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Ban Hydrofracking for Natural Gas

Howie Hawkins and the Green Party support a statewide ban on hydrofracking for natural gas.

We should instead focus our energy policy and investments on the rapid transition to a safe, clean energy system based on conservation, efficiency and renewables.

As the BP oil disaster in the Gulf of Mexico reminds us, "Drill, Baby, Drill" inevitably means "Spill, Baby, Spill." Using hydraulic fracturing of rock formations in gas drilling results in the contamination of water, air and soil. And accidents inevitably happen, which result in major spills that can extend contamination far from the well site.

Big Oil and Big Gas have set their sights on upstate New York. They want to "frack" the Marcellus and Utica shale formations, and possibly other sandstone and limestone layers, to release natural gas trapped in the rock across much of upstate New York. The state's Southern Tier, the Susquehanna and Upper Delaware river basins, and the Catskill Mountains are the source of drinking water for about 14 million New Yorkers and about 9 million Pennsylvanians — more than 5 percent of the US population, including much of upstate New York, New York City and Philadelphia.

With the pending November elections, some state Democrats claim they are protecting the environment by putting forth a moratorium bill, which has passed the State Senate though not the State Assembly. However, the moratorium is primarily political posturing, since a moratorium is already in place while the state Department of Environmental Conservation does an environmental review. The potential slight extension of such moratorium until May 15, 2011 has little practical effect, especially as it covers a time of year when drilling would not be taking place due to frost restrictions. Both the Governor's office and federal Energy officials have stated they are looking at how to "better regulate" hydrofracking, not ban it. The Democratic gubernatorial nominee, Andrew Cuomo, recently told reporters in Binghamton that he believes "gas drilling can be practiced safely," and touted its economic benefits.

Other Democrats have pushed for a ban on hydrofracking in the NYC watershed. The Greens support a statewide ban since everyone's drinking water should be protected.

The Risks of Hydrofracking

Hydrofracking means injecting toxic-laden fresh water and sand at extremely high pressure into rock layers to shatter the stone and release the gas. Each frack injects 2 to 9 million gallons of water with 20,000 to 90,000 gallons of toxic chemicals. Where it has been done in Texas, Louisiana, Oklahoma, Pennsylvania — in fact, in over 30 states — hydrofracking has generated immense environmental problems, including:

Pollution

Contaminated drinking water aquifers and wells, reservoirs, lakes and streams.

- <u>Toxic waste ponds</u> full of the waste fluids that come back up the wellbore; there could be up to 40,000 of these ponds across the New York State if full-scale fracking is permitted.
- Air pollution from flaring (burning "excess" gas to relieve well pressure), along with pipeline and compressor station venting and leaks, release of nitrogen oxides, particulate matter, sulfur oxides, benzene, toluene and other volatile compounds all of which contribute in various ways to cancers, genetic mutations, nervous system disorders and lung disease.
- Global warming increase due to carbon dioxide from flaring and methane from leaks, with methane (the largest component of unrefined natural gas) being 72 times more potent as a greenhouse gas than carbon dioxide over 20 years, according to the International Panel on Climate Change's measure of Greenhouse Warming Potential.

Accidents

- Well blowouts, fires and explosions
- Pipeline fires and explosions
- Drilling fluid waste pond leaks and spills
- Trucking accidents and spills of toxic chemicals in drilling and waste fluids

• Property Damage

- Natural gas can seep into water systems and homes to pollute kitchen faucet water so it can be lit
 on fire, and cause houses and drinking water wells to explode.
- Heavy metals and radioactive substances can also seep into the water systems of many rural upstate New York homes with private wells and no access to municipal water.

Disease

Residents of drilling areas can become chronically ill due to the seepage of carcinogens and neurotoxins into the air, water and soil, with immediate symptoms that can include:

- Headaches
- Dizziness
- Blackouts
- Muscle spasms
- Loss of hearing, vision, taste and smell

Repeated or prolonged exposure can cause liver, heart, blood and brain damage as well as leukemia and other cancers.

Land Theft

These impacts can be far from the drill site because hydrofracking involves horizontal drilling up to a mile and a half from the wellhead. When 60 percent of the land in a "drilling unit" is leased to a driller, neighboring landowners who do not want drilling can be forced to allow gas extraction under their land against their wishes. This policy is called "compulsory integration" in New York State. We regard it as an **unlawful seizure of private property** and call for its repeal.

With a failure rate between 2 and 8 percent, horizontal drilling and hydrofracking pose an unacceptable risk to New York State's abundant water supplies, a natural resource that sustains our communities and is the state's most important natural resource base for sustainable economic development in the

agriculture, manufacturing and tourism sectors.

Thanks to the "Halliburton Loophole" that exempted oil and gas fracking from the Safe Drinking Water Act in 2005, Halliburton and other companies can legally inject known toxins directly into gas wells and threaten underground sources of drinking water without federal regulation. While the oil and gas corporations generally refuse to reveal the chemicals they inject as "proprietary secrets," we know from congressional hearings that diesel fuel, benzene, toluene, ethylbenzene and xylene are among the toxic substances in the injection soup. These chemicals are known to cause cancer and other illnesses.

Privatized Profits, Socialized Costs

Extensive drilling will turn the rural landscapes of upstate New York into an industrial belt of drilling rigs, heavy truck traffic, wastewater ponds and pipelines. It will undermine property values, increase the tax burden on local citizens and reduce the tax base of the state. The industrial and transportation activities of the gas and oil industry will place an enormous strain on local public services and emergency services, including roads, water, fire and police departments, emergency medical services, hospitals and health care providers.

Existing wastewater treatment facilities in New York State are equipped to deal with biological material in sewage and rain runoff — *not* the types of drilling "muds" and fluids that flow back from hydrofracked wells. Even now, Pennsylvania drillers are exporting drilling waste to Chemung County, New York for burial in a landfill, which is not equipped to handle waste containing the toxic chemicals, heavy metals and radioactive substances brought up from the depths.

Chesapeake Energy Corp., the Oklahoma City-based company that holds dozens of drilling leases in central New York, wants to dump up to 663 million gallons of wastewater from Pennsylvania in a used-up conventional natural gas well in the Steuben County town of Pulteney, less than a mile from Keuka Lake, one of the Finger Lakes.

We Are in the Fight of Our Lives

We are up against the biggest and most powerful economic and political forces in the world. The "Drill, Baby, Drill" Republicans have now been joined by many key Democrats, such as Energy Secretary Stephen Chu declaring last January his opposition to a ban on hydrofracking. Governor Paterson's administration has continued to push for hydrofracking, though community opposition has led some state lawmakers to question the wisdom of this. The corporate-financed leadership of New York Democrats and Republicans are going for the short-term royalties and intend to leave the much higher cost of permanent economic and environmental devastation to be covered by taxpayers in the future.

Behind the two corporate parties are some of the largest multinationals. We're up against the biggest, most profitable corporation in the world, ExxonMobil, which took over hydrofracking specialists XTO for \$41 billion in December 2009. Other big gas and oil companies coming to frack New York include Cabot Oil & Gas, Chesapeake Energy, Hess, EOG Resources and Range Resources. Giant energy corporations from around the world are investing in hydrofracking the Marcellus shale, including corporations from China, Japan, India, and Europe. Among the European investors is BP, British Petroleum.

The big three hydraulic fracturing companies are Halliburton, BJ Services and Schlumberger, but smaller fracturing companies comprise a growing share of the market. These include Frac Tech

Services, Superior Well Services, Universal Well Services, Sanjel Corporation and Calfrac Well Services.

Halliburton is responsible for the death of at least 13 US soldiers who were electrocuted in showers and swimming pools at US military bases in Iraq and Afghanistan. KBR, which was then a Halliburton subsidiary, installed poorly grounded electrical wiring. If Halliburton cannot do competent electrical wiring in military living quarters, if it cannot cement an oil rig in the Gulf of Mexico so it will not blow out, should we trust them to frack New York State?

Hydrofracking Boom and Bust

Hydrofracking companies often state that shale gas wells have about a 30- to 40-year production life, but a <u>study</u> of hydrofracking gas in the Barnett shale formation in Texas found that the average commercial life for horizontal wells is about 7.5 years. The most common commercial life is just 4 years. Some wells have 8 to 12 years of production, but few extend beyond 15 years.

Fracking New York is likely to create a short-term gas boom that soon leaves behind a long-term economic and environmental bust. We will be better off investing now for the long term in a sustainable energy system based on the efficient use of renewable energy generation and storage systems.

Natural Gas is NOT a Bridge to a Renewable Energy System

Natural gas is not "clean" energy but rather another polluting, non-renewable fossil fuel that releases greenhouse gases into the atmosphere, which contribute significantly to global warming.

Gas is often portrayed as a "bridge fuel" to provide a lower-carbon alternative to coal while zero-carbon technologies like wind, solar, ground source heat pumps and other renewables scale up capacity and reduce in price. But increased use of "cheap" natural gas will merely postpone the growth of — and divert investment from — wind, solar, ground source heating and cooling, and other renewable energy sources. We will find ourselves addicted to a new fossil fuel that further delays the long overdue switch to renewable energy.

The Myth of "Low-Carbon" Gas

Natural gas may actually be worse than oil and coal with respect to greenhouse gas emissions that cause global warming. The greenhouse-warming potential of natural gas from hydrofracking may be greater than oil and coal when methane leakage from gas wells and the indirect carbon costs of developing, processing and transporting each fossil fuel are factored in, according to estimates made by Professor Robert Howarth of Cornell University.

The Myth of Energy Independence

Hydrofracking will not increase the energy independence either of New York or the US. The oil and gas corporations are based outside New York. Many of the smaller companies are headquartered in Pennsylvania. The bigger companies tend to be based further away: Chesapeake is based in Oklahoma City, XTO in Fort Worth, Texas. XTO is now owned by ExxonMobil, headquartered in nearby Irving, Texas. Halliburton moved its headquarters to Dubai in the United Arab Emirates, a tax-free haven with no extradition treaty with the United States.

More ominously, in just the last few years (often the last few months) international corporations have been buying chunks of US-based companies to cash in on the anticipated Marcellus bonanza. Who's entering these joint ventures? BG Group and BP (UK), Total and Schlumberger (France), Mitsui & Co.

and Sumitomo (Japan), StatoilHydro and Nornew (Norway), Epsilon, Talisman, Range, EnCana and Gastem (Canada), Royal Dutch Shell, Petrochina and Hopu (China), KNOC (Korea), ONGC and Reliance (India), Temasek Holdings (Singapore), ENI (Italy), Petsec (Australia). We can reasonably rely on both profits and gas to exit the US.

Renewable energy sources are present throughout New York State and are as equitably dispersed as the sunshine, the wind, the plants that convert sunlight into energy, and the solar heat stored in the ground. They do not require giant corporations and huge capital investment to tap. They are plentiful and amenable to local ownership and control at the household, business, municipal and county level.

The Myth of Job Creation

Hydrofracking will almost certainly destroy more jobs than it creates. The gas and oil industry is about 10 times more capital intensive than the US economy as a whole. Few jobs are created compared to comparable investment in other economic sectors. Most of the workers skilled in the industry are from outside the state and will be imported. Hydrofracking will destroy other jobs in agriculture, tourism, and sport fishing and hunting as rural landscapes are transformed into industrial wastelands.

It's an either/or choice: either we have a few short-term jobs for imported workers in hydrofracking for a few years, or we have plentiful, secure and long-term employment in upstate New York based on agriculture, tourism and clean manufacturing.

Jobs for conventional gas drilling in the top 10 gas drilling counties in New York account for only 0.04 percent of the total non-farm payroll. In Pennsylvania, where gas drilling, including hydrofracking, is much more developed, employment has never reached more than 0.1 percent of total non-farm payroll, just a few thousand jobs in the entire state. Tourism, by comparison, accounts for 400,000 jobs in Pennsylvania.

The Myth of Economic Development

A "multiplier" is the additional local spending a given amount of economic activity will generate in a local economy. If the multiplier is 1.4, for every \$1 in income for an industry, \$1.40 will be spent in the local economy. Because local agricultural dollars turn over more in local economies than in other sectors, agricultural earnings have a higher economic multiplier.

Economic Multipliers by Sector in New York State

Manufacturing	1.40
Retail and wholesale trade	1.40
Services	1.48
Agriculture – nursery and wood products	1.78
Agriculture – crops	2.28
Agriculture – dairy	2.29

Source: "Economic Multipliers and the New York State Economy," Policy Issues in Rural Land Use, Cornell Cooperative Extension, December 1996

The New York State Department of Environmental Conservation's draft Supplemental Generic Environmental Impact Statement (dSGEIS) relies on an economic analysis done in 1988 to assess the economic impact of permitting hydrofracking in New York State.

The numbers in the DEC'S tables used to project the economic multiplier from hydrofracking are

woefully outdated, unreliable and probably overstated, given the greater capital intensity of gas drilling today and the high degree of out-of-state and out-of-country ownership.

The dSGEIS concedes: "The reported earnings multiplier of 1.4 for the oil and gas industry in New York is lower than many manufacturing and service industries, partly because the industry as a whole is not labor intensive, and also because most of the companies which provide services to the industry in New York are headquartered in nearby Pennsylvania."

A decade or so of a boom in hydrofracking could undermine the agriculture, food and fiber processing, manufacturing and tourism that are the most promising economic base for sustainable prosperity in upstate New York.

A Ban, Not a Moratorium

We know enough now to demand a ban. The stronger 18-month moratorium that some environmentalists have pushed the state to adopt until the US Environmental Protection Agency completes its study of hydrofracking will do little more than the weaker 9-month moratorium now pending in the state legislature. The EPA study is more likely to recommend regulations for proceeding with hydrofracking. Either moratorium can be used to further educate the public, pressure policymakers and press for a complete ban, but neither by itself will stop hydrofracking.

The New York State DEC's draft SGEIS openly supports drilling, minimizes the enormous risks and fails to consider the environmental and social costs of drilling. It sets up the conditions to regulate drilling — not to stop it. The DEC is understaffed and underfunded. It cannot even effectively monitor the low level of *current* drilling in New York State.

The US EPA may be expected to do the same – set the conditions and regulation for drilling. President Obama's top energy advisor, Energy Secretary Stephen Chu, has already said he wants drilling to proceed.

To help speed the way to hydrofracking, New York State, on behalf of Big Oil and Big Gas, preempted the right of local governments to regulate hydrofracking in Article 23 of New York State's Environmental Conservation Law. The US Energy Policy Act of 2005 also removed municipal home rule over natural gas drilling. The Green Party supports the repeal of these laws.

The gubernatorial candidates designated by the party conventions of both major parties, Democrat Andrew Cuomo and Republican Rick Lazio, say they support hydrofracking if it can be done safely. The EPA study, like the DEC's dSGEIS, will likely provide the cover they need to move forward with hydrofracking despite widespread public opposition.

It is wishful thinking for opponents to hope that a state moratorium on hydrofracking until the EPA report comes out will result in an EPA recommendation to stop hydrofracking, or that the delay will deter the industry from investing in New York natural gas drilling.

It is time to demand a ban on all forms of hydraulic fracturing now. We should then focus our energy policy and investments on the rapid transition to a safe, clean energy system based on conservation, efficiency and renewables.