


# Presentation to the NYS Business Council Construction & Transportation Committee




November 16, 2010

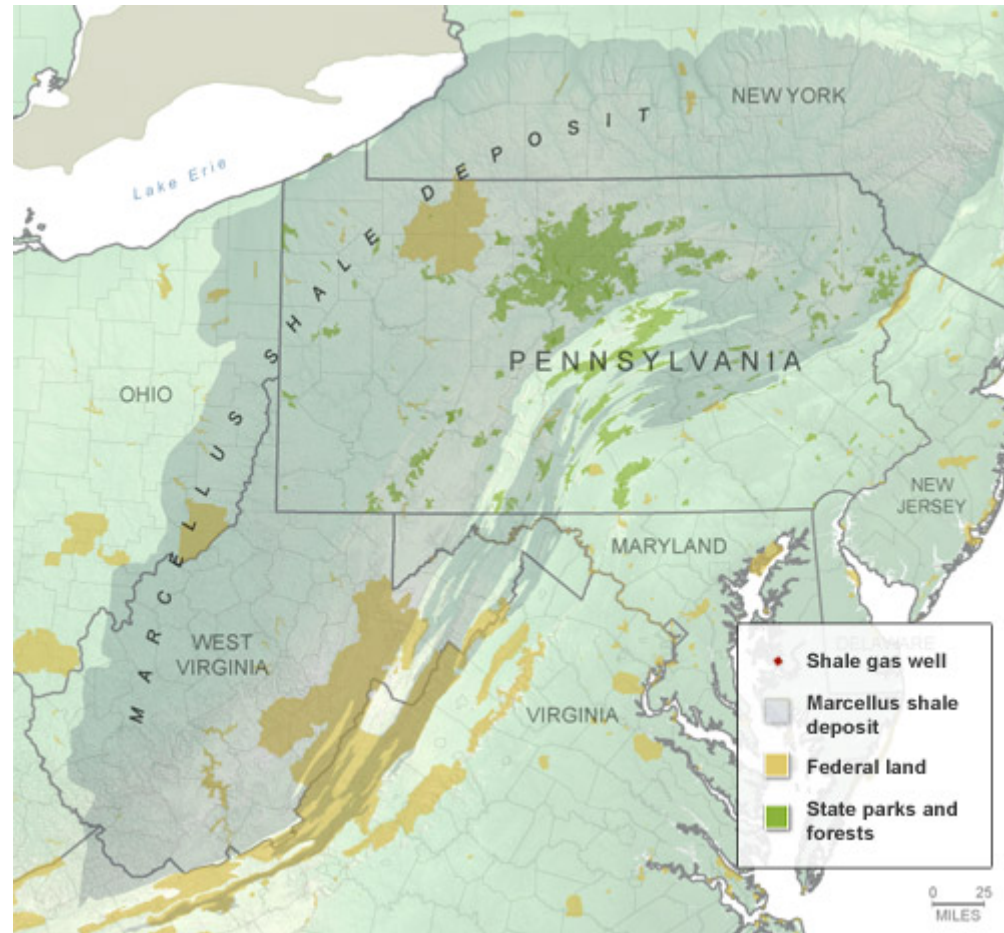
# About Chesapeake Energy

- ▶ The company was founded in 1989 by CEO Aubrey K. McClendon.
  - ▶ Chesapeake Energy is the second largest producer of natural gas in the United States.
  - ▶ Headquartered in Oklahoma City, the company's operations are focused on discovering and developing unconventional natural gas and oil fields.
- 

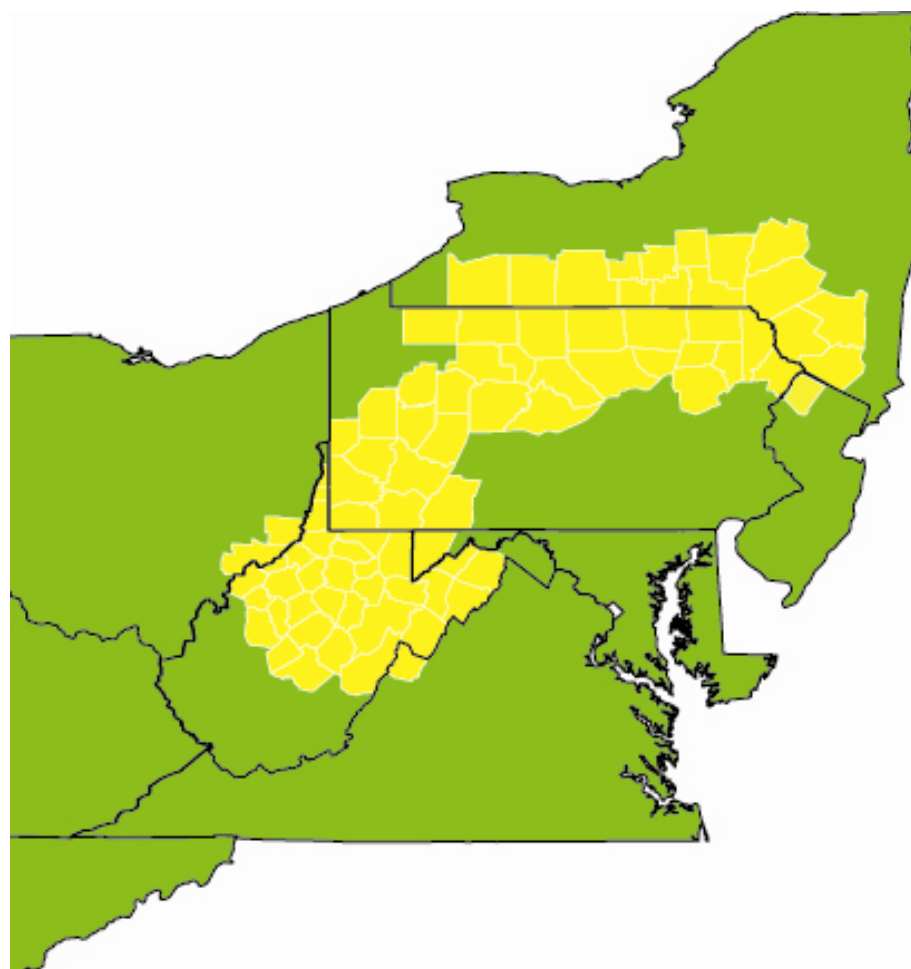
# What is the Marcellus Shale Formation?

- ▶ The Marcellus Shale is a black shale formation extending deep underground from Ohio and West Virginia northeast into Pennsylvania and southern New York.
  - ▶ The Marcellus Shale is exposed at the surface in the Finger Lakes area and it is as deep as 7,000 feet or more below the ground surface along the Pennsylvania border in the Delaware River valley.
  - ▶ The productive area of the Marcellus Shale is found at depths ranging from 4,000 to 8,500 feet underground;
- 


# View of Marcellus Shale Region




# Gas Company Leaseholds in the Marcellus Shale Region




# How much natural gas is in the Marcellus Shale?

- ▶ Geologists estimate that the entire Marcellus Shale formation contains between 168 trillion to 516 trillion cubic feet of natural gas throughout its entire extent.
  - ▶ To put this into context, New York State uses about 1.1 trillion cubic feet of natural gas a year.
- 

# Primary uses of natural gas:


- Residential (22%)
  - Commercial (14%)
  - Industrial (43%)
  - Electric Utilities (18%)
  - Transportation (3%)
- 

# How We Get the Gas -- Hydraulic Fracturing

- ▶ Hydraulic fracturing is a proven technological advancement which allows natural gas producers to safely recover natural gas.
  - ▶ Hydraulic fracturing consists of pumping a fluid and a propping material such as sand down the well under high pressure to create fractures in the gas-bearing rock.
  - ▶ Its been used safely in the Unites States for more than 60 years.
- 

# Amount of Water Needed to Hydraulically Fracture a Well – About 5.6 Million Gallons

The 5.6 million gallons of water needed to drill and fracture a Marcellus deep shale gas well is equivalent to the amount of water consumed by:

- New York City in eight minutes
  - A 1,000 megawatt coal-fired power plant in 13 hours
  - A golf course in 28 days
  - Nine acres of corn in a season
- 

# Hydraulic Fracturing of a New Well



# Gas Production is Transportation Intensive

- ▶ Water, sand, pipe and drill rigs move mostly by truck.
- ▶ The PA and gas companies are partnering on strategic infrastructure investments to reduce truck traffic and impacts on State roads.
- ▶ PA recently announced \$32 million for 38 rail projects, many of which support shale needs.
- ▶ Chesapeake has paid out than \$88 million this year to maintain, repair and upgrade more than 160 miles of road on 40 state routes.



# Economic Benefits: What is happening in PA could also happen in NY


A recent Penn State Marcellus Shale Economic Impact Study forecasts:

1. By the end of 2010 there will be up to 88,000 jobs created in Pennsylvania by the Marcellus Shale play.
2. The economic impact of the Marcellus Shale may top \$20 billion and 200,000 new jobs by 2020.
3. In 2008 alone, natural gas companies paid over \$1.8 billion in these lease and bonus payments to Pennsylvania landowners.

Over the past two years, Chesapeake Energy has hired more than 1,000 people in PA alone.




# Other Impacts on PA Economy

- ▶ New housing and associated infrastructure is being built to handle the influx of gas workers and their families.
  - ▶ Apartment rental prices have tripled in and around Towanda, PA.
  - ▶ Its hard to find a hotel room in NEPA. Last week 2 new hotels were announced in Wyoming Co. (Hampton Inn and Comfort Inn & Suites).
  - ▶ Local colleges are offering new programs to train local workers for gas jobs.
- 


# Drilling Controversy

- ▶ Concerns about chemicals and the amount of water used in the hydraulic fracturing process has produced opposition to this method of drilling in NYS.
- ▶ Opposition groups such as the Natural Resource Defense Council, Catskill Mountain Keeper and others are concerned about:
  - Impacts on the NYC Watershed and other ground water aquifers.
  - Increased truck traffic and noise.
  - Visual impacts of drill pads.
  - Ability of DEC to enforce drilling rules.

# Regulatory Update

- ▶ Currently there is a moratorium on horizontal drilling until DEC completes a Supplemental GEIS.
  - ▶ The Draft SGEIS was released on September 30, 2009 and the public comment period ended on December 31, 2009.
  - ▶ DEC received more than 14,000 comments on the SGEIS.
  - ▶ As of today the SGEIS has not been finalized by DEC.
- 

# State & Federal Legislative Update

- ▶ Moratorium Bill – The NYS Senate passed a moratorium on Marcellus Shale fracking until May 15, 2011.
  - ▶ The Assembly has not acted on the bill.
  - ▶ Governor Paterson's position.
  - ▶ Governor-elect Cuomo's position.
  - ▶ FRAC ACT sponsored by Congressman Hinchey.
- 

# EPA Studies

- ▶ 2004 -- EPA Study
- ▶ 2010 -- EPA studies potential adverse impact of hydraulic fracturing on water quality and public health.



# Questions & Answers

