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# Croton Watershed Clean Water Coalition, Inc.



## How We Can Actualize New York State's Potential for Renewable Energy

By Lisa DiCaprio

**April 12, 2012  
Community Forum to Promote Safe Energy and Ban Fracking in New York State hosted by WESPAC – a local grassroots peace and justice educational organization serving Westchester County since 1974. This forum was held at Pace University in Westchester County.**

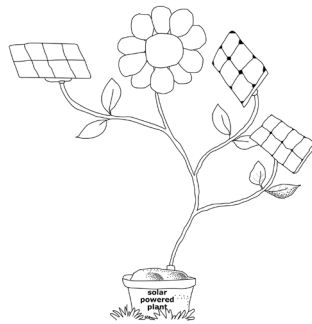
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According to the scientists at this center, three of these boundaries may have already been crossed: climate change, biological diversity, and nitrogen input to the biosphere. (1)

As all products are connected to an ecosystem, we will only succeed in living within our planetary boundaries if we

Thank you for the opportunity to speak about how we can actualize New York State's potential for renewable energy.

For the first time in geological history, the impact of human activity is determining the future of our planet. Recently, the Stockholm Resilience Centre identified nine planetary boundaries: stratospheric ozone layer, biodiversity, chemicals dispersion, climate change, ocean acidification, freshwater



Illustrations by Enrique Dura

consumption and the global hydrological cycle, land system change, nitrogen and phosphorus inputs to the biosphere and oceans, and atmospheric aerosol loading.

restructure our patterns of production and consumption around meeting people's basic needs and cradle to cradle/closed loop design. Unlike cradle to grave, a linear form of production in which products are manufactured, consumed, and then discarded, cradle to cradle design is modeled on nature in which there is no waste and all that dies and decomposes becomes the basis of new life. (2)

We must close the production/consumption loop by extracting raw materials from discarded products and recycling them in new products. As described in a recent New York Times article, by recycling an aluminum can, we can save 95% of the energy used to manufacture cans from extracted raw ore. (3)

Closed loop design is now being applied to the entire global economy in a new visionary concept called the circular economy which is premised on conservation rather than perpetual growth and the destructive consumption of finite resources.(4)

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What will be the role of renewable energy in creating the circular economy of the future in which all buildings can become generators as well as consumers of electricity?

**Renewable Energy and the New Green/Clean Economy:**

Renewable energy in New York State will promote sustainable economic development, facilitate the transition to the green/clean economy of the future, and mitigate climate change, which is increasingly placing at risk New York’s infrastructure, residential and commercial property, tourism industry, and agriculture. (5)

Currently, wind and solar power only comprise 2% of New York State’s energy grid. According to the most recent studies, with adequate transmission lines, more efficient means of transmitting electricity, and the smart grid, which will maximize flexibility in energy deployment, New York State has the potential for generating 80% of its energy needs from solar, wind (onshore and offshore) and geothermal. This does not include hydroelectric power or the savings to be achieved from energy efficiency and conservation. (6)

Although promoted as the fossil fuel of choice, natural gas is part of the problem and not the solution. We should not accept the view that the main criteria for evaluating a source of energy is that it guarantees us independence from foreign countries. True energy independence does not mean switching from Middle East oil to domestically extracted natural gas, but rather freeing ourselves from our current, lethal

*True energy independence does not mean switching from Middle East oil to domestically extracted natural gas, but rather freeing ourselves from our current, lethal addiction to all fossil fuels.*

addiction to all fossil fuels.

To those who claim that hydrofracking will benefit New York State’s economy, we can show that renewable energy is the fastest growing sector of energy which spans a wide range of labor-intensive professional and vocational employment opportunities and provides an important source of taxes and state revenues.

“Sizing the Clean Economy,” a study released by the Brookings Institution in July 2011 and based on data from 2003 to 2010, reveals that environmental-based employment in the U.S. comprises 2.7 million jobs in diverse areas of work and now surpasses the 2.4 million jobs in

fossil fuel related industries. In the New York metropolitan area, 152,034 workers are employed in the clean economy that has been growing at an annual rate of five percent since 2003. The largest segments of work are in public mass transit, waste management and treatment, conservation, professional environmental services, recycling and reuse. The fastest growing segments are in wind energy, waste-to-energy, solar photovoltaic, recycled-content and water efficient products. The clean economy is growing globally

and in the U.S., but requires government support to level the playing field with heavily subsidized fossil fuels whose prices do not reflect their true social cost in terms of environmental destruction, carbon emissions, and health expenses. (7)

Here, I will outline how we can promote renewable energy on the state and municipal levels as well as at universities throughout New York State.

**Initiatives at the State Level:**

Seven initiatives that we can carry out on the state level are as follows:

*It is important for you to write and express your concerns to the responsible agencies and officials such as:  
Andrew M. Cuomo, Governor of NYS, Capitol Building, Albany, NY 12224  
Joe Martens, Commissioner, Dept. of Environmental Conservation  
625 Broadway, Albany, NY 12233-0001  
Dr. Howard Freed, Director, Center for Environmental Health,  
NYS Dept. of Health, Flanigan Square, 547 River St., Troy, NY 12180-2216*

1. Increase the percentage of renewable energy in the New York State Renewable Portfolio Standard (RPS). The RPS is a standard for including a minimal amount of renewable energy in New York State's portfolio of electricity resources. In 2010, the New York Public Service Commission expanded New York's RPS target to 30% renewables for 2015. Currently, the RPS is being met with hydroelectric power (now 19% of the total and virtually the same percentage since 2004), an expansion of wind power (less than 1% of the total), a negligible increase of solar power (also less than 1% of the total), and voluntary green power purchases by consumers (1%). (8)

2. Mandate solar and wind power, as appropriate, on all state property which can be paid for by state pension funds as an investment in New York State's future.

3. Mandate solar power, as appropriate, for all new construction, as is now required in California.

4. Support the New York State Solar Industry Development and Jobs Act (Solar Jobs Act) which will set a goal for increasing the amount of installed solar photovoltaic power in New York State.

5. Campaign for a Feed-in-Tariff that will pay generators of solar power a price per kilowatt hour of electricity that is above market prices. Feed-in-Tariff contracts promote renewable energy by providing a secure market for solar power over an extended period of time. Feed-in-Tariffs can be passed as a law by state legislatures or implemented by local power authorities. Currently, there is a campaign for LIPA (the Long Island Power Authority) and NYPA (the New York Power Authority) to initiate pilot Feed-in-Tariff programs.

6. Expand the financial incentives for solar photovoltaic power by campaigning for a NYSERDA On-Bill Recovery Loan Program that will cover the installation of solar photovoltaic panels which can be repaid through a residential utility bill at a low-interest loan of 2.9%. The current loan program, which is part of a state-wide green retrofit initiative to improve building efficiencies, only covers solar

thermal panels. (While a solar hot water system saves electricity, solar photovoltaic panels provide an alternative source of electricity.)

7. Increase state support for research and development and restore a strong connection between innovation and production. If we do not support renewable energy companies in the U.S, we will continue to undermine our own economy, diminish our capacity for technical innovation, and perpetuate our reliance on foreign sources of technology, energy and manufacturing. Research and development is the key to expanding the potential of renewable energy. While we cannot increase the brightness of the sun or the velocity of wind currents, we can develop solar panels and wind turbines that capture more of their energy. The Danish company Vestas has designed a wind turbine that can produce 300 times the amount of wind power as a turbine manufactured 15 years ago.(9)

#### **Initiatives at the Municipal Level:**


We have models throughout the U.S. of how cities are developing plans to reduce greenhouse gas emissions and promote energy efficiency, conservation, and renewable energy.

(1) The first step in reducing a carbon footprint (individual, corporate, or municipal) is to measure this footprint by identifying the sources of greenhouse gas emissions and carrying out a carbon inventory. In 2008, the Carbon Disclosure Project (CDP) and ICLEI - Local Governments for Sustainability created a joint project to assist cities with this measurement. (10)

(2) Based on knowledge of their existing carbon footprint, municipalities can draw up a Climate Action Plan.

For example, the Westchester Action Plan for Climate Change and Sustainable Development, which was adopted in 2008, aims to reduce county-wide greenhouse gas emissions by 20% below 2005 base year levels by 2015 and to achieve an 80% reduction by 2050. This plan outlines strategies to reduce emissions related to five areas: energy, transportation, land use, waste management, and water resources management. (11)





(3) Map out the renewable energy potential of your city. This can be carried out in various ways, such as public hearings, and can be assisted with funds available from the Department of Energy (DOE).

In NYC, the DOE funded a CUNY initiative to map out the solar potential of NYC rooftops. The NYC solar map ([www.nycsolarmap.org](http://www.nycsolarmap.org)) has identified more than 650,000 out of a million NYC residential rooftops that have the potential for solar power. This map can provide a model for cities throughout New York State. Now we know that NYC has the potential to generate enough solar power to provide 41% of peak electricity needs and 14% of NYC's electricity overall. (However, at present, only 400 rooftops have solar power installations.)

(4) Draw up a plan to actualize the renewable potential of your city.

Today, there are two NYC strategies to mandate solar power – the first on all city property and the second, of a more limited nature, to install solar power on NYC public schools. These initiatives can be paid out of city pension funds as an investment in our cities.

The NYC solar map and these proposals for government mandates can provide a model for cities throughout New York State.

#### **Initiatives at the University Level:**

Universities throughout the U.S. are also adopting climate action plans that incorporate energy efficiency and conservation and the replacement of fossil fuels with renewable forms of energy.

NYU's plan, which was released in March 2010, was developed in relation to two commitments:

(1) NYC Mayor Bloomberg's PlaNYC Climate Challenge, which calls on NYU to reduce greenhouse gas emissions by 30 percent by 2017, and (2) the American College and University Presidents' Climate Commitment (ACUPCC) that commits NYU to achieving climate neutrality by 2040.

The NYU Climate Action Plan to achieve climate neutrality by 2040 consists of four main

strategies to reduce greenhouse gas emissions: "reduce energy intensity, generate and use cleaner energy, generate renewable energy, and reduce/offset remaining emissions." (12)

Climate action plans provide a focal point for educational activities based on the idea of the university as a living laboratory of sustainability i.e. we can teach about plant operations on campus as a way to illustrate basic concepts of sustainability to students and the general public. Sustainability literacy is a key aspect of global citizenship and is essential for meeting the challenges of the twenty first century.

#### **Conclusion:**

In conclusion, for every kilowatt hour of electricity generated by renewable sources of energy, we are replacing a kilowatt hour produced by coal or natural gas. The initiatives that I have outlined can facilitate the transition from a fossil-fuel based economy that is leading us to irreversible climate change tipping points to a new, post-carbon society that will guarantee us a future.

#### **Notes:**

(1) See the discussion of the nine planetary boundaries on the Web site of the Stockholm Resilience Centre: <http://www.stockholmresilience.org/research/researchnews/tippingtowardstheunknown/thenineplanetaryboundaries.4.1fe8f33123572b59ab80007039.html>

(2) William McDonough and Michael Braungart, *Cradle to Cradle: Remaking the Way We Make Things*, North Point Press (New York, 2002). See also, Janine M. Benyus, *Biomimicry: Innovation Inspired by Nature*, Harper Perennial (New York, 2002) and the Web site: <http://biomimicry.net>. This new Biomimicry 3.8 Web site, which refers to 3.8 billion years of evolution, includes links to the Biomimicry Institute, among others.

(3) See, Stephanie Strom, "Companies Pick up Used Packaging, and Recycling's Cost," *New York Times*, March 23, 2012, <http://www.nytimes.com/2012/03/24/business/companies-pick-up-used-packaging-and-recyclings-cost.html?pagewanted=all>

(4) See, for example, Felix Preston, "A Global Redesign? Shaping the Circular Economy," March 2012, <http://www.chathamhouse.org/publications/papers/view/182376> See also the challenge papers posted on the Global Transition 2012 Web site: <http://globaltransition2012.org/challenge-papers>

(5) Leslie Kaufman, "From Shore to Forest, Projecting Effects of Climate Change," *New York Times*, November

16, 2011, <http://www.nytimes.com/2011/11/17/nyregion/climate-change-to-affect-new-york-state-in-many-ways-study-says.html?pagewanted=print>

(6) John Farrell and David Morris, Energy Self-Reliance States, New Rules Project, May 2010. The report is now posted on the Web site of the Institute for Self-Reliance: <http://www.ilsr.org/energy-selfreliant-states-second-and-expanded-edition>

(7) See, "Sizing the Clean Economy: A National and Regional Green Jobs Assessment," July 13, 2011: [http://www.brookings.edu/metro/Clean\\_Economy.aspx](http://www.brookings.edu/metro/Clean_Economy.aspx)

(8) For a description of New York State's Renewable Portfolio Standard (RPS), a list of eligible forms of renewable energy, and incentives for these renewables, see the information on New York State as of November 2011 that is provided on the Web site for the Database of State Incentives for Renewables & Efficiency (DSIRE): [http://www.dsireusa.org/incentives/incentive.cfm?Incentive\\_Code=NY03R&re=1&ee=1](http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=NY03R&re=1&ee=1)

(9) See, Kate Galbraith, "Wind Power Gains as Gear Improves," New York Times, August 7, 2011, <http://www.nytimes.com/2011/08/08/business/energy-environment/wind-power-gains-as-gear-improves.html?pagewanted=print>

<http://www.nytimes.com/2011/08/08/business/energy-environment/wind-power-gains-as-gear-improves.html?pagewanted=print>

(10) See the ICLEI Web site for a description of this project: [http://www.iclei.org/index.php?id=1487&no\\_cache=1&tx\\_ttnews\[tt\\_news\]=3021&tx\\_ttnews\[backPid\]=983&cHash=f254fdd224](http://www.iclei.org/index.php?id=1487&no_cache=1&tx_ttnews[tt_news]=3021&tx_ttnews[backPid]=983&cHash=f254fdd224) See also the Web site for the Carbon Disclosure Project (CDP): <https://www.cdproject.net/en-US/Pages/HomePage.aspx>

(11) For the Westchester Action Plan for Climate Change and Sustainability, see: [http://www.westchestergov.com/pdfs/ENVFACIL\\_globalWarmingAction2008FINAL.pdf](http://www.westchestergov.com/pdfs/ENVFACIL_globalWarmingAction2008FINAL.pdf)

(12) For the NYU Climate Action Plan, see: <http://www.nyu.edu/nyu2031/nyuinny/sustainability/climate-commitments.php>

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## Excerpted from AOL Energy newsletter April 2012

Misconception and myth hang over the entirety of the US energy sector, but with renewable energy equally likely to get bogged down in political wrangling over subsidy levels and climate change, getting to the truth remains a particular challenge.

Accounting firm Ernst & Young is accustomed to crunching data from a wide range of sources and sorting it into manageable categories.

In discussing the report, the indices and the results this year that placed California at the top of the heap but had some surprising breakouts, Ernst & Young LLP Senior Manager, National Tax Michael Bernier dispelled some of the most entrenched myths in the renewable energy business.

***Myth One:*** *The renewable energy industry is facing an unprecedented challenge in the end of the production tax credit at the end of this year.*

The renewable energy industry does face a number of challenges this year and next, says Bernier, but none of them are unique or insurmountable. "The wind industry has been through this before, and it has survived and grown," Bernier said, referring to the possible end of the PTC. Bernier says his report is relatively upbeat, but that reflects his belief that "a solution exists to all the problems that exist."

***Myth Two:*** *Wind energy will still lead growth in renewable energy.*

Bernier says it is actually solar energy that will attract the most growth in the renewable sector over the next three to five years, and that resulted in a much heavier weighting for solar in the accounting firm's renewable energy attractiveness report. The solar industry is "clicking on all cylinders," Bernier said, with an attractive environment for large-scale utility projects, domestic-scale home solar panels and medium-scale distributed generation solar.





**Myth Three:** *Geography and weather are the determining factor in how appealing a market is for renewable energy.*

People oversimplify when they talk about solar, Bernier said, presuming that projects cannot be profitable or contribute when they are outside of sunny areas. In fact there are about 10 different factors in determining the success of a solar energy installation, he said, including the cost of the power a unit of solar energy is replacing. In Boston, Massachusetts, although sun is comparatively rare, power prices are high enough that even intermittent solar when combined with incentives can make a project attractive.

**Myth Four:** *Natural gas and renewables are always competitors.*

Low natural gas prices are not the end of the world for renewable energy, says Bernier. While natural gas generation currently sets the marginal price for electricity, the price of renewable energy generation is falling fast enough to compete with other forms of generation, even natural gas. "High power prices would help expedite the adoption of renewables, but renewables can already compete in many markets," Bernier said.

**Myth Five:** *Transmission can always be developed once the big renewable energy projects are built.*

The challenge in the US for renewable energy is that it is a large country with many different power market regimes, Bernier said. "Transmission is a big factor in moving up or down the attractiveness index...if you don't have transmission you can't build a large-scale project," he said.

**Myth Six:** *National players in renewable energy can only succeed in their own markets*

"We are seeing our client base across a much-larger swathe of the globe than it has been previous years," Bernier said. New entries from international markets are entering the US and competing on price and scale with US firms, in part because they are becoming accustomed to the tax-code-based US incentive system.

**Myth Seven:** *Infrastructure funds are the shining hope for a second boom in renewable energy financing*

While completed renewable energy assets are attractive to many "second-level funding sources" looking for reliable, long-term returns, many infrastructure funds and pension funds are actually limited in their ability to take on early-stage funding of new renewable energy projects. Many of them do not pay taxes because they hold pension funds or retirement funds, and thereby cannot use the tax incentives that are used to fund new projects. The tax equity market, in which taxpayers assume the incentives, continues to play a role but has struggled to grow since 2007 even as the pipeline of qualifying renewable energy projects has grown.

**Myth Eight:** *The US military's renewable energy efforts will boost the market for renewable energy before 2015*

The military's role as a purchaser of renewable energy is important because it is less price-sensitive than private sector buyers; it is focused on other mission goals as well, like fuel security. But the investments the military is making are "really cutting edge," Bernier said. "[They] have the ability to spend to fix those needs, but all that is beyond the three to five year window the market is currently looking at."



# In Response to David Brooks' New York Times Column, "Shale Gas Revolution" 11/4/11

By David Ferguson, Vice President



*Shale shaker isolating drill cuttings from the drilling fluids.*

Some months ago on the PBS News Hour David Brooks lamented that the Republican candidates had failed to do their homework, a comment that echoed in my mind as I read his column ticking off the gas industry's talking points with nary a nuance. How did this otherwise ostensibly thoughtful writer's fracking column disappoint? Let me count the ways.

## **1. The dehumanization game**

Brooks lamented that industry and environmentalists were "dehumanizing" each other. At the same time reserving the fullweight of his scorn for such "special interests" as "not-in-my-backyard activists," evidently assuming that this dismissive characterization of people working to protect the only environment we have could not itself be construed as dehumanizing. The dedication of people in our group, the CWCWC who have been working to protect New York City's watersheds since 1997, for the most part at less than no pay, defy Brooks' lame stereotype.

NIMBY, as I understand the acronym, means opposition to a major project that will serve the larger community, such as a waste water treatment plant, not the positioning of profit driven pollution prone industrial facilities erected literally in thousands of actual backyards. One of those "activists" Tomas Linzey, a founder of the Community Environmental Legal Defense Fund, referring

to opponents of fracking, observed that,

The towns where they've been successful are not liberal enclaves by any stretch.... Here are rural conservatives passing things saying we won't let our rights be taken away and are using a local law as a municipal, collective civil disobedience tool to actually push up against the state....(1)

At 78 I am of that generation Brooks invited to write to him, hoping our experience might vindicate his view of where the nation went wrong. I live in Manhattan. My backyard is in the watersheds that provide our city water. I drink milk and wine from upstate, where much of the produce I consume is grown on organic farms. I would much rather be writing poems, plays and music, but, at the risk of waxing apocalyptic, without a planet poetry isn't going to matter. Brooks clearly disagrees with such dire prognostications, as is his right. However, it would be helpful if he could find some way to exercise that right without disparaging the motivation of those who see grave danger in the path that we are on.

## **2. Those pesky vested interests**

How is it that the definition of "special interests" has been turned on its head; coming to refer to those who act out of principle or simply to protect their lives, land and livelihoods, while corporations, whose only objective is profit, have been magically transformed into bastions of socially responsible behavior?

Once upon a time, banks and insurance companies were considered special interests. Now, ironically, despite the economic disaster their legally dubious adventures perpetrated, banks and insurance companies have a legitimate concern about properties leased for fracking, a demonstrably hazardous process "expressly forbidden by mortgages because they can harm resale values," as reported by Ian Urbina in The Times,(2) especially at a time when the housing market is chronically depressed.



As for those opposed to fracking in their backyard – if there was money to be made safely, especially in this Wall Street induced recession, why on earth would so many people take so much time out of their lives to oppose it? Their growing opposition is based on carefully researched knowledge of the process and testimony of those in other states, whose lives have been ruined by fracking..

Brooks, at a comfortable distance from those whose lives have been devastated, worries that, “America will blow this blessing,” passing up this complex and poisonous process suffered by residents in Pennsylvania, Colorado, West Virginia, Wyoming, Texas, (and even in New York from the supposedly less destructive vertical fracking), people out there on their own, at the mercy of the most profitable, global industry the world has even seen, composed of multi-national corporations such as Exxon, (now heavily invested in the Marcellus shale play), positioned to operate in many respects as its own sovereign nation. In his review for Time of Steve Coll’s Private Empire: ExxonMobil and American Power, Bryan Walsh cites this passage:

The book also captures a 2001 exchange between then President George W. Bush and then Indian Prime Minister Atal Bihari Vajpayee. Worried that Exxon was delaying a deal with India’s largest state-owned oil company, Vajpayee asked Bush: “Why don’t you just tell them what to do?” The President’s response was telling: “Nobody tells those guys what to do.”(3)

Presidents come and go, but Exxon continues, as it’s former CEO, Lee Raymond once observed. State and federal governments are little, if any, help, going as they do with the flow of gas. So much for the Supreme Court finding that an individual is equal to a corporation treating citizens as collateral damage while funding the election of those who make the laws that are supposed to protect us.

Take for example, the law in New York state known as “compulsory integration” whereby, if 60% of a town’s land has been leased the land under your property may be fracked without your permission. No reckoning is made of the ongoing collateral damage, the fracking-induced

healthcare costs, lost wages, devalued property, the loss (in perpetuity) of farmlands and aquatic preserves and damage due to the migration of methane, toxic brine and radioactive materials to the surface. To be sure, such opponents of fracking have a vested interest in their lives, land and livelihoods.

“Compulsory integration” might be justified to extract such mineral deposits as coal and gold. However, it is quite another matter to inject, under enormous pressure, a cocktail of chemicals (the exact formulation of which the industry regards as a proprietary secret, but which is known to contain such cancer-causing chemicals as benzene), and then blasting horizontal shale plays up to a mile in length, releasing fugitive methane and mobilizing radioactive materials.

Approximately 20% of this highly toxic fluid comes to the surface as what the industry tamely labels as “produced water,” frequently contaminating the source of a community’s drinking water, leaving the remaining 80% underground to migrate to the surface over time through abandoned well shafts, natural and fracking induced fissures penetrating strata subject to seismic events, with methane leaking into homes that become, not their castle, but a bomb.

Such unprecedented, destructive wholesale confiscation of a citizen’s property, arbitrarily depriving families of the peaceful enjoyment of their own homes. One would think those of a conservative disposition might find such “takings,” at the very least, dehumanizing. At a time when the Right persistently invokes “original intent” as the bedrock of constitutional jurisprudence, how is it that the sanctity of private property can be so egregiously violated and with impunity?

An article in Crain’s juxtaposed the windfall of Pennsylvania landowner, Jeff Decker, who “believes drilling won’t destroy his community,” with the experience of Pat Farnelli:

The landowners, many of whom work in the moribund quarry industry, considered it found money. None consulted a lawyer. “This entire road was in a state of desparation,” she explains.



Now, desperation truly is at hand. “For the last year and a half, they’ve been drilling and fracking around my house constantly,” Ms. Farnelli says. At night, stadium lights from a dozen drill sites flood her daughter’s bedroom, and workers chatter on walkie-talkies. The fracking shakes her old house, and blasting is common. “I don’t even flinch anymore,” Ms. Farnelli says as an explosion reverberates across the landscape.

Trucks rumble by every few minutes. Carter Road was too narrow for them, so the driller widened it – chopping off the edge of Ms. Farnelli’s lawn. “Never asked us,” she says.

“We had flower beds there.” Earthmovers changed the pitch of the hayfield above her house; now the road and her driveway wash out when it rains.

Carter Road’s biggest problem is the drinking water. One water well after another filled with sediment, methane and unknown elements....

Last New Year’s Day, neighbor Norma Fiorentino’s water well blew up. A spark from the pump might have ignited methane that, freed by drilling, had migrated underground. Blocks of concrete were blown across the yard. The driller refused to provide bottled water until last week, when a Scranton newspaper splashed the story across its front page. Says Ms. Farnelli, “We’re basically ruined.”

Dozens of similar stories are posted at drilling-opposition sites like un-naturalgas.org.<sup>(4)</sup>

Clearly, money is there to be made by local landowners. A few may even escape the devastation that accompanies fracking, especially if they happen to be absentee landowners. Communities may also experience pyrrhic infusions of cash, but at the cost of irreparable damage to neighbor’s lives and land, and ultimately to the environment that has till now, sustained the town. What is the legal and ethical basis for playing Russian roulette with the health

of your family and that of your neighbors? This is the complex, inherently dangerous and pollution prone industrial process, championed by an eminently powerful, multi-national, obdurately profit hungry industry, that New York State, with its slashed staff and severe budgetary constraints, determines it can safely regulate for the good of the state.

In fact, it hasn’t been environmentalists activists, but the gas drilling industry’s dismal record that has been the most potent force in creating opposition. People, often in desperate financial straits, knowing next to nothing about the dangers, prevailed upon by landmen into signing leases, without full disclosure of certain risks, only come to realize they’re horrific mistake when it’s too late. Without resources to fight the richest industry in the world, often suffering from contaminated water and air, with mounting doctor’s bills, spoiled crops and dying livestock, they have had no alternative but to settle, signing a non-disclosure agreement. They can’t sell their property and move because, with fracking under way, banks won’t give mortgages.

Who’s going to by a house with a poisoned well?

### **3. Welcome to the middle-ground**

By breezily positioning himself between the “‘drill baby, drill’ conservatives” and “some environmentalists, who seem to regard fossil fuels as morally corrupt,” Brooks clearly intends to establish himself in the sensible middle between distasteful extremes, however awkward it may be to claim this space while expressing unbounded admiration for the inventor of fracking, in addition to extolling the virtues of various companies that stand to profit from expansion of the process, while at the same time characterizing opponents as NIMBY.

What, exactly, is so special about the interests of citizens fighting to protect their families from a process that the record shows has already devastated so many lives throughout the country? How is it that the overwhelming evidence of fracking induced suffering, supported by peer reviewed science, can be dismissed as merely anecdotal while proclamations by an industry with substantial vested interests, that can afford to protect itself by getting critical laws rescinded, forcing desperate litigants into non-disclosure





agreements, still manages to retain credibility?

The industry's "trade secrets" policy also conveniently precludes definitive identification of chemicals that would strengthen a plaintiff's case in court with evidence directly implicating the fracker as the source of contamination.

Excluding such evidence is tantamount to prohibiting the use of DNA or fingerprint testimony in a criminal trial. Where is the middle-ground to be found when critical forensic evidence is declared off-limits and equal protection under law can be so blatantly circumvented?

#### **4. Dangers? Some, of course, but not to worry**

In light of Brooks' dismissive acknowledgment that, "Like every energy source, fracking has its dangers. Consider what James Northrup, in the energy business for 30 years, has to say just about the magnitude of the blasts set off to release the gas bound up in shale:

Horizontal hydrofracking of shale gas formations is essentially a hydrobaric underground explosion, ie. a bomb. A very powerful, very dirty pipe bomb. A bomb's explosive power is a function of the pressure wave it generates and the mass of air or water it displaces. An "air bomb" used in Afghanistan as an anti-personnel device has a pressure wave of about 500 lbs per square inch (psi). It can be heard up to 100 miles away. A horizontal hydrofrack in shale can have pressures approaching 15,000 psi, or 30 times that of an air bomb. That is equivalent to the water pressure 6 miles deep in the ocean. The volume of fluid in a hydrofrack can approach 1 million gallons, or almost 10 million pounds of fluid, about the same weight as 2,500 automobiles. The fracking fluid contains chemicals that would be illegal to use in warfare under the rules of the Geneva Convention banning chemical weapons. This all adds up to a massive explosion of a "dirty bomb" underground. (5)

Given the force of these explosions and the injection of millions of gallons of water, with chemicals and sand under extremely high pressures, it should not be surprising that the

jostled substrata might induce unintended consequences. As reported by RT America:

...[T]he United States Geological Survey has published a finding confirming that processes like fracking can be to blame for "natural" disasters.

"Earthquakes induced by human activity have been documented in a few locations in the United States, Japan and Canada," writes the USGS. "The cause was injection of fluids into deep wells for waste disposal and secondary recovery of oil and the use of reservoirs for water supplies."

Out West, geologists have blamed fracking on earthquakes that unexpectedly shook up the state of Arkansas, which recently saw over 20 small tremors in a single day. Freak earthquakes have also occurred in regions of Texas, New York and Oklahoma that should not be likely sites of epicenters, though those locales have all seen a rise in fracking in recent years.

Multi-stage fracking, which can drill several miles deep in the Earth, has only become prevalent in recent years. Once introduced, however, Arkansas, West Virginia and Texas all saw an unexpected increase in quakes across the region.

The correlation has caused concern in other parts of the country, including West Virginia, where residents are asking lawmakers to reconsider the legality of fracking, which can not only cause earthquakes but is overall detrimental to the local ecosystem. One incident in central Virginia occurred in 2008 when fracking caused an explosion of a natural gas pipeline that created a fireball that stretched up to half a mile long and tall and injured five people.(6)

Hopefully assuming Brooks' homework included the meticulously documented Drilling Down series by Ian Urbina in The Times, it is hard to imagine how he, or anyone else, even someone whose support for fracking survived such compelling evidence, could embrace such casual

optimism as, “the inherent risks can be managed if there is a reasonable regulatory regime, and if the general public has a balanced and realistic sense of the costs and benefits.”

To begin with, the most immediate, unconscionable costs will be borne by those whose lives will have been ruined while the putative local benefits will accrue to those fortunate enough not to live over a shale play or downwind of the noxious fumes or downstream of polluted streams. Though no one will be able to avoid the 100-truck caravans of 18-wheelers belching diesel exhaust.

Furthermore, those “benefits” are bound to sour as upstate economies struggle, after the initial infusion of money, with the toxic detritus of industrialized landscape, reducing the economic viability of the state as a whole; as aquifers are poisoned in perpetuity; as contaminated farms, dairies and wineries are taken out of production; as towns address their damaged roads with dollars from recreational activities drying up while families abandon the state for healthier environments.

Beyond the immediate devastation to those who currently live over the shale plays, fracking still threatens the New York City, despite the prohibition of drilling in the watersheds. The consequences of blasting deep shale formations in the vicinity of watersheds defy precise control. It’s unlikely that improvements in the final SGEIS will be sufficient to protect streams and reservoirs from the explosive forces unleashed by fracking or the drifting of toxic air into the city from as far as 200 miles away.

Furthermore, blasting outside the watersheds in the vicinity of the city’s subterranean aqueducts is certain to threaten their integrity. In addition to

the potentially catastrophic loss of water such damage would also expose these critical pipes to the infiltration of toxic chemicals. Even without fracking the DEP is having to build a three-mile bypass tunnel around a portion of the Delaware Aqueduct that has been leaking up to 35 million gallons of water a day since 1990, a project likely to cost over \$2 billion. Should the aqueducts and/or reservoirs be contaminated, the cost of a Catskill/Delaware filtration plant would be well north of \$8 billion, if in fact filtration could remove such toxic and potentially radioactive materials. Since water and sewer rates constitute a regressive tax, the burden would fall on those least able to pay.

(To be continued)

**Notes:**

(1) Tara Lohan, Vision: How Small, Mostly Conservative Towns Have Found the Trick to Defeating Corporations, AlterNet, February 12, 2011

(2) Ian Urbina, Officials Push for Clarity on Oil and Gas Leases, The New York Times, November 25, 2011

(3) Bryan Walsh, Inside the Death Star — Also Known as Exxon, Time Magazine, May 01, 2012

(4) Erik Enquist, The New Gold Rush, Crain’s New York Business, November 1, 2009

(5) James L. Northrup, statement to Otsego County Board, July 21, 2010. James L. Northrup was in the energy business for 30 years. Having sold a company to AtlanticRichfield (ARCO) in the late 1970’s, he was a Planning Manager at ARCO. He has been an independent oil and gas producer in Texas and New Mexico and has owned onshore and offshore drilling rigs, in Texas, Louisiana, Oklahoma, west Africa, Brazil and the South China Sea.

(6) RT America, part of an international media company, Published: 24 August, 2011

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MAY JUNE 2012

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