

## “Fracking”

*The Latest Battlefield in the Green War Against Jobs*

**By Robert Kirchoff**

**Summary:** You will be hearing lots more about hydraulic fracturing, or “fracking,” the name for an innovative technology that resource companies use to extract natural gas contained within layers of shale rock deep below the surface of the earth. Companies capture vast quantities of otherwise inaccessible natural gas by drilling into layers of rock and then pumping in a mixture of water, chemicals and sand at a rate that generates hydraulic pressure. This creates fractures in the rock sufficient to tap into the natural gas reservoirs contained within them. Green groups want to make Americans hate fracking, and they are spreading scare stories to pressure lawmakers to ban the technology. More natural gas production can only undercut the greens’ dream of forcing the federal government to restrict fossil fuel production so that Americans will subsist on “renewable” alternative fuel sources.

On June 29 the New Jersey state legislature overwhelmingly voted (32-1 in the Senate and 56-11 in the Assembly) to impose a ban on hydraulic fracturing. As of this writing, it is possible that Governor Chris Christie will sign the bill into law. New York’s department of environmental conservation is ready to implement a regulatory scheme that will ban, restrict and manage various forms of fracking in that state. And on



June 30 the parliament in France passed the world’s first national ban on fracking.

Fracking is a new technology for getting at natural gas, a hard-to-extract natural resource that is essential to running a modern industrial economy. Just as Canadians have always known about the vast deposits of oil sand (also called tar sand) in their province of Alberta, so also have Americans long known about our enormous domestic reservoirs of natural gas located within layers of shale throughout Appalachia. But tapping both resources has been very difficult and

uneconomical. It took the creation of new technologies able to extract oil from sand and natural gas from rock to create what looks like a potential new energy boom in North America. (For more on the fight over the Alberta oil sands, see *Green Watch*, March 2011.)

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On first inspection, fracking seems to be a technology that green groups would support. Environmentalists have often touted natural gas as a “clean” source of energy, and fracking has opened up trillions of cubic feet of previously inaccessible natural gas reserves in what’s called the Marcellus Shale in the heart of the United States.

These layers of shale are as much as one mile below the surface of much of New York, Pennsylvania, Ohio and West Virginia and in smaller parts of Kentucky, Tennessee and Virginia. Though fracking is not a new technology (it was first used by Halliburton in 1949) the key to opening up new natural gas deposits deep below the earth’s surface is the recent successful meshing of horizontal drilling with using hydraulic pressure to create fractures within rock.

A proven, decades-old technology to extract a fuel that many green groups find acceptable—what’s not to like? Unfortunately, rational decision-making is not the a strong point with many environmental activists. Environmental

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groups level many objections against fracking. Some are serious and specific. They relate to the environmental impact of current hydraulic fracturing practices.

Others, however, are paranoid suspicions about the motives of the natural gas industry. Still others involve extremist environmental hostility to any human attempt to exploit a natural resource.

### **The Technological Critique**

The most serious objections focus on specific practices of hydraulic fracturing. Critics say the chemicals fracking companies mix with water and sand to create hydraulic pressure can be dangerous to individuals and wildlife, especially when they infiltrate the water table. They also note that fracking is wastefully water-intensive. Finally, they allege that fracking can cause earthquakes.

1) Fracking Poisons the Water Table - The allegation that fracking chemicals can poison the water table is the most frightening. Most of the companies that engage in fracking use proprietary chemical formulae, which many guard as a trade secret. Although the chemicals make up only a small fraction of the mix of water and sediments pumped into natural gas wells, the risk that freshwater supplies will be threatened invites controversy.

States like Wyoming have passed regulations requiring companies to publicly disclose the contents of these chemical cocktails. New York has imposed a moratorium (read: ban) on fracking until its risks can be further assessed.

Fearing chemical contamination in the watersheds serving New York City and Syracuse the state’s environmental regulatory board has recommended a permanent ban on fracking even if the moratorium is lifted. Because of these fears many state environmental groups favor a total ban on fracking.

Interestingly, a Duke University study has debunked the worry over water table contamination. It sampled natural gas wells, both fracked and unfracked, and found no trace of chemical infiltration in local groundwater, a finding consistent with logic and the facts of geology. Hydraulic fracturing for natural gas typically occurs at depths in excess of 5,000 feet, which is far below the deepest aquifers, normally no deeper than 1,000 feet.

Of course, chemical spills and run-off can damage land and pollute water, and the chemicals used in fracking processes are indeed dangerous. A test sponsored by the US Forest Service found that when 75,000 gallons of fracking waste fluid was spread over a quarter-acre of West Virginia forestland the mix destroyed ground vegetation. Over half the trees in the area died within two years.

Environmental groups have trumpeted the test, whose results were published in July, as proof of fracking’s danger. Public Employees for Environmental Responsibility (PEER), a nonprofit that helps government whistle-blowers inside natural resource agencies, has criticized the Forest Service. It says the agency should be doing more to publicize its own research and should be working to outlaw fracking.

PEER receives grants from the David and Lucile Packard Foundation, the Bullitt Foundation and the McKnight Foundation.

But fracking's defenders have found flaws in the experiment conducted by Forest Service researcher Mary Beth Adams. Marcellus Drilling News, an "online resource and news service specifically for landowners who live in the Marcellus Shale region of the eastern United States", has criticized the study and the reports based off of it. They note that the concentration of waste-fluid used during Adams's study has no relation to the amount of waste-fluid disposed of in the real world: 75,000 gallons of waste-fluid is not required to ruin an area smaller than a mid-sized residential lot. Even saltwater, sewage and non-toxic liquid chemicals will destroy plant life if they are spread over small areas in such large volumes.

A more important concern is the wastewater created by hydraulic fracturing. West Virginia already requires that fracking wastewater be treated before discharge, and in Pennsylvania drillers have agreed to end the practice of discharging wastewater into waterways.

The accepted best practice is to pump wastewater back into the deep underground, often in exhausted wells. This is considered ideal because the great depths of exhausted wells insure that any potentially harmful chemicals are isolated from water tables.

2) Fracking Wastes Water - Instead of focusing on a real problem like the proper disposal of fracking wastewater, some green groups are concerned that fracking

uses water. They say millions of gallons of freshwater resources are wasted in hydraulic fracturing.

This message generates powerful emotions in arid regions of the country or areas suffering from drought. In Texas, personal injury trial lawyers at the Houston firm Arnold & Itkin have argued that fracking should be considered a "discretionary" use of water and should be reassessed during a time of drought.

Water in large amounts is used in fracking, especially when coupled with horizontal drilling and the deep wells that characterize modern hydraulic fracturing practices. But such explanations don't persuade the kind of environmental activists who are appalled that people use gas to drive cars and burn coal to heat houses.

The science of hydraulics by definition involves using a liquid in a confined space to create pressure. That upsets certain green sensitivities, and trial lawyers are ready to discover a cause of legal action to remedy the injuries they claim to suffer.

3) Fracking Causes Earthquakes - One of the strangest and most misleading complaints leveled at shale fracking is that it causes earthquakes. If the Texas drought prompts Houston trial lawyers to consider using the courts to restrain fracking water usage, it's only a matter of time before memories of 1906 prompt San Francisco trial lawyers to propose restrictions on fracking to save the city.

However, there is a grain of truth to the earthquake claim. The hydraulic pressure

used in fracking deep below the earth's surface inevitably does create low levels of seismic activity, or "microquakes," as rock formations collapse and natural gas, petroleum and water escape. These microquakes, usually no more than a 3.0 on the Richter scale, are seldom noticed by the public. (Damage from earthquakes begins around 4.0-5.0 on the scale.)

Some green groups blame recent increased seismic activity in Arkansas on fracking, a charge geologists dispute. The scientists say the problem is not fracking itself, but they speculate that the disposal of wastewater created by the fracking process may "lubricate" rocks and cause increased seismic activity when wastewater is injected back into the ground.

### **The Real Enemy is Natural Gas**

It's unfortunate that important questions of public policy concerning hydraulic fracturing are obscured by environmentalist scare stories and alarmist rhetoric. The green movement is changing. With the defeat of cap-and-trade legislation last year environmental groups that accept industrial development and economic growth are losing ground. The winners are extremists who reject compromise and advocate a hard-line on energy policy. More and more the radical green left calls the shots and determines the movement's political strategy. For these groups the real enemy is not hydraulic fracturing. It's natural gas.

In the past some environmentalist groups looked favorably on natural gas. They called it a "clean" energy that could be a good alternative to foreign oil and domestic

but “dirty” domestic coal. Even someone as shrill and conspiracy-minded as Robert F. Kennedy, Jr. of the Waterkeeper Alliance said natural gas was an “obvious bridge fuel to the ‘new’ energy economy.”

With its relatively low cost and well-developed technology natural gas appealed to government agencies and corporations that knew they needed to become more sensitive to environmental issues. City buses in Washington, DC sported signs saying “This bus runs on clean natural gas.” But those days are over. The natural gas industry continues to advertise itself as a green technology, but hard-line green groups scoff at its claims. The current green political agenda consists of advocacy for a no-growth and zero-impact economy, ideals the business community rejects and that have little public appeal during a time of high unemployment and slowing economic growth.

But green extremists don’t care that their agenda is not important to most consumers and the voting public.

Josh Fox is the director of *Gasland*, a documentary film that attacks the production of shale gas. He sums up his understanding of environmentalism today:

*“What’s really happening here is not a battle between natural gas and coal. What’s happening here is a battle between another dirty fossil fuel and renewable energy.”*

This sums up the attitude of the new, anti-gas environmental left, of which Fox is a spokesman. He has called for a national moratorium on all fracking, and

has a sequel to his hit documentary in the works. Embraced by a broad range of green groups, *Gasland* has become the centerpiece of the anti-gas movement. Notoriously liberal Hollywood defended *Gasland*’s Oscar ambitions by summarily dismissing criticisms lodged against the documentary. But of course, if greens are excited about something, its factuality is probably to be questioned—this case is no exception.

The film’s claim to fame is a scene where Fox filmed a Colorado family setting their tap water on fire, thanks to high methane content. The scene was so inflammatory (pun intended) that the Colorado Oil and Gas Conservation Commission, part of the Colorado Department of Natural Resources, released a paper to set the record straight.

The film also claimed that the Ground Water Protection Council refused an interview on the topic of fracking. The GWPC is a coalition of state regulatory agencies involved in water policy, and presents a cautious, moderate-environmentalist support of fracking. The GWPC maintains that no such refusal occurred, and attempted to clear the record with an official release.

In response to the many factual disparities in the film, *Energy in Depth*, an industry group representing a large number of small and independent natural gas producers, released a point-by-point rebuttal to the claims in *Gasland*.

*Gasland* was written, directed, filmed, and narrated by Fox. His film was given a huge boost by being debuted at the exclusive

Sundance Film Festival. Well-known for king-making for independent films, it is the largest independent cinema festival in the United States.

What is less known is its connection to infamous leftist financier George Soros. Soros’ Open Society Institute started the Soros Documentary Fund in 1996. In 2001, this merged with the Sundance Institute, and in its own words, it “has continued to be a crucial resource—both financially and creatively—for documentary filmmakers.” It is not hard to imagine to what kind of filmmakers Soros would provide crucial resources. It is clear that the makers of *Gasland* placed factual accuracy second to flashy muckraking.

### **A Smear Campaign Within a Smear Campaign**

Environmentalists like Fox want an immediate top-down reengineering of the world economic system. Theirs is a fantastical vision of an economy that does not rely on oil, or coal, or natural gas. They want a world that is “sustainable” because people conserve, use recycled products, and only generate power using “alternative” fuels like wind and sun and decaying vegetation that is “renewable.”

Because fracking deep shale is a technology that is new to the public. It raises serious scientific and legal questions on such issues as wastewater disposal whose effects are perhaps less understood than other energy technologies.

So it’s inevitable that some politicians will feel compelled to publicly oppose fracking and seek to ban it. Unfortunately, they are

responding less to legitimate concerns about hydraulic fracturing than they are to scare campaigns orchestrated by activists who oppose all fossil fuels. Too often the concerns raised about fracking are only tactics in a long-term campaign to cut energy production and reduce energy usage.

By intertwining a new technology with an old fuel, environmental activists obscure the difference between them. But not everyone has fallen for the trick. In Pennsylvania, epicenter of the Marcellus Shale, the controversy over fracking pits PennEnvironment, which opposes natural gas against Penn Future, which supports natural gas and promotes fracking.

### **Conclusion**

Extremists in the environmental movement are now in the ascendancy, and they are advocates for green technologies that are demonstrably inefficient and expensive. This was less a problem when the US economy was in overdrive, when Americans had jobs and felt rich.

But today green goals have little appeal. And, ironically, that's why environmental extremists dominate the movement. In the abstract, 77 percent of the American public supports wind farms—but 68 percent would not pay more for renewable energy. Americans support nuclear energy, but “not in my backyard.”

Large majorities say they support “investment” in energy-saving “green” technologies, but not if it increases their bills or their taxes. This contradictory data

is not a popular mandate for environmental extremism. But it's allowing environmental extremists to become increasingly irresponsible making wild charges in the expectation that plenty of people will believe them.

### **GW**

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**Many thanks,**

**Terrence Scanlon  
President**

# GreenNotes

New York City Mayor **Michael Bloomberg**, having tamed table salt and trans fats in Gotham, has turned his attention to the evils of coal. **Bloomberg Philanthropies** has made a \$50 million donation, spread over four years, to the **Sierra Club's** 'Beyond Coal' campaign to shutter the nation's coal-fired power plants. You know, the ones responsible for such dastardly business as heating and lighting our homes. No word on Bloomberg's position on salt-fired power plants.

Europeans, it seems, are against any and all wars these days. But that hasn't stopped them from waging war on their own economy. The **Emissions Trading System**, (ETS), launched in 2005 by the **European Union** to help regulate carbon emissions, will expand its mission in January to include airlines. The expanded ETS will require the industry, "...to cut its carbon dioxide emissions average from the 2004-2006 period by 3 percent in 2012 and 5 percent in 2013," as reported by the *Washington Times*, costing the industry billions. The U.S. has joined China, Australia, Canada, and the United Arab Emirates in protesting the move, saying it violates international law. One wonders if the European tourism industry will be as vocal in protest, as it will surely violate its profit margin.

There's a lot of bad news for believers in global warming these days, and apparently it's all getting to **Al Gore**. The High Priest of Climate Change was addressing an audience at the **Aspen Institute** in Colorado when the subject of global warming came up. Gore, not aware he was being recorded, quickly became unhinged and launched a profanity-laced, paranoid rant against global warming 'deniers' whom he claims manipulate the media. "They [deniers] pay pseudo scientists," said Gore, "to pretend to be scientists to put out the message: 'This climate thing, it's nonsense. Man-made CO2 doesn't trap heat. It may be volcanoes.' [expletive]! 'It may be sun spots.' [expletive]! 'It's not getting warmer.' [expletive]!" Wow. Anyone else get the feeling we dodged a bullet in 2000?

Speaking of Al Gore, remember his computer animations showing a future Florida and New York City under water because of melting Arctic ice? Well, a new study by scientists from the **National Center for Atmospheric Research** (NCAR) appearing in the journal *Geophysical Research Letters* (GRL) says the Arctic ice melt could stop, and even reverse in the coming decades. As the **National Science Foundation** reports, "in an unexpected new result, the NCAR research team found that Arctic ice under current climate conditions is as likely to expand as it is to contract for periods of up to about a decade." Lead NCAR researcher **Jennifer Kay**, "Even though the observed ice loss has accelerated over the last decade, the fate of sea ice over the next decade depends not only on human activity but also on climate variability that cannot be predicted." No kidding. Just don't tell Gore or, if you must, make sure there's no live microphone around.

*Green Notes* never gets tired of marveling over the hypocritical capacity the left, especially the environmental movement. Fortunately for us, there is never any shortage of examples, to wit: The **Natural Resources Defense Council** and 11 other environmental groups are pushing the new, bi-partisan "super-committee" on debt reduction "...to cut billions of dollars in tax breaks and energy subsidies for the oil and gas industry," reports the *Huffington Post*. Of course, environmentalists have nothing against, and indeed actively advocate, tax breaks and other government subsidies for "green" energy, but never mind. NRDC & Co. sent a letter to congressional leaders: "Any deficit deal must represent a balanced approach that focuses both on cutting wasteful subsidies that harm the public interest and raising significant revenues." That's right folks – the green movement wants you to pay higher energy prices and higher taxes!