

SIERRA CLUB
RESOLUTION

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The following resolution has been worded in a detailed manner in order to hold the DEC more accountable on the specifics of the measures they must take.

Some of you are aware that the Sierra Club has been working at the state level to get the necessary attention on the gas drilling issue state wide. This past Saturday a resolution was passed at the executive meeting of the statewide Atlantic Chapter. It is the intention of the chapter to firmly confront the Department of Environmental Conservation on what they must do to safeguard the rights of citizens and its natural resources, produce a comprehensive plan that irrefutably shows that the water resources of the state are sufficient and that the disposal of frac fluids can be handled properly on the scale that will be necessitated, and show that the state is ready to proceed with diligence and caution on all aspects of environmental impacts of the drilling and associated fracing process. The following resolution has been worded in a detailed manner in order to hold the DEC more accountable on the specifics of the measures they must take.

Notes on the parts of the resolution:

Part A – what the landscape will look like in entirety after the gas drilling infrastructure is in place

Part B - inventory of the natural resources that exist today

Part C – the effect the gas drilling would have on natural resources and communities

Part D – evaluation of the chemicals used in the process and measure this against accepted best practices

Part E – special emphasis is needed for the NYC watershed in the Catskills as this is serves as the water supply for over nine million people

Be It Resolved that the Atlantic Chapter of the Sierra Club urges that the New York State Department of Environmental Conservation Division of Mineral Resources:

Prepare a Supplemental Generic Environmental Impact Statement to the 1992 GEIS On the Oil, Gas and Solution Mining Regulatory Program in accordance with the State Environmental Quality Review Act that would include but not be limited to:

- A) A full build out model of the potential Marcellus gas field, including temporary roadways, pipelines, well pads and staging areas based upon spacing

requirements and geographical constraints

- B) Mapping overlays of the potential Marcellus gas field that include: ground water resources, aquifers, wetlands, critical habitats, naturally occurring radioactive deposits, air quality attainment areas as well as waste water infrastructure, transportation infrastructure, community infrastructure and cultural resources.
- C) An analysis based on these maps and overlays of how collective natural and community resources would be affected by the entirety of the full gas well build out, including the impact of increased water withdrawals, waste water disposal, habitat fragmentation, increased truck traffic, accidental spills or releases, air emissions, noise and secondary growth.
- D) An evaluation of all chemicals and materials used in the Hydraulic fracturing process with no exemptions to proprietary privilege as well as an assessment of all possible naturally occurring sources of contamination. In addition, an analysis of best available practices should be conducted for onsite operations to include banning of open waste pits, on site water remediation, independent water testing (pre and post drilling), non-toxic frac fluids, and emissions control including CO₂.
- E) An additional and emphasized analysis of gas well development within the New York City watershed.

In addition, the Atlantic Chapter of the Sierra Club opposes drilling on public lands and environmentally sensitive lands

BACKGROUND The Marcellus Shale formation holds a large source of natural gas in New York, Pennsylvania, West Virginia and Ohio. In New York, it runs throughout the Southern Tier, stretching from Chautauqua County to the Catskills. The shale formation varies in depth but is generally 6,000 to 8,000 feet deep, requiring deep wells to extract the gas. Conservative estimates are that there is between 16 and 50 trillion cubic feet of recoverable gas, which would support the national consumption from 1 to 2.4 years at the current rate. Recent technological advances in horizontal drilling and the rising cost of energy have made this economically feasible. A process called hydraulic fracturing or 'fracing' which can use about 1-5 million gallons of water, sand and toxic chemicals are directed into the bore hole under high pressure which allows the gas to flow from the shale. Wells are commonly fraced several times after the initial fracing to keep the gas flowing. A well site for a deep well can be as large as 5 acres to contain the drill rig, a pit for waste water, mud and drill clippings and a fleet of tanker trucks to bring the water or haul out the waste.

New York State Department of Environmental Conservation processes for permitting

drilling essentially service rather than regulate gas drilling. The gas industry has over reaching authority to negotiate leases with landowners, determine well placement and spacing units and determines the agenda for what communities in the region of the Marcellus shale will look like after drilling begins.

To the extent that the DEC is a regulatory body, it is crippled by the staff cuts. Illegal dumping of drilling wastewater, sediment runoff, erosion, road and property damage and a host of other violations of legal and contractual obligations will be impossible to pursue without enough inspectors in the field. This lack of oversight, and the orientation of the DEC to rush to exploitation of resources involved could lead to accidents, secrecy, cover-ups, shortcuts, spills, and a lack of accountability. The scale of the Marcellus Shale drilling will be enormous, unlike anything the DEC has had to contend with in the past. The number of well sites may be reduced if horizontal drilling is used, but the amount of water, chemicals and waste is far beyond the capacity of the DEC is currently staffed for adequate oversight.

3. ARGUMENTS

Pro:

1) Water pollution, the enormous quantity of fracing fluid makes surface contamination more likely.

2) Improper disposal of fracing fluids, this is considered 'industrial waste' in Pennsylvania, even if it contains only brine it cannot be handled by most waste water treatment plants. The addition of toxic chemicals, if above EPA guidelines, will require special handling. The DEC allows drillers to bury "drilling cuttings" and the frac pit liners on the site. The fracing fluid, with the potential for higher than allowed EPA guidelines for toxicity, is allowed to be stored in a pit on the drill site for up to 45 days before it is required to be hauled out. It may also contain radioactive material (radon, which can be a problem in local basements). The radioactive stuff is thought to be benign -- unless it's concentrated.

3) Destruction of viewshed (Hillside leveling.)

4) Air pollution, light pollution, noise pollution, truck traffic during round-the-clock drilling operations.

5) Potential threats to NYC drinking water supply and world class trout streams

6) Threats to land preservation in Catskill Park

7) Destruction of farmland, wildlife habitat and forests by access road and pipeline construction.

8) Toxic chemicals in the drilling and fracturing fluids can include diesel fuel,

benzenes, naphthalene, ethylene glycol, fluorine and methanol. The DEC hasn't fully disclosed information about use of these chemicals. It claims that chemicals are only .6% of the fracturing fluid, which would place them at 6000 gallons, if 1 million gallons of fluid mixture is used.

9) Wells on leased (or purchased) properties will be initially drilled down, and then sideways if horizontal drilling is used, over 60-90 days, a process that will consume 800,000 gallons or more of drilling fluids and require generators producing ~83 decibels (a subway train in a tunnel at 200') around the clock.

10) Of this fluid, ~60% is returned to the surface where it is put in evaporation ponds lined with plastic sheets, where the volatile components join others escaping from the drilling and fracturing processes to threaten respiratory, neurological, and child-development problems. The other ~40% of the fluid is unrecoverable and remains permanently underground, with unknown future consequences for groundwater.

11) Problems already experienced in New York and Pennsylvania with ruined wells, damaged roads, property damage, unauthorized collection of water from streams, spilled diesel fuel and the likelihood of higher lawsuit insurance for local governments.

12) Using chemicals, technologies and equipment exempted from the Clean Air and Clean Water Acts by Cheney's Energy Act of 2005, and aided by a state permitting process that provides for the forced inclusion of private properties into the drilling domain.

Con:

Though it will take six months or more for leasing to be completed, the development of a resource management plan may take longer than six months, delaying development of the gas. This will delay the economic benefit to the region and state, both in terms of tax revenue and jobs for the duration of the drilling.

PRIOR CLUB POLICY The Sierra Club national policy is that natural gas is an acceptable transitional energy source on the way to reducing our carbon dioxide emissions by 80% by 2050 -- but that it must be produced in environmentally acceptable ways. The Club also has some specific, much older extraction technology specific policies: we favor secondary and tertiary recovery from existing gas fields, oppose coal bed methane. and oppose frontier development of natural gas in the Outer Continental Shelf (OCS) or in environmentally sensitive onshore areas.

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