

Future energy: natural gas fracking--who blew up the 'bridge to the future'?

Jon Entine | Ethical Corporation

December 13, 2011



Energy Tomorrow

Williams' natural gas facilities in Piceance Basin, April 15, 2009.

Article Highlights

- Anti-fracking groups throw a wrench into science by not allowing abundant, clean fuel to be energy game-changer

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- natural gas is essential bridge to renewable energy era

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- While we are awash in natural gas, skepticism over the mass scale feasibility of alternatives has escalated

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An anti-fracking philanthropist has turned environmentalists into precautionary conservatives. How did this happen?

Environmentalists are not playing it straight on natural gas. Until recently, they have been amongst its most aggressive promoters, even coining the phrase “bridge to the future.”

“Natural gas is inherently cleaner than coal or oil,” wrote the DC-based NGO, Renewable Energy Policy Project, in 1997, in a typical analysis.

“Since renewables will be unable to meet most energy needs for some time, gas is an essential bridge to a renewable energy era.”

As recently as 2008, progressive environmentalists, such the Pew Center on Global Climate Change, [heralded its promise](#). “We also need to consider ... how to better support natural gas as a bridge fuel to a more climate-friendly energy supply,” said president Eileen Clausen in a widely circulated speech. Natural gas was seen as a marriage of enlightened capitalism and pragmatic progressivism—a fossil fuel, whose reserves would gradually diminish, as the price of alternative energy became cost competitive.

Now, many activists call natural gas a “bridge to nowhere,” as [Earth Island Journal](#) recently headlined. Inexpensive comparatively clean natural gas is portrayed as a Trojan horse that will bring “water contamination, air pollution, global warming, and fractured communities.” The morphing of natural gas from ‘a necessary alternative to dirtier energy’ to ‘worse than oil and coal’ happened, metaphorically, almost overnight. What’s behind this seismic turnaround?

Cheap gas v. alternatives

There are two factors, one widely reported and the other ignored: (1) advances in gas exploration and extraction fracking technology; and (2) a below-the-radar outpouring of funding by connected, wealthy anti-shale gas antagonists—and one activist philanthropy in particular, the Park Foundation headquartered at the epicenter of the US shale gas boom in Ithaca, New York. It’s also the home of Cornell University, which has become the academic face of the anti-shale gas movement.

Economically, shale gas is a disruptive technology, in the good sense. Recently identified unconventional reserves in stable, western countries are reshaping the world’s geopolitical landscape. [Shale gas has been predicted to rise](#) from 1% of US gas supplies in 2000 to 50% by 2020. There are substantial finds in the UK, Europe, Israel, India, Brazil, South Africa and Australia. The [International Energy Agency](#) estimates there is quarter of a millennium’s worth of cheap shale gas in the world based on current energy consumption.

In contrast, while we are awash in natural gas skepticism over the mass scale feasibility of alternatives has escalated. Overflowing supplies destroy Big Green’s argument that fossil fuels will get more and more costly till even wind and solar power are competitive. That undermines the argument for massive subsidies of alternatives that may never deliver competitive bang for the buck. No longer is natural gas a bridge to the alternative energy future. Much to the chagrin of energy activists, natural gas now is the future.

The progressives’ former ally is now being cast as Public Enemy No. 1. Even though the vast majority of horizontal drilling and fracking occurs below water tables so aquifers are not affected, opponents are stirring up precautionary fears and NIMBY—not in my back yard—protests.

We’ve come to expect environmental orthodoxy—ignoring cost-benefit analysis—from ideological NGOs and the hard left media, such as [Environmental Working Group](#), [Mother Jones](#), [Earth Times](#) and the like that reflexively attack industry, and that’s what’s happened. These groups don’t mention that state regulators, Republican and Democrat, in Alaska, Colorado, Indiana, Louisiana, Michigan, Oklahoma, Pennsylvania, South Dakota, Texas and Wyoming state there have been no documented cases of groundwater contamination from hydraulic fracking (although there is a [dispute about one shallow site in Wyoming](#)).

More sober environmentalists such as the Sierra Club, Environmental Defense Fund and Natural Resources Defense Council continue to reject the simplistic demonization of shale gas. “At the EDF, we don’t pick fuels. We are realists; we recognize that fossil fuels will be around for a while,” says [senior policy advisor Scott Anderson](#), noting that most states have considerable experience in regulating well construction and operation. “If wells are constructed right and operated right, hydraulic fracturing will not

cause a problem.“

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But hardcore opponents say there should be no middle ground: the environment is forever so only a total ban is acceptable. Consequently, scientists who consider trade offs face vitriolic criticisms. Much as the far right demands fealty on hot button issues such as no taxes or anti-unionism, environmentalists are determined to turn opposition to shale gas into the ideological litmus test of our time.

The anti-shale gas mindset has gotten so pervasive that The New York Times's public editor has [twice taken its own reporters to task for channeling anti-fracking propaganda](#). How did we get to this state where strident environmentalists and campaigning journalists define the debate while mainstream scientists and sober minded NGOs are ignored?

The media-philanthropy-university complex

What if wealthy donors are deploying their money to manipulate public opinion and support research whose conclusions often conflict with science? That in a nutshell is

the media rationale for scrutinizing public relations efforts by Big Business.

Journalists should be truth vultures. Expose the puppeteers. But the corrupting power of money and the ego enhancing romance of influence have no ideological limits. That's the story unfolding in New York's Tompkins County in the middle of the vast Marcellus shale formation. In this case, however, the key actors are not industry apologists but 'white as snow' philanthropists, NGOs and journalists.

Over the last two years, Cornell University has emerged as the locus of academic study challenging the benefits of shale gas drilling. Research by a select group of scholars—oddly, none is considered experts in this field, even at Cornell—has been ballyhooed around the world, with the New York Times, consciously or unconsciously, playing the leading role of megaphone.

In April 2011, the Times helped transform Cornell professor Robert Howarth into the ideological rock star of anti-shale gas activism. It ran a report and blog promoting a short article Howarth and Anthony Ingraffea had just published in *Climatic Change Letters*, a journal that had never before addressed the shale gas phenomenon. The authors claimed that shale gas generates more greenhouse gas emissions than the production and use of coal. It would be difficult to overstate the influence of this paper, which generated thousands of news reports around the world and was even debated in the British parliament and the European Union.

"There is a lot of money invested in shale gas development," Howarth told me. Our research is threatening that, which makes it political."

If the debate has become sharply contentious, Howarth is at least partly responsible. He often describes himself in ways that create the impression he has been researching fossil fuel issues his entire career. “I’ve worked on the water quality effects of oil and gas development for 35 years off and on,” [he said recently](#). His training is in oceanography, with his primary concentration in marine science, particularly coastal marine ecosystems. Until his published letter, he had never published any university level research into natural gas, let alone shale gas.

Howarth and his wife, Roxanne Marino, a biochemist at Cornell and partner at his lab, are well-known long-time environmental activists and [outspoken opponents of developing shale gas reserves](#). Just months before the release of his letter, Howarth appeared in a YouTube video wearing an anti-fracking button at an anti-natural gas rally outside an Environmental Protection Agency meeting in Binghamton, NY, [saying](#), “All this talk that it’s a clean fuel, as some say, is not based on any scientific analysis.” He continues to passionately and publicly lobby against shale gas.

Marino is the town supervisor in Ulysses, a small town in Tompkins County. For more than a year, often with Howarth at her side, she oversaw the implementation of an anti-fracking law through the local town council. “Industrial-scale hydraulic fracturing as proposed in the shale formations of the Finger Lakes and Southern Tier is a land, water, and chemical-intensive activity that poses unacceptable risks to human health and safety and environmental degradation,” [Marino is quoted as saying](#), months before the publication of Howarth’s article.

It’s particularly curious that the Times and other publications go out of their way to portray Howarth’s analysis as definitive. Each time the Times and anti-shale activists cite his letter, they make a make a point of mentioning that it was peer reviewed. But that’s misleading. It did not undergo classic double blind review. The editor, Princeton astrophysicist Michael Oppenheimer, acknowledged that neither of the two reviewers—classic peer review has three—had backgrounds in natural gas or geology, which they would have needed to make an informed evaluation.

With only a few exceptions, Howarth’s paper has been [widely criticized](#) by scientists across the ideological spectrum. The Department of Energy’s National Energy Technology Laboratory [reviewed the same data](#), concluding that natural gas, even from shale, results in far less emissions than coal. But that study did not make it into the NYT.

In August, scientists at Carnegie Mellon University, in a [study partly funded by the Sierra Club](#), concluded that shale gas has significantly less impact on global warming than coal, a direct rebuke of the Cornell study. “We don’t think they [Howarth et al] are using credible data and some of the assumptions they’re making are biased. And the comparison they make at the end [that the development of shale gas generates more greenhouse gas emissions than the production and use of oil or coal], my biggest problem, is wrong,” [wrote lead researcher Paula Jaramillo](#).

That same month, independent researchers from the [University of Maryland](#) also published a [peer-reviewed response](#) to the Howarth study, again to no notice in the popular media. “[A]rguments that shale gas is more polluting than coal are largely unjustified,” they concluded.

The article was received skeptically even by liberal experts at EDF and the NRDC, but their comments got little play. As the [Worldwatch Institute](#) wrote,

“Despite differences in methodology and coverage, all of the recent studies except Howarth et al. estimate that life-cycle emissions from natural gas-fired generation are significantly less than those from coal-fired generation.”

It's unusual for an article to spark such consistently negative reaction. Even more striking, most articles on this controversy, particularly in the New York Times, seem to present Howarth's study as definitive.

Howarth's colleagues at Cornell, Lawrence Cathles, Larry Brown and Andrew Hunter, with years of expertise in this area, [have written a stinging response](#) accepted for publication in January's Climactic Change Letters. They characterised it as “seriously flawed,” more ideology than science, noting, “the assumptions used by Howarth et al are inappropriate and ... their data, which the authors themselves characterise as ‘limited,’ do not support their conclusions.”

When asked his reaction to the spate of anti-fracking cheering in the media ignited by Howarth's study, editor Oppenheimer volunteered almost apologetically that he hoped it would be part of an ongoing search for truth. “That's the way academic research progresses,” he told me, noting Cathles' upcoming response. Michael Levi of the Council on Foreign Relations was not so charitable. “I worry what this paper says about the peer review process and the way the web treats it,” he wrote in a [summary rebuttal](#).

Web of connections

Much of the anti-fracking research at Cornell, including Howarth's modest burst of scholarship, is possible because of the generous support of the Park family of Ithaca, through its well-endowed trust, the [Park Foundation](#). Its president, Adelaide Park Gomer, and her daughter, Alicia Park Wittink, are openly antagonistic of natural gas development. And they've found ideological soul mates at Cornell and at dozens of influential NGOs, from Friends of the Earth to the Coalition for Environmentally Responsible Economies (CERES) that receive contributions from Park.

The foundation funded the totemic video of the anti-shale gas movement, [Gasland](#), the cinematically engaging but [scientifically questionable](#) documentary that made the rounds at Sundance, Berlin, Tokyo and Cannes, jumpstarting the backlash against shale gas. Park has sponsored anti-shale gas shareholder resolutions at the annual meetings of Chevron, ExxonMobil and Ultra Petroleum in alliance with the NGO, As You Sow, which Park also supports and which reliably churns out anti-shale gas propaganda.

Wittink is on the board of the Environmental Working Group, Mother Jones magazine and the Center for a New American Dream, all charity recipients noted for their anti-shale gas vehemence. Gomer, a vocal shale gas opponent, has signed several [anti-fracking petitions](#), this one in September

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2010:

Hydrofracking will turn our area into an industrial site. It will ruin the ambience, the beauty of the region. But, moreover it will poison our aquifers. We can live without gas, but we cannot live without water. As a cancer survivor, I am especially concerned about the health repercussions! It is obvious that the 600+, as yet undivulged, chemicals that are used to extract the gas will not promote long healthy lives.

Gomer is also on the board of trustees of Ithaca College, which to an even greater extent than Cornell depends upon the largesse of the Park family. Its leading voice is biologist Sandra Steingraber, who, like the foundation, believes shale gas should be the litmus issue for progressives. "I have come to believe that extracting natural gas from shale using the newish technique called hydrofracking is the environmental issue of our time," [she wrote](#).

The Park foundation [lists assets of \\$320 million](#), guaranteeing that its views will be well represented. In 2010, it contributed \$19m to various causes, more than \$3.5m to seed dozens of anti-shale gas projects.

Mother Jones, Earth Island Institute and Yes! Magazine among numerous media organisations have exclusively carried articles sharply critical of shale gas. They each received sizable donations from Park in 2010, \$144,000 to Mother Jones.

Park also funded a widely circulated YouTube video on "Fracking Hell?" produced by Link Media's Earth Focus. It also donated \$50,000 to support distribution of the the influential Public Media radio program in the US hosted by Dick Gordon that regularly pilloried shale gas."

Curious about the recent sudden explosion in "grassroots" uprisings opposing shale gas? Southern Environmental Law Center received \$125,000; Food and Water Watch banked \$150,000; Community Environmental Legal Defense Fund operating in 110 municipalities got \$35,000. The list goes on and on.

Park has injected millions of dollars into anti-shale gas education campaigns across the country, including \$158,000 donated to Ithaca College for the development of "training kits" to ensure that children are exposed to only one side of this issue. It even funds the Green Guerrillas Youth Media Tech Collective, a group of teenage minorities getting job training in exchange for making an [anti-fracking movie](#).

Park also provided \$100,000 to seed a [separate anti-Marcellus project](#) at Cornell's Department of City and Regional Planning, resulting in a [paper](#) and [webinar](#) contending that the benefits of shale drilling is overstated and will ultimately lead to an economic collapse in the region. The department has produced 13 "[working papers](#)" and "[policy briefs](#)" with the kind of narrow ideological conclusions one expects from an industry-funded "research center" generating propaganda for hire. Yet another Park-funded project is the anti-shale gas Cornell Cooperative Extension Natural Gas Resource Center, which has created an "[Online Toolkit for Municipal Officials and Community Leaders](#)" to develop expertise in battles against shale gas development.

Of course, philanthropists of any ideological stripe have a right to support any cause of their choosing. But big money raises conflict of interest issues,

no different than the potential for corruption posed when industries fund lobbying against policies they find objectionable. Journals and researchers that receive funds should be disclosing conflicts and the media should be reporting about them. But that's not happening.

The public is usually only presented with one side of the story—anti-industry. For example, on November 25, the Times [ran a front page investigation](#) noting that “energy companies have been pouring millions of dollars”—\$3.2m over two years—in support of shale gas, but has ignored the easily discoverable fact that organized anti-shale gas groups, led by Park, have poured more than twice as much into media and public lobbying efforts.

The Park Foundation has not responded to requests for an interview. Professor Howarth told me, “\$35,000 won't buy my opinion,” a reference to the first of two grants he has received from Park. He also expressed confidence that his analysis and conclusions are “solid” and that large environmental NGOs, with which he remains in close contact, will turn against shale in due time. “They're still heavily invested in their prior statements that shale gas is a win-win solution,” he said. “It will take them some time to come to grips with the new data and move towards a new position. Science moves slowly.”

Zero sum myopia

With the shale boom radically altering the energy chessboard, panicked ideologues are resorting to a tired ploy: pitting natural gas against alternative sources as if generating energy is a zero-sum game. In a [fact free tirade](#) against the shale gas industry published in November, Princeton University economist and Times columnist Paul Krugman made it seem as if the industry gets a free pass on externalities—the health and environmental impact from natural gas production—and seeks exemption from environmental and safety standards—“special treatment for fracking” he puts it—that would amount to a public subsidy.

Cost benefit analysis has shown that hydro, wind and solar create as many if not more externalities than natural gas. And even at this early stage in the shale gas revolution, regulators and industry are partnering to develop oversight regimes so that fracking, though not totally free from consequences, will be safer. New York has a web of state of the art restrictions in place or ready to be instituted on waste disposal, well construction and water production. “In a number of areas these regulations are more stringent than in other states,” said Kate Sinding, a senior attorney with the NRDC.

In Pennsylvania, Chesapeake Energy has spent more than **\$90 million** to repair 160 miles of state roads damaged by the company's trucks. The state's Department of Environmental Protection has gotten [industry cooperation](#) to increase permitting fees to hire field inspectors. Pennsylvania's cautious embrace of shale gas has already led to an economic revival in once depressed areas.

“[Unconventional natural gas] is unstoppable,” Jesse Ausubel, an ecologist at Rockefeller University in New York, [said recently](#). Gas, he says, will be the world's dominant fuel for most of the next century. Coal and renewables will have to give way to economic realities, oil will be used mainly for transport and the need for nuclear will be delayed for decades.

In its desperate effort to slow down this train, anti-shale gas advocacy groups are forging unlikely alliances. Their new allies include the Russians and the Iranians who thought they were going to corner the gas market in the coming decades, and factions of the oil, coal and even the nuclear industry, whose higher cost models may be as vulnerable to competition from natural gas as alternative energy.

The most intriguing question lying ahead is whether politics—the forces lining up against unconventional sources of natural gas—will trump the science. The key is how reporters and university researchers who the public depends upon for a fair accounting of the consequences of innovation handle their responsibilities.

The signs are not promising. Not too long after the Times public editor blasted his own reporter, Ian Urbina, for questionable reporting, Urbina was invited to Cornell to discuss his anti-fracking reporting. The event was billed as the “Kops Freedom of the Press” forum.

Robert Howarth's anti-shale gas perspective was well represented. No journalist or scientist with long-standing established credentials in this research area—almost none of whom would have agreed with Urbina's or Howarth's perspective—were invited to participate in this celebration of academic 'dialogue' and journalistic 'integrity'.

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Full article at <http://www.aei.org/article/who-blew-up-the-bridge-to-the-future/>.

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