Winter 2012-13
Energy Market Assessment

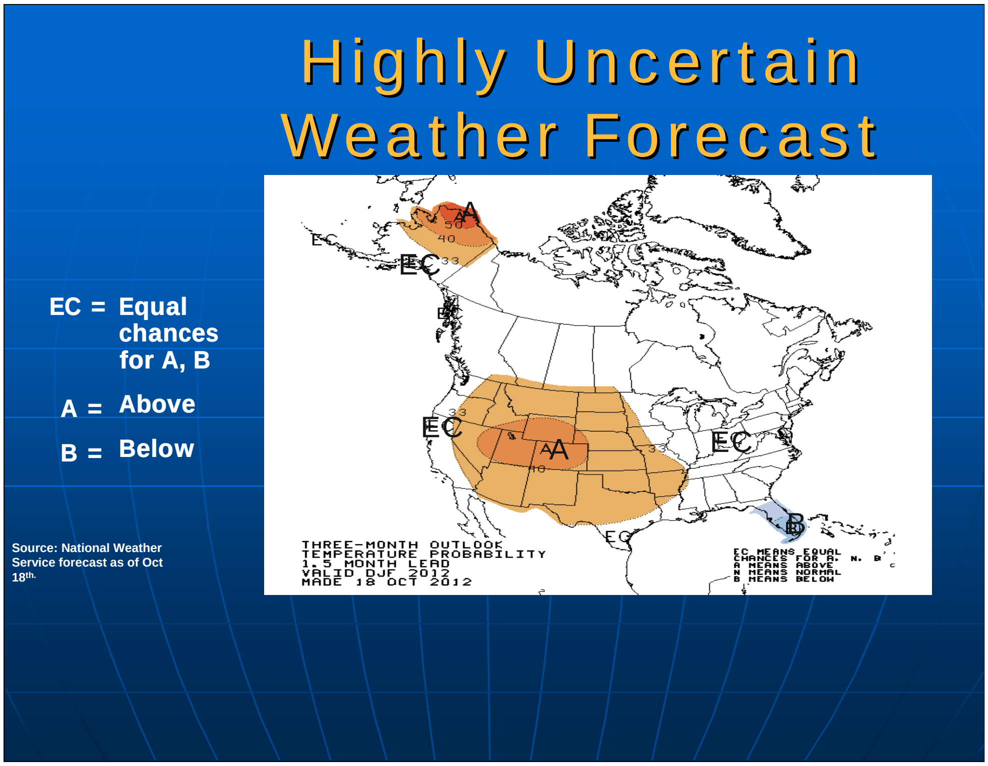
Item No. A-3

November 15, 2012

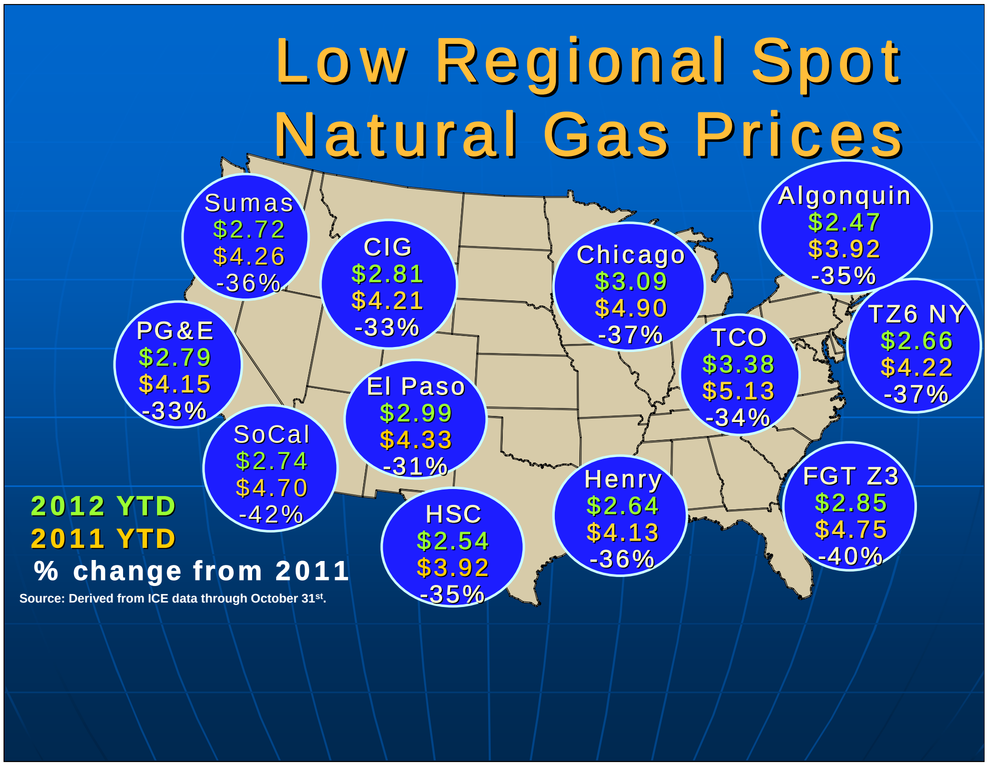
Good morning Mr. Chairman and Commissioners. Today we are pleased to present the Office of Enforcement's Winter 2012-2013 Energy Market Assessment. The Winter Assessment is staff's opportunity to look ahead to the coming season and share our thoughts and expectations.

At this point, conditions going into the winter appear favorable. Current natural gas prices and winter forwards are the lowest we have seen in ten years. The U.S. natural gas market is well supplied, with production at almost forty-year highs and inventories approaching last year's record. This should help keep natural gas prices relatively low into the winter assuming normal winter weather, and also help moderate electric prices. Low natural gas prices for most of 2012 resulted in high usage of natural gas to generate electricity, and staff expects power burn to remain high into the winter. High power burn, coupled with high seasonal natural gas demand from residential and commercial customers, could lead to higher than usual winter peak demand. This may in turn cause congestion on some pipelines in the Northeast which could lead to higher than expected prices.

In this year's Winter Assessment we will take a slightly different approach from past formats by expanding our assessment to the New England market, which could see elevated prices if we experience a colder than normal winter or extended cold spells.



In the last month, the National Weather Service (NWS) temperature outlook for the coming winter changed dramatically. Previous forecasts indicated there was a high likelihood of above normal temperatures in the Northeast, from Maine to Tennessee and northwest to Montana and normal to below normal temperatures in the South. This was typical of an El Nino winter forecast. A key variable in predicting winter weather is the occurrence of an El Nino - a warming of the water in the Pacific Ocean that generally brings wet winter weather to the south and warmer than normal temperatures to the northern tier of the country. However, over the last month, Pacific Ocean water temperatures have cooled considerably leading NWS forecasters to discount completely the possibility of an El Nino this winter. One result is the likelihood of colder weather in the Northeast. Another forecaster, Accuweather, calls for a wetter and possibly snowy winter for the Eastern Seaboard based on a weak to non-existent El Nino. In fact, the first winter storm hit the Northeast last week, bringing cold weather and snow and gas prices in New England doubled to nearly $8/MMBtu. This followed Hurricane Sandy, which knocked out power to millions of customers in the Northeast and damaged local distribution gas lines on the New Jersey shore.



This slide shows that year-to-date, natural gas prices throughout the U.S. are nearly half what they were in 2011. Through the end of October, the Henry Hub natural gas price averaged $2.64/MMBtu, 36% lower than last year. The decline can be attributed to plentiful natural gas supply, high storage levels, and last year's mild winter. Inflation adjusted natural gas prices haven't been this low since the early 1990's, when natural gas prices were deregulated. During much of 2012, regional gas prices traded in a tight range of $2/MMBtu in the Gulf Coast and the Rockies to $3.50/MMBtu in the Northeast. The highest prices are in New England, New York, and Florida due to growing natural gas demand and pipeline bottlenecks. The San Onofre nuclear outage in Southern California has resulted in the dispatch of more natural gas-fired generation and has elevated prices in the region. Staff expects regional gas prices to remain in this tight range through the winter, although there could be occasional regional price spikes due to cold weather events or pipeline outages.

Forward Prices Decline Across U.S.

Location	2013 ^	2012*	
Massachusetts Hub	$67.08	$73.25	Power
PJM Western Hub	$47.88	$55.25	
Northwest (Mid C)	$35.25	$33.10	
Southern California (SP-15)	$43.43	$37.65	
Transco Zone 6 NY	$6.59	$8.96	Gas
Mid-Atlantic (Columbia TCO)	$3.78	$4.19	
Southern California Border	$3.88	$4.11	
Henry Hub	$3.77	$4.13	

Source: Derived from ICE data through October 1st.

Note: Units for Power are $/MWh and units for Gas are $/MMBtu

^January and February 2013

*January and February 2012

This table shows forward power and gas prices for key regional markets. Regional forward gas prices are the sum of the Henry Hub forward price plus the forward basis. Basis is a measure of regional price differences. Forward prices are a tool for consumers and producers to lock in winter prices to hedge against price volatility. They do not forecast winter spot prices and in general are not a good predictor of actual winter prices.

Based on forward prices from October 1, 2012, a marketer could lock in a price at the Henry Hub for January and February at a 10-year low of $3.77/MMBtu, 10% below the forward strip this time last year. Consumers in the Northeast can lock in much lower natural gas prices than last year. As of October, the winter forward basis was only $2.82/MMBtu in New York, nearly half of last year's values. Record storage and continued growth in Marcellus shale gas production contributed to the decline. This means that total forward prices in New York declined from $8.96/MMBtu last winter to $6.59/MMBtu for the upcoming winter.

Similarly, forward power prices for the winter are generally lower compared to last year. The Massachusetts Hub is 8% below last year's price, while PJM forwards are down 13%. The decline in power prices closely resembles the decline in natural gas prices because natural gas is typically the marginal, or the price setting fuel in these regions. In contrast, power forwards in the Northwest are 6% higher than last year due to lower than normal hydropower conditions and higher natural gas forward prices. In Southern California, the San Onofre nuclear plant outage has contributed to the rise in forward power prices there.

Total U.S. Natural Gas Supply Increases

Supply (Bcfd)	2012 YTD	2011 YTD	% Change
Dry Production	63.5	61.1	4%
Net LNG Send Out	0.40	0.80	-53%
Net Canadian Imports	5.40	5.70	-5%
Total Supply	69.30	67.60	3%
Storage Inventories (Tcf)	3.93	3.82	3%

Source: Derived from Bentek and EIA data through November 8th.

This slide shows U.S. natural gas supply, including production, imports, and the amount of natural gas in storage as of November 8th. Overall supply is up almost 3%, driven by a 4% increase in production. Most of the growth was in the Northeast, which grew by 3.1 Bcfd, or 63%, driven by strong growth in Marcellus shale gas production. However, the rate of growth in the rest of the country has slowed and dry natural gas production appears to have leveled off at around 63.5 Bcfd in 2012, but still the highest production since the early 1970s. Shale gas now accounts for at least 34% of total U.S. natural gas production, up from 23% in 2010.

Offsetting some of the increase in production, LNG imports are down 53% over 2011, while imports from Canada are down about 5%. US LNG imports continue to decline as US natural gas prices are well below world gas prices. For example, natural gas in the UK is four times more expensive than Henry Hub. Imports from Canada are down because Canadian gas is less competitive than new Marcellus gas in the Northeast and other shale and Rockies gas in Midwestern markets.

Storage is an important component of winter natural gas supply, and storage levels indicate the ability of the industry to meet peak winter demands. As of November 8th, 2012, U.S. working gas in storage set a new record at 3.92 Tcf. Storage withdrawals can contribute as much as 32% of U.S. gas supply on a peak winter day. The highest weekly storage withdrawal ever reported by the EIA is 274 Bcf (an average of 39 Bcfd), while the highest total U.S demand seen in a given winter day is 121 Bcf.

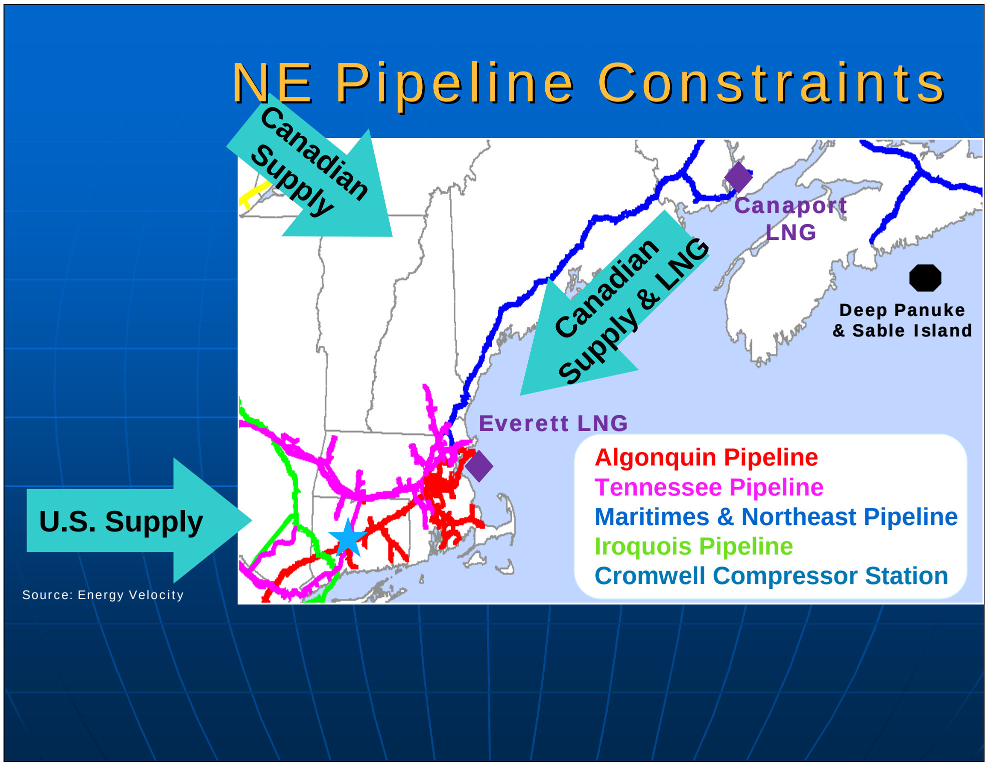
Power Burn Drives U.S. Natural Gas Consumption Higher

Demand (Bcfd)	2012 YTD	2011 YTD	% Change
Power Burn	26.00	21.40	22%
Industrial	18.10	18.10	0%
Residential/Commercial	19.30	22.20	-13%
Total Demand*	66.90	64.80	3%

Source: Derived from Bentek data though November 8th. *Includes pipeline loss

This slide shows the major components of U.S. natural gas demand. Year to date natural gas demand is up 2.1 Bcfd, nearly offsetting the increased supply mentioned earlier. This is a result of a 22% increase in natural gas burned by power generators primarily because of low prices. Residential and commercial demand is down 13% due to last year's warm winter. Weather will be a main driver of natural gas demand this winter, and we will see a recovery in residential and commercial natural gas demand if there is a normal winter.

I will now turn to Ryan Jett who will discuss the New England region.



As you are aware, FERC recently conducted a series of gas-electric coordination technical conferences, and staff is working on next steps for the Commission to consider. One of the regions highlighted in the conferences of particular concern was New England. Accordingly, we will focus on this market on the next two slides.

This map highlights New England natural gas supply options and pipeline constraint points. NOAA's current seasonal weather forecast for New England is highly uncertain. In the event of a colder than normal winter, or extended cold spells, New England could experience some tightening of supply. In particular, New England could see high winter power burn, which adds to winter peak demand from the non-power sectors. Combined with the likelihood of lower LNG imports compared to last year and high utilization of pipelines bringing Gulf Coast and Marcellus supply into the region, this could lead to price spikes.

Last winter, LNG imports contributed to 17% of total New England natural gas supply, and historically contributed 60% during peak winter days. New England has access to three LNG import facilities, two offshore and one in Boston harbor. The Neptune and Northeast Gateway terminals, located offshore Boston, are unlikely to see deliveries this winter because of low natural gas prices. These offshore LNG terminals were specifically put into service to help alleviate problems associated with regional pipeline capacity constraints. Imports into the third LNG terminal, Everett in Boston harbor, are down 30% year-to-date. However, Everett's operator expects to see adequate cargoes through the winter because they have long term supply contracts. This should ensure that the Mystic power plant units 8 and 9 receive enough gas to run throughout the winter, although sendout into the surrounding gas market may be less than previous years.

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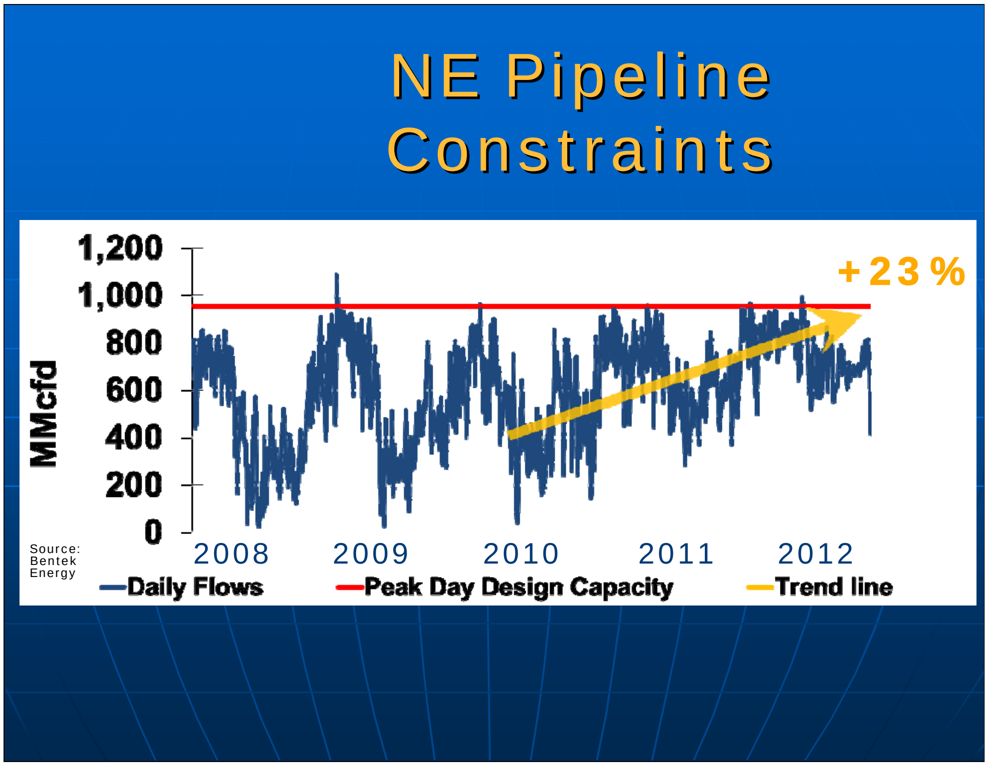
Another issue facing the region this winter is the steep decline in imports of LNG from the Canaport LNG terminal, down 49% from last year due to low U.S. gas prices compared to Europe and Asia. Also production from the Sable Island Offshore Energy Project is down 55% from last year. Production at Sable Island has been on the decline for several years and now supplies only 80 MMcfd on average into New England compared to 300 MMcfd in 2008. An additional source of supply could be the Deep Panuke Offshore Energy Project if it meets its scheduled in-service date of December 2012. Initially Deep Panuke is projected to sendout 150-200 MMcfd before ramping up to its full capacity of 300 MMcfd. However, Deep Panuke has already missed two scheduled in-service deadlines over the years, which introduces some uncertainty to the December in-service date.

In addition, the Northeast is a region with pronounced dual summer-winter peaks in electricity consumption, with the rise of winter peaks increasing total winter gas demand. These issues could contribute to increased spot gas prices in the region in the event of a colder than normal winter or extended cold spells.

On the next slide we will discuss the impact pipeline constraints could have in New England on supply and spot natural gas prices.



High utilization of pipelines into New England during winter can cause price volatility at regional trading hubs. Historically, when pipeline gas flows spike due to cold weather, the result has been that regional spot prices spike between $12-$14/MMBtu over the Henry Hub. Constraints can occur on both the Tennessee Gas Pipeline near Boston and along the Algonquin Transmission System. As an example, the graphic highlights flows versus peak design capacity through the Cromwell compressor station, one of the constraints along Algonquin located in central Connecticut. The red line is the peak day design capacity. The blue line represents the daily natural gas flows. The yellow line is the trend line showing that average flows have increased since late 2009. From the graphic you can see that the level of natural gas flows has grown over the past two years and last year, despite the very warm winter, gas flows frequently bumped up against capacity.

Constraints like this could result in price spikes for the system given that we have seen a 7% growth in demand from power generators in 2012. If we have a cold winter in New England, residential and commercial demand will increase along with power demand potentially causing instances where there is a sustained flow above peak design capacity. This may result in regional price volatility and tightness in supply, with a possibility of interruption to pipeline customers with interruptible service. The most vulnerable pipeline customers are power plants with interruptible contracts. However, many of these plants could switch to backup fuel supplies if needed. All indications are that LDCs have adequate firm transportation capacity to meet their expected needs. Also, although imports of Canadian gas from western Canada are down substantially this year, they could ramp up if needed.

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New England could experience some tightness and high prices in the event of extended cold periods. However, at the gas-electric coordination technical conferences pipelines and their customers stated that they are aware of the challenges facing the market and have begun to take some steps to improve reliability, for example stocking up on backup fuel and opening up communications between pipelines and their power customers.

This concludes the Winter 2012-2013 Energy Market Assessment, we are happy to answer any questions.