

**TESTIMONY OF
CHRISTOPHER A. HELMS
PRESIDENT, PIPELINE GROUP
NISOURCE INC.**

**ON BEHALF OF THE
INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA**

**BEFORE THE
COMMITTEE ON ENERGY AND NATURAL RESOURCES
UNITED STATES SENATE**

**REGARDING
HURRICANES KATRINA AND RITA'S EFFECTS ON ENERGY
INFRASTRUCTURE AND THE STATUS OF RECOVERY EFFORTS IN THE
GULF COAST REGION**

OCTOBER 6, 2005

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to testify on this important topic. My name is Chris Helms, and I am President of the Nisource Inc. Pipeline Group. NiSource Inc. is a fully integrated energy company engaged in natural gas transmission, storage and distribution, as well as electric generation, transmission and distribution. Our operating companies deliver energy to 3.7 million customers located within the high demand energy corridor that runs from the Gulf Coast through the Midwest to New England. One of our pipelines, the Columbia Gulf Transmission Pipeline, operates in the central Gulf of Mexico and brings natural gas on-shore in central Louisiana.

I am here today on behalf of the Interstate Natural Gas Association of America (INGAA). INGAA is a trade organization that represents virtually all of the interstate natural gas transmission pipeline companies operating in the U.S., as well as comparable companies in Canada and Mexico. Its members transport over 95 percent of the nation's natural gas through a network of 180,000 miles of pipelines. Many of these pipeline systems operate in the Gulf region – either off-shore or along the coastal area that includes Texas, Louisiana, Mississippi and Alabama.

Before discussing the recent hurricanes and their effects on our industry, I first want to make a few points about the structure of the natural gas industry. The natural gas industry has never been as vertically integrated as the oil and electric power industries. Put differently, it is the exception and not the rule for a single company to be significantly involved in all segments of the industry. These segments can generally be broken down into the following categories: production, gathering and processing (also known as midstream services), interstate pipelines, marketing, and local distribution. Some of these segments are subject to economic (i.e., rate) regulation at the federal or state level, while others are not subject to any rate regulation.

INGAA represents the interstate pipeline segment, which is regulated economically by the Federal Energy Regulatory Commission (FERC). As part of the natural gas industry restructuring that occurred during the 1980s and early 1990s, the interstate pipeline industry gave up its merchant role as the provider of bundled wholesale natural gas services. Under the current industry structure, interstate pipelines transport and store natural gas, but do not produce, purchase or sell the commodity itself. We are analogous to a trucking company that provides both transportation and warehousing services for goods, but does not take title to the goods themselves. The maximum rate an interstate pipeline may charge for transportation and storage is set on a pipeline-by-pipeline basis by the FERC, based upon the costs incurred by that pipeline to provide those services.

Despite the disaggregated structure of the natural gas industry, significant interdependencies remain. This is especially true for off-shore production in the Gulf. Generally speaking, the chain of delivery is as follows: Natural gas is first produced at off-shore platform or wellhead facilities; it is then gathered and transported through smaller diameter gathering pipelines for redelivery to FERC-regulated transmission pipelines for transportation to onshore processing plants. There, the natural gas is

processed to remove hydrocarbon liquids, such as propane and ethane. Those liquids must be transported, via dedicated pipeline, barge or truck, to markets for those products, such as refineries and petrochemical facilities. Once the liquids are removed, the natural gas is fit for consumption and is delivered into the interstate pipeline network where it is transported to end-use customers. All of these systems must work together in order for natural gas to flow onshore, and from there to the millions of customers downstream. If any link in this delivery chain is disrupted, the remaining links in the chain will be affected in some way.

I point this out to emphasize that Hurricanes Katrina and Rita have highlighted these interdependencies. Links in the delivery chain have sustained major damage. In cases where multiple links have been damaged, we cannot repair just a single link and expect natural gas supplies to return to pre-hurricane levels. All of the links must be working in order to achieve that result.

Mr. Chairman, I think it is safe to say that two major hurricanes striking back-to-back at the heart of our nation's energy system have caused an unprecedented disruption in our Gulf-based natural gas infrastructure. As many of you know, the federal waters in the Gulf of Mexico account for about 10 billion cubic feet (bcf) per day of natural gas production, which is about 20 percent of total U.S. demand. As of early this week, about 72 percent of this daily production, about 7.5 bcf per day, remained "shut-in" due to the storms. To place this number in some perspective, the United States typically consumes on average 54 bcf per day nationwide. Given the tight supply/demand situation we were already facing before the hurricanes, this loss of supply – even temporarily – is cause for concern as we approach the winter heating season.

The media, and indeed most Americans, have focused on how the twin hurricanes have affected the price and supply of gasoline. Gulf Coast oil production and refineries are a critical part of the nation's infrastructure for obtaining supplies of gasoline, jet fuel and fuel oil. Nonetheless, the United States imports almost 60 percent of our petroleum supplies from overseas. This means that a short-term increase in imports can mitigate some portion of the impact of the hurricanes on petroleum supplies. However, when it comes to natural gas, the United States still produces 85 percent of the total supplies needed to meet domestic demand, while most of the remaining supply needed to meet demand comes from Canada. Our ability to import natural gas from outside North America is far more limited than with petroleum, given the limited number (5) of operational liquefied natural gas (LNG) import terminals in the U.S. Therefore, even as the country continues to be focused on gasoline prices, we believe the hurricanes will have a greater and more protracted impact on natural gas prices and supplies.

I also want to challenge the notion that Hurricane Rita produced far less damage to energy infrastructure than did Hurricane Katrina. While this might be true with respect to the oil refinery complex in the Gulf region, it is not the case with natural gas. In fact, for operations in the Western Gulf including my company's pipeline, the Columbia Gulf Transmission Pipeline, Rita had more impact than Katrina. For example, our Blue Water header pipeline was able to redirect some natural gas produced in the central Gulf that

was not able to reach the shore due to damage from Katrina. This worked well for a few weeks, but Rita subsequently damaged the Blue Water header, which only compounded the difficulties associated with bringing more gas production back on line. The “one-two punch” nature of these storms means that repairs will take longer than normal, because the limited manpower and equipment resources for assessing damage and making repairs are being stretched far beyond normal capacity. Damage sustained during Rita that, for example, normally might take a week or two to repair is taking much longer, due to the limited availability of crews, boats and equipment that were already working on Katrina-related damage.

I want to assure the Committee that we are doing all we can. The dedication of our employees, in the face of losing their homes and possessions and having their families uprooted, has been phenomenal. Across the industry, people are showing up to work long hours even as they have no place to go home to. Finding temporary housing within the region so our employees can continue to repair critical energy facilities is crucial to speeding the pace at which natural gas supplies in the Gulf can be brought back online.

Let me now turn to our outlook for the winter heating season. While assessments are continuing, there can be no doubt that, compared to last winter, there will be less natural gas delivered from the Gulf of Mexico region this winter. The damage is too widespread, and the amount of repair work too great, for everything to be made right within a month or two. The fundamentals of supply and demand in the North American natural gas market already were tight before hurricanes Katrina and Rita. Consequently, any loss of supply – even a relatively small one – can have a disproportionate impact on natural gas prices over the winter. All of this puts an extra emphasis on natural gas storage levels.

While it is largely invisible to the public, the United States has a significant amount of natural gas storage scattered throughout the country. These storage facilities, typically located in depleted oil and gas fields, are usually filled during the warmer months of the year when there is excess natural gas supply and pipeline capacity to move it. Storage fills are generally completed by November 1, which is the beginning of the winter heating season. During the coldest winter days which typically are the days of peak natural gas demand, storage withdrawals can meet more than 50 percent of the daily natural gas load.

Prior to the hurricanes, storage fills were proceeding at total volumes above the five year average. The hurricanes have slowed storage fills somewhat, but volumes still remain ahead of the five-year average.

Still, storage is a supplement to – not a replacement for – natural gas flowing through the interstate pipeline network. Many of the pipelines serving the Midwest, Northeast and Southeast draw their primary supplies from the Gulf region. If pipelines are not flowing their full volumes of natural gas, and the winter is normal to colder-than-normal, greater volumes of natural gas are likely to be withdrawn from storage earlier in the winter season than is the norm. Should this occur, storage would be depleted more quickly and there could be an even greater dependence on flowing pipeline gas to make up the

difference. This could create significant operational challenges for pipelines in late winter, particularly if cold weather, limited supply availability, and low storage drive customers to attempt to take more natural gas off a given pipeline than is available

I should also mention the importance of returning damaged natural gas processing facilities to service. As mentioned previously, natural gas processing plants remove the heavier hydrocarbons entrained within produced natural gas. These “natural gas liquids” include propane, ethane and butane. Once removed, there is a separate market for these liquids, principally in the petrochemical industry. Just as with oil refineries in the Gulf region, however, a number of natural gas processing plants were damaged by the hurricanes. Several of these facilities may be out of operation during most, if not all, of the winter.

This presents another operational challenge for pipelines. A certain amount of unprocessed natural gas can be accepted into the natural gas pipeline network. If the quantity of heavier hydrocarbons in the gas stream becomes too high, these substances can “drop out” of the natural gas stream as liquids and collect in pipelines and end-use equipment. This is a particular concern during the winter heating season when the lower ambient temperatures cause the temperature of the flowing gas to drop, increasing the amount of heavy hydrocarbons that will convert to liquids. This phenomenon can cause safety and operational problems as slugs of liquids work their way through sensitive equipment. Therefore, as off-shore production facilities come back on line, it is also important to bring corresponding processing capacity back on line as well; otherwise, pipelines may be compelled to limit the volumes of unprocessed natural gas that can be accepted during the winter heating season in order to preserve the operational integrity of the transmission and distribution pipelines and in order to protect end-users.

How high will natural gas prices go this winter? While a number of factors will affect the answer to this question, the most important factor is completely outside of our control. It is the weather. The single most significant factor in determining natural gas demand, and therefore prices, will be the weather. Peak winter demand is driven by space heating needs. If it is a mild winter, there will be less demand for natural gas and prices will almost certainly moderate, even with the effect of the hurricanes. Conversely, if the winter is normal or colder-than-normal, then the supply disruptions caused by the hurricanes will be reflected in higher natural gas prices.

Another factor affecting the ultimate price level will be the rate at which demand is reduced in response to higher prices. Price allocates supply in a demand-constrained market. At what price will a consumer choose to conserve and reduce use of natural gas? The industrial sector is the most price sensitive consumer of natural gas; and at a certain price level, it can be anticipated that industrial gas consumers will choose either to curtail production or to switch to an alternative fuel rather than purchase natural gas. The market clearing price for natural gas will be driven by how much a customer is willing to pay for the last molecule of natural gas available. My colleague from Dow Chemical, who is already facing some of these challenges, can explain this better than any of the other witnesses at the table today.

For most residential and commercial consumers the price paid for natural gas this winter will depend on the purchasing strategy employed by the local natural gas distribution company (LDC) that serves their community. For example, to what degree has the LDC hedged the price of its natural gas purchases using either long-term purchase contracts or financial instruments? How much natural gas does the LDC have in storage, and at what price was that gas purchased before it was placed into storage? The price paid by the average consumer will be a blended price, taking into account these factors, and not just the spot price for natural gas on a given day.

The ripple effects of higher natural gas prices will be felt across the economy. All of us expect to pay more for natural gas this winter to heat homes and businesses. Electricity prices also will be affected, particularly in regions where gas-fired power plants make up a significant part of the generating fleet. And, as I mentioned, higher natural gas prices will affect the cost of manufactured products.

What can be done? The short-term imperative is repairing the infrastructure as quickly as possible. That means expediting permitting and approvals for repair work. It also means the various levels of government should consider the value of granting individual companies some forbearance from legal restrictions that might frustrate their ability to coordinate assessment and repair activities. The twin hurricanes have resulted in extraordinary damage, and extraordinary measures are needed to get systems repaired on a timely basis.

Also in the short-term, both the energy industry and the government must educate consumers in advance so they are prepared for higher bills and have the ability to implement strategies for conserving energy. This is important, because unlike the gasoline price that is posted at the local gas station, the consumer sees the price of natural gas after the fact when he or she receives a bill for the previous month's consumption. Many of you are already familiar with some of these measures, including weatherization of homes, regular inspections of furnaces and changing of filters, installing programmable thermostats and setting them a couple of degrees cooler. The funding of the Low Income Heating Energy Assistance (LIHEAP) program is also critical in helping needy families cope with rising heating costs.

In the long-term, Mr. Chairman, we agree that more needs to be done to diversify our supplies of natural gas. Katrina and Rita have clearly demonstrated the high degree of our reliance as a nation on the Gulf region to supply our energy needs. Other regions of the country can and should be a part of our overall energy resource development. Yes, many groups have complained about the environmental risks associated with expanding offshore energy to include waters outside the western Gulf of Mexico. After three significant hurricanes in two years, it is time to concede that apprehensions about the environmental consequences of offshore energy development are greatly overstated. The fact that we have not had significant environmental incidents after Ivan, Katrina and Rita must stand for something! Our national energy policy should not be premised on hypothetical problems or on assumptions based on incidents from 40 years ago.

In addition, the United States will need to build new liquefied natural gas import terminals to keep pace with our demand for this fuel. Most of the new terminals that have been approved by the FERC in recent years have been located in the Gulf of Mexico. There are good reasons why the Gulf is attractive, such as access to an extensive pipeline network, but it is also true that the Gulf has been the “path of least resistance” in terms of NIMBY-type opposition. Perhaps the hurricanes, and the effects this winter on natural gas prices and the larger economy, will finally convince other regions of the country of the importance of having a geographically diverse mix of these facilities.

Finally, it is worth examining the factors that have precluded electric generators from installing dual-fuel capability when building a gas-fired power plant. Over the last decade, dual-fueled facilities – facilities that can operate on both natural gas and fuel oil – have been discouraged by emissions limits and by the difficulty in siting oil storage facilities on site. Also, the rules in some electric power markets provide such generators no assurances that the additional capital cost of such facilities can be recovered in the price received for electricity. These factors have compelled developers to build power plants totally dependent on natural gas. Should natural gas supplies remain tight this winter, these facilities will face the choice of either paying huge fuel charges, or not running at all.

Before I conclude, I want to suggest some responses that should not be undertaken. During times of crisis, it is easy to overreact in ways that are ultimately counterproductive. The first suggestion I would like to leave you with is this: please do not try to regulate commodity prices. This country actually did regulate natural gas prices for many years, resulting in artificial supply shortages and a misallocation of resources. Similarly, the government should not attempt to pick winners and losers in allocating scarce supplies among end-users. Some debate has surrounded the notion of limiting the use of natural gas for generation. Mr. Chairman, you and Senator Bingaman were present when Congress debated the deregulation of wellhead natural gas prices and the Fuel Use Act, so you remember the problems that existed at the time. While it can be painful in the short run, the market really does the best job of efficiently allocating scarce resources and sending the right price signals that will solve supply problems.

Mr. Chairman and Member of the Committee, I thank you once again for the opportunity to testify, and I will be happy to answer your questions.