.S. Department of Energy. Publications of particular interest include its "Short-Term Energy Outlook," updated monthly, and its weekly "Natural Gas Market Update." Its site is located at: www.eia.gov.

End-Notes:

1. U.S. Department of Energy, "Energy Assurance Daily," February 6, 2012, p. 3
2. U.S. Energy Information Administration (EIA), "Short-Term Energy Outlook," February 7, 2012
3. Ibid
4. American Gas Association (AGA), October 11, 2011
5. U.S. Energy Information Administration (EIA), "Short-Term Energy Outlook," February 7, 2012
6. AGA, "Natural Gas Price Trends," June 19, 2000
7. Gas Research Institute (now Gas Technology Institute (GTI)), "Short Term Gas Prices: How the Market Adjusts to Changing Fundamentals," July 1998
8. AGA, "Natural Gas Price Trends," June 19, 2000
9. EIA, "Why Do Natural Gas Prices Fluctuate So Much?," 1998
10. U.S. Federal Energy Regulatory Commission, "Winter 2011-12 Energy Market Assessment," October 20, 2011