

Tioga Landowners News

Hometown News for Landowners in Tioga County, NY
www.tiogagaslease.org

Forth Edition

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Opening Remarks

Last newsletter we talked about regional gas development, local activities, and national trends. We ended the last newsletter with a discussion on the Natural Gas Act 2009 Bill HR 1835. This newsletter is dedicated to the important changes affecting our County, our State and our Country. Changes are underway which we need to focus on and encourage helping speed them to fruition. The first signs of change occurred earlier this year when the House of Representatives introduced Bill HR 1835 on April 1st which we talked about in a note on June 9th (also see June 15th Newsletter). As you may recall this bill requires 50% of all new vehicles purchased or placed in service by the U.S. government by December 31, 2014, to be capable of operating on compressed or liquefied natural gas. Further authorizes the Secretary of Energy to make grants to manufacturers of light and heavy duty natural gas vehicles for the development of engines that reduce emissions, improve performance and efficiency, and lower cost.

The Senate introduced their version companion bill to HR1835 on July 8th it is S1408. Billionaire oilman T. Boone Pickens has shelved his wind generation plan in Texas for two years and has given full financial support to the Natural Gas Act 2009.

On July 21st the House also approved [H.R. 1622](#), to provide for a program of research, development, and demonstration

on natural gas vehicles, by a vote of 393 to 35.

“This bill reauthorizes the Department of Energy’s research, development, and demonstration program in natural gas powered vehicles and related infrastructure,” said Committee on Science and Technology Chairman Bart Gordon (D-TN). “Since Natural Gas is both cleaner than petroleum and domestically available, it will likely play an important role in a more sustainable transportation sector.”

- Improvement in the reliability and efficiency of natural gas fueling station infrastructure;
- The certification of natural gas fueling station infrastructure to nationally recognized and industry safety standards;
- The improvement in the reliability and efficiency of on-board natural gas fuel storage systems;
- The certification of onboard natural gas fuel storage systems to nationally recognized and industry safety standards;
- The use of natural gas engines in hybrid vehicles; and researching and developing technologies and processes.
- Developing technologies and processes so as to improve and streamline the process by which natural gas conversion systems meet Federal and State requirements and standards.

All of the above bills are very important to America’s future. Most of the oil we import is used

as a transportation fuel - cars, trucks, aircraft, boats and trains. About one barrel out of every five is used as diesel fuel to power heavy trucks - 18-wheelers.

There are 675 million vehicles on the road today worldwide. But neither batteries nor hydrogen are ready for widespread distribution to our national fleet of approximately 250 million cars and light trucks¹. A battery also won't push an 18-wheeler. The only fuel which is available to reduce our dependence on foreign oil is domestic natural gas. Let’s compare gasoline or diesel fuel:

- Nearly 87% of U.S. natural gas used is domestically produced
- US has 2,074 trillion cubic feet of domestic natural gas reserves
- 60-90% less smog-producing pollutants
- 30-40% less greenhouse gas emissions
- 60% less expensive

This is an excellent opportunity for our group to have some impact on humanity. These bills have the teeth to free America from the grip of foreign oil, to improve our economy and environment. It will put Americans back to work to create new cars and trucks running on compressed or liquefied natural gas. It will create an infrastructure of fueling stations throughout the United States. An industry of garages to convert existing diesel or gasoline vehicles will develop.

¹ T. Boone Pickens Energy Plan



In addition to being great for America's economy this would create a local demand for our Natural Gas here in New York. Our environment will be very greatly improved. We need to express our support for this bill by writing to our representatives. We will talk more about this toward the end of this newsletter.

Natural Gas Assessment

Since the natural gas market is a national resource let's take a look at the market as a whole and then focus on New York State. Natural gas consumption comprises about 23 percent of the total energy consumption in the United States. Natural gas is used for many purposes: home space and water heating, cooking, commercial and industrial space heating, commercial and industrial processes, as a raw material for the manufacture of fertilizer, plastics, and petrochemicals, as vehicle fuel, and for electric generation. Over 50 percent of the homes in the United States use natural gas as the primary heating fuel. In 2008, U.S. natural gas consumption totaled about 23.2 trillion cubic feet, nearly matching the peak consumption of 23.3 trillion cubic feet reached in 2000.

Nationally, the electric generation sector consumed about 6.7 trillion cubic feet, accounting for about 29 percent of total U.S. natural gas demand for 2008. There has been significant growth in the use of natural gas for electric generation, and it has increased about 40 percent from 1999 levels.

The residential sector represents about 4.9 trillion cubic feet or 21 percent of total U.S. natural gas consumption for 2008. Residential natural gas demand is largely a function of heating demand and is highly weather sensitive.

New York is the fourth largest natural gas consuming state in the nation using about 1,200 billion cubic feet of natural gas per year, accounting for about five percent of U.S. demand. The breakdown of this gas consumption by sector is residential 393 billion cubic feet (33 percent), commercial and industrial 375 billion cubic feet (32 percent), and electric generation 404 billion cubic feet (34 percent)².

Governor Paterson Supports Marcellus Natural Gas Development in NYS

Governor David Paterson on August 10th released a draft of the NYS Energy Plan. The 123 page draft developed by the New York State Energy Planning Board, identified strategies and recommendations to reduce the carbon emissions and also makes the development of natural gas a state priority. Let's focus on excerpts from the draft plan which can be viewed in its entirety at <http://www.nysenergyplan.com/sta-teenergyplan.html>.

The Overall Strategy: Support Development of In-State Energy Supplies

New York spends approximately \$65 billion annually on energy, of which 53 percent or close to \$35 billion leaves the State to pay for energy imports. This reliance on outside sources of energy creates economic opportunities in exporting regions at the expense of New York. It also reduces New York's control over energy supply disruptions caused by market forces or

² *Natural Gas Assessment NYS Energy Plan 2009*
<http://www.nysenergyplan.com/Assessments/Natural%20Gas%20Assessment.pdf>



infrastructure issues outside the State. By investing in measures that reduce energy use and supporting in-state energy resource development, New York will reduce the outflow of dollars to pay for energy imports. This will help to stimulate the economy and create local jobs.

Developing in-state energy supplies, in particular renewable energy resources and natural gas, helps to reduce the reliance on higher carbon content fossil fuels imported from outside the State and therefore improves the States energy security. Reducing energy imports also helps to keep more money within the State for economic development purposes. Supporting in-state resources creates jobs, increases capital investment, increases tax revenues for local governments, and increases revenue for landowners.

Demand for natural gas is expected to increase over the planning horizon. Currently, New York meets less than 5 percent of its gas demand with in-state production. The majority of the gas to meet the States remaining demand is produced in Canada and the Gulf of Mexico and is delivered via pipeline to New York. Increasing in-state production of natural gas will diversify the States natural gas supply, improving the State's energy security.

We must encourage development of the Marcellus Shale natural gas formation with environmental safeguards that are protective of water supplies and natural resources. In the case of natural gas, enhanced pipeline delivery capacity is needed in the downstate area to maintain reliability while allowing for conversions or repowering of power plants from oil to natural gas and accommodating growing core demand.

Natural Gas In-State Potential and Development Progress

With the recent discovery of the Marcellus Shale gas potential, there is a renewed interest in natural gas development in-state. At this time, in-state natural gas production from about 6,700 active natural gas wells supplies about five percent of the States requirements. The Marcellus Shale gas formation extends northeast from West Virginia, through Pennsylvania to southwestern New York, and holds great promise for future development. New York's portion of total recoverable gas remains unknown; however, the States natural gas production is expected to increase significantly over the forecast period due largely to the projected production from the Marcellus Shale formation.

For the 2008 calendar year, total reported State natural gas production was 50.3 billion cubic feet, down 9 percent from the 2006 record total of 55.2 billion cubic feet. These figures represent an increase of over 200 percent since 1998 (16.7 billion cubic feet). The increase in New York natural gas production is driven by prolific wells in the deep (7,000 to 11,800 feet) Trenton-Black River formation in the Finger Lakes region. The largest area of production from this formation is in Chemung and Steuben counties. Annual production from the formation has grown from about 1.6 billion cubic feet in 1998 to over 40 billion cubic feet between 2005 and 2007, dropping to 34.8 billion cubic feet in 2008. Trenton-Black River production accounts for about 69 percent of the State's overall natural gas production from just 100 producing wells, with one well alone producing about 2 billion cubic feet³.

³ DEC. *New York Oil, Gas and Mineral Resources*. 2007.
<http://www.dec.ny.gov/pubs/36033.html>

This resource presents an opportunity for the State to unlock substantial economic value while helping to achieve a key energy policy objective of importance to the State's energy security. Natural gas extraction would create jobs, create wealth for upstate land-owners, and increase State revenue from taxes and land-owner leases and royalties. Development of State-owned lands could provide much needed revenue relief to the State and spur economic development and job creation in economically depressed regions of the State. Furthermore, the increased supplies of natural gas in combination with natural gas efficiency programs will place downward pressure on natural gas prices, thereby potentially lowering the cost of energy for New Yorkers. For development of the Marcellus Shale, horizontal well completions combined with hydraulic fracturing are likely to provide the best means for producing economic volumes of natural gas. While neither horizontal drilling nor hydraulic fracturing is new to natural gas development in New York, there are environmental concerns with respect to the effects of fracturing on water supplies, and disposal and contamination issues related to the chemical composition of the fluids used in the fracturing process. Additional concerns regarding drilling in the Marcellus Shale focus on the potential local impacts to communities, including increased truck traffic, noise, aesthetics, and impact on quality of life.

The extraction of projected economically recoverable reserves from the Marcellus Shale presents a unique challenge with regard to the construction of the pipeline facilities necessary to bring the produced gas to market. In the course of developing a conventional source of natural gas,

a company would drill a well and only if that well is successful, would it submit an Article VII application to construct the associated pipeline.

The technique used to tap into the Marcellus Shale requires that the gas be produced immediately once the well has been fractured and completed or the well may seal and cease to be productive. The Marcellus Shale formation has a high concentration of clay which makes it susceptible to re-closing if the gas does not flow immediately. As a result, some producers contend that the pipeline must be certified, built, and ready to accept gas before knowing for certain that the well will be a success. The existing process for sitting gas pipelines under Article VII of the PSL would likely accommodate this need.

Recommendations and Conclusions

Support private interest and investment in drilling in the Marcellus Shale natural gas reserves and natural gas pipeline expansions to improve supply and deliverability of natural gas to markets in New York in an environmentally acceptable manner.

Study the potential for new private investment in extracting natural gas in the Marcellus Shale on State-owned lands where it would not be inconsistent with public trust or parkland doctrines, in addition to development on private lands.

In the case of natural gas, enhancing pipeline delivery capacity in the downstate area would allow for conversions or repowering of power plants



from oil to cleaner burning natural gas, while also meeting core gas demand needs. In the case of transportation, ongoing investments are necessary to maintain the system in good working order, and additional investments can be used strategically to reduce vehicle congestion, expand mass transit and encourage more efficient transportation systems.

In recent years, the market has responded to environmental regulations with significant new natural gas power generation development, particularly downstate in load pockets where there are few alternatives to meeting both demand and environmental requirements.

New York's aggregate natural gas demand is expected to increase over the 10-year planning period, driven largely by growth in the residential and commercial sectors. Reliance of electric generation on natural gas coupled with the almost total dependence on interruptible delivery services for that supply raises reliability concerns, particularly during times of peak gas system demand.

Modeling of the natural gas system was performed to examine two market scenarios that stress the natural gas system (repowering of aging oil-fired units to gas combined cycle and retirement of the Indian Point facility). The modeling results show that the capacity of interstate pipelines to transport sufficient natural gas to meet peak day demand is a concern, particularly for the downstate area. Under each scenario, available pipeline capacity in the downstate area

is essentially fully utilized during peak day demand periods throughout the forecast period. Additional pipeline capacity will be needed to continue to reliably meet demand.

Editors Comments

I hope the excerpts of the New York State Energy Plan provide useful insight into the State official's view of natural gas opportunities in our State. I believe that there are very major and positive changes afoot for New Yorkers and our Nation. We need to make our voices heard by our Representatives and Congressman. The best way to communicate our desires is to write a good old fashioned letter and drop it in the mail box. We have had staffers tell us that nothing has as much impact as a mail bag full of letters. For the 180 folks which don't have e-mail we have included an address list and several sample letters. The rest of you will have additional attachments to our e-mail note. Please take the time to encourage our officials to get onboard on these important bills. We have a huge opportunity to improve the environment, create jobs, and reduce our dependency on foreign oil.

Only 5 percent of New York's natural gas demands are satisfied by in State production. There is a lot of opportunity for our help. It is obvious from these reports that our State official's and Governor Paterson are working in synergy with our needs.

I hope that September will see the completion of DEC's SGEIS and the renewed interest of additional major companies. In the mean time be watchful of landman with

empty pockets and more scare tactics.

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