

# Department of Energy

## SEAB Natural Gas Subcommittee

John R. Hanger, Special Counsel  
Eckert Seamans  
[jhanger@eckertseamans.com](mailto:jhanger@eckertseamans.com)

# Shale Gas Development

- Pennsylvania's Strategic Objective:
  - Produce the Gas and Protect the Environment

# PA Goals in Shale Development

- Economic Development/Jobs
- 2010 PA Ranked Third in New Job Creation; Lower Unemployment Rate than Nation & Texas
- Strong State Regulation To Encourage a World Class Industry
- Tax Revenues to Pay For Local Impacts, Environmental Programs and Vital State Services Like Schools
- Use More Gas and Less Coal and Oil to Reduce Pollution
- Energy Security

# Producing Gas

- First Marcellus Well Drilled in 2005
- By 2008 Marcellus Industry Booming
  - Gas at \$13/mcf
- By January 2011, 6,000 Marcellus Permits Issued
- 3,100 Marcellus Wells Drilled Now
  - Gas at \$4.50/mcf

## Producing Gas cont'd

- PA Marcellus Profitable at about \$2.50/mcf and Up
- Production Nearing 1 Trillion Cubic Feet from more than 1,100 Marcellus Wells
- PA on the way to 2 Trillion Cubic Feet/Year Production

# Protecting the Environment – Issues for the Public

1. Impact on water from drilling /wastewater
  - Streams
  - Private water wells
  - Withdrawals
  
2. Operational Problems/Accidents
  - Spills
  - Leaks
  - Fires – Response time
  - Blow outs – Response time
  - 50 plus emergencies responses

# Protecting the Environment – Issues for the Public

## 3. Truck Traffic Impact & Safety

- Congestion
- Road damage
- Unsafe trucks

## 4. Gas Migration

## 5. Public Lands: State Forests & Parks

## Protecting the Environment – Issues for the Public

### 6. Taxation

- 70% support for drilling tax as of 1/1/2011

### 7. Staffing of Oil and Gas Program

- Number of employees
- Location

### 8. Air Impacts

- Nox
- HAPs

# Protecting the Environment – Issues for the Public

9. No Clear Benefit for Public Health In  
Minds of Public from Gas Production
  - 100,000 megawatts nationally of 40  
year old, poorly controlled gas
  - Just 110,000 natural gas vehicles in  
USA
10. Disclosure of Chemicals
11. Credibility of Regulation/Regulators

# Regulatory Response

- Staffing
  - 88 Positions in Oil Gas Program as of September 2008
  - Raised Fee When Applying For a Permit from \$100 to as much as \$10,000 for Deep Wells
  - Doubled Staff to 202 by January 2011

# Regulatory Response

- Enforcement of Rules
  - 1,200 Violations Issued During 2010
  - Companies Pay for Clean Up of Spills, Leaks, Gas Migration

# Regulatory Response

- Review & Strengthen All Rules
  - 4 Regulatory Packages Enacted
    1. Water Withdrawal Plan: August 2008
    2. Waste Water Disposal/TDS Rule: August 2010
    3. New, Strong Drilling Standards: January 2011
    4. 150 Feet Mandatory Buffer from All Development for 22,000 Miles of High Quality Steams: November 2010

# Regulatory Response

## Disclosure of Chemicals

- 2008 Place List of Chemicals on Agency Website
- 2010 Update List of Chemicals on Website
- Require Chemicals to be listed at each well site in MSDS
- Require Disclosure in Drilling Rules proposed in 2009 that Became Effective on February 5, 2011

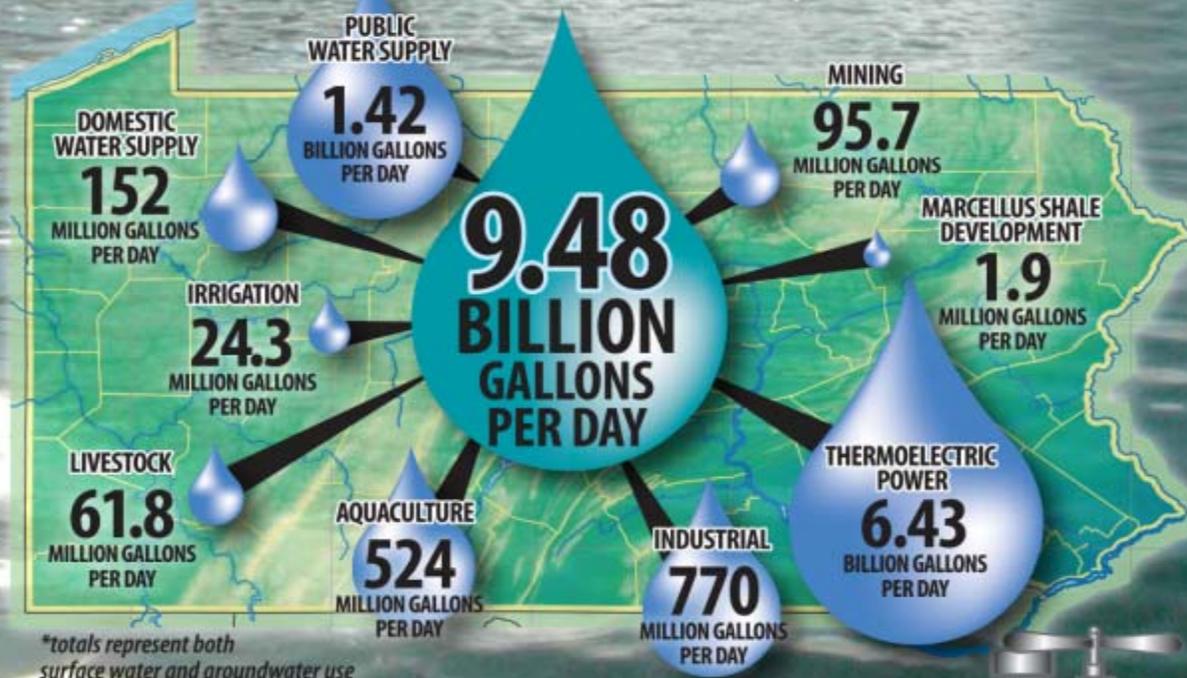
## Industry Response

- At Least 70% of Water Recycled
- Moving to Eliminate or Reduce Pits
- Air
  - Concern about aggregation
  - Moving to cleaner engines

## Industry Response

- Support of New Strong Gas Drilling Standards
- Greater, Increasing Focus on Safety and Best Practices
- Range, Chief, EGS, Talisman Disclose Chemicals and Related Information

## PA Water Withdrawals by Water Use\*



\*totals represent both surface water and groundwater use

Sources: J. F. Kenny, N. L. Barber, S. S. Hutson, K. S. Linsey, J. K. Lovelace and M. A. Maupin. 2009. *Estimated use of water in the United States in 2005*. U. S. Geological Survey Circular 1344. 52 p.

Marcellus Shale Gas Development Water Use: June 1, 2008 - May 21, 2010 Susquehanna River Basin Commission basin-wide reported daily use of 0.99 MGD expanded to statewide estimate. Water sources: 29% Public water supplies/71% Surface water withdrawals  
1 MGD daily use in Susq. Basin ÷ wells drilled in Susq. Basin/wells drilled statewide=1 MGD ÷ (765/1428)



## Possible Issues for Commission Report

- Methane Leaking
- Controlling Air Emissions
- Well Construction Standards
- Water Management Issues
- Recycling of Drilling Wastewater
- Gas Migration
- Water Withdrawal
- Disclosure