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Building Accountability in the Energy Sector: Natural Gas & Hydraulic Fracturing

Thought Piece
May, 2012

Natural gas and hydraulic fracturing - the technology used to extract it - have become one of the most polarizing environmental issues of recent times.

The matter is multi-faceted: while natural gas has been shown by several studies to emit significantly less greenhouse gas (GHG) than coal when burned for electricity, it is nonetheless a non-renewable fossil fuel. At the same time, abundant domestic supplies and low prices have lowered electricity and fuel costs for end-users. Separately, hydraulic fracturing and its associated processes have a set of inherent risks and impacts; if done improperly, they risk causing environmental damage and may negate some of the climactic benefits that natural gas offers over coal. To date, several governments around the world have established moratoria or bans on the process.

As active investors, we at Boston Common have addressed the issue of natural gas and hydraulic fracturing head on. We continue to support the rapid development of a wholesale clean energy system. Meanwhile, we are using our power as investors to promote accountability and responsibility in the oil and gas industry, such that the risks and impacts of its operations in natural gas and otherwise are addressed and mitigated.

In Brief

- As regulators play catch-up with the rapid expansion of hydraulic fracturing, we are exercising our voice as investors to shape how the oil and gas industry addresses the risks inherent to their drilling practices.
- While it has yet to be seen if natural gas will be the bridge fuel to the clean energy future that we are working toward, we believe that failing to explore the sustainable use of transitional sources of energy will only delay that future.
- We helped draft and promote "Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations," a document that urges oil and gas companies to report on, and systematically reduce, the risks and impacts of natural gas drilling.
- As of May 1st, 2012, "Extracting the Facts" has received public support from investors and institutions with total funds under management approaching $1 trillion dollars.

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Reducing global dependency on unsustainable sources of energy drives our approach to energy in our investments and our engagements.

We are committed to working toward the national and global shift toward a clean-energy, low carbon future. As investors, we search for opportunities in the clean energy space, and actively pursue investments in companies whose products and services either work to resolve environmental dilemmas or provide exposure to environmental solutions. This includes companies engaged in renewable energy, recycling, eco-sensitive waste management, and energy efficiency. We have promoted sustainable industry practices in the renewable energy sector, as well. For the past three years, we have been the co-lead investor assisting the Silicon Valley Toxics Coalition (SVTC) in producing its annual Solar Scorecard, a part of SVTC's Clean and Just Solar Energy Campaign. In April, the Solar Energy Industries Association (SEIA) invited Boston Common to join its independent advisory group to help implement the Association's new industry code for environmental and social responsibility.

It has yet to be seen if natural gas will be the bridge fuel to the clean energy future that we are working toward. The industry first must address technical challenges that constitute environmental risk, such as fugitive methane emissions from the production and distribution of natural gas, and the use of toxic hydraulic fracturing fluids. Still, when compared with coal and nuclear power, natural gas offers several meaningful environmental benefits. Natural gas emits substantially less greenhouse gas than coal when burned for electricity, and its emissions of sulfur dioxide and mercury compounds are negligible. Unlike nuclear power plants, natural gas fired power plants do not produce radioactive wastes, nor do they create radioactive dead zones in the event of major accidents. The shift to a renewable energy future cannot happen in a single leap, and we believe that failing to explore transitional sources of energy can only serve to delay that future.

A window of opportunity has opened for investors to exercise their voices in shaping the industry's response to the risks and negative impacts of natural gas extraction.

While new federal and state regulations are emerging to address the risks of natural gas drilling, it may take several years before these regulations are adopted and can begin to resolve the critical concerns inherent to the process. The investor community can be crucial in finding the middle ground between industry interests and community opposition to new natural gas development in the immediate term, and in promoting best industry practices.

"Fracking," as the process is commonly called, entails sending a high pressure blast of "frac fluids" into wells drilled vertically often a mile or more below the earth's surface, then horizontally through targeted rock formations. Wells are constructed within concrete and steel barriers to prevent methane and frac fluids from leaking into water supplies. The initial high-pressure stream cracks open fissures in the surrounding rock, allowing access to previously uneconomic hydrocarbons. While the public's focus has been on shale gas, due to low gas prices, approximately 70 percent of hydraulic fracturing in the U.S. is currently used to produce oil, according to the US Environmental Protection Agency.

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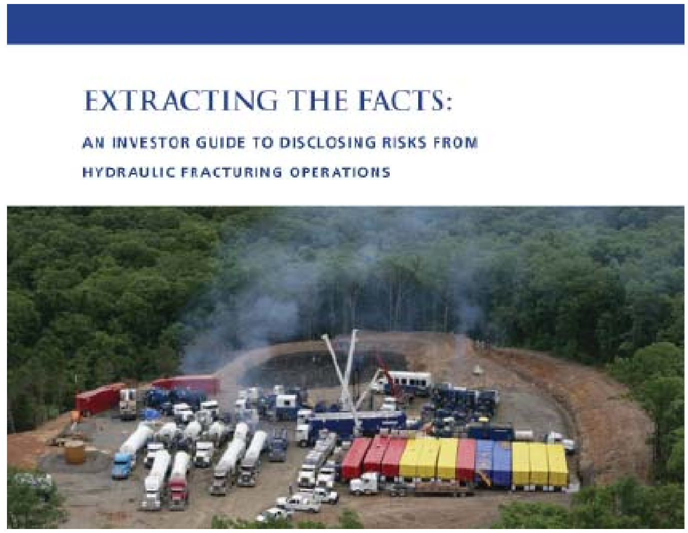
At Boston Common, we believe that owning and engaging companies in this sector is a responsibility for concerned investors.

There are several environmental and social concerns that arise throughout the entire lifecycle of a gas or oil well that uses hydraulic fracturing. The chemicals found in frac fluids, and flowback waters from the well, may constitute potential health risks. Additionally, while methane, the primary component of natural gas, is not toxic, it can foul drinking waters, as occasionally happens even in locations where no drilling has occurred. Leakages of these substances into surface water bodies and groundwater supplies can occur through faulty well casings, as a result of surface level spills, or due to inadequate wastewater disposal systems. The water demands of fracking a well - anywhere from 3 to 13 million gallons - is a controversial issue in areas facing water stress. Additionally, some critics have claimed that leakages of methane during fracking, well completion, and distribution may nullify the GHG emissions savings offered by natural gas when used for electricity generation or as a transportation fuel. Additional concerns include local and regional air pollution, harm to biodiversity and regional forest covers, and social impacts like rural industrialization and heavy demands on municipal services and local roads.

We have worked to mobilize investors to urge companies to report on how they are reducing the environmental risks and community impacts of their operations.



As investors, we are uniquely positioned to ensure that companies earn their social license to operate by requiring them to prove that they are taking rigorous measures to identify and reduce risks, and to systematically minimize negative impact from their extraction procedures.

To that end, we helped draft and promote **"Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations,"**[1] which was published by the Investor Environmental Health Network (IEHN) and the Interfaith Center on Corporate Responsibility (ICCR) in December 2011. The document calls for companies to commit to full disclosure in their operations. It also articulates management goals, best practices and key performance indicators for natural gas operations in shale formations. The guide outlines imperatives such as minimizing fresh water use, assuring well integrity, and eliminating toxic chemicals in fracturing fluids. We solicited investor input into the Guide, and wrote the first draft of the document's background section on community consent.

[1] *Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations, Investor Environmental Health Network, Interfaith Center on Corporate Responsibility, 2011.*

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As of May 1st, Boston Common has helped recruit support for "Extracting the Facts" from institutions with total funds under management approaching $1 trillion dollars.

This reflects a deep investor commitment to holding the oil and gas industry to high standards of safety, transparency and accountability.

The path to "Extracting the Facts" began for us in 2006, when we began educating institutional investors on natural gas issues, such as speculative pricing and fugitive emissions from pipelines. Since 2007, we have co-led a Ceres investor-working group on natural gas. In 2009, we helped organize an investor campaign led by IEHN and Green Century Capital Management to identify companies to engage on specific areas regarding the issue of fracking.

This campaign resulted in a direct engagement with Apache Corporation, and in 2010, we partnered with the company to launch a series of meetings between investors and major oil and gas companies. These meetings provided a venue for a collaborative, frank investigation into material risks, disclosure, and best practices in hydraulic fracturing.

The 18 month dialogue took the form of six meetings and one workshop between July 2010 and September 2011, and gave investors enhanced guidance on identifying best practices in hydraulic fracturing, equipping them to ask tougher questions of their portfolio companies. Over that period, institutional investors met with major industry players that included representatives from Chesapeake Energy, Southwestern Energy, Chevron, Halliburton, Baker Hughes and Williams Cos.

"Extracting the Facts" is perhaps the most tangible result of these meetings. It is the first public statement from institutional investors and investment advisors of their expectations of policies, practices and reporting by oil and gas companies regarding hydraulic fracturing. It is a dynamic document, and we expect it to be updated over time to reflect changes in technology, regulatory developments, and new best practices. This document will form the basis for our continuing engagement with oil and gas companies, as it will for other investors around the globe.

The information in this document should not be considered a recommendation to buy or sell any security. There is no assurance that any securities discussed in this report will remain in an account's portfolio at the time you receive this document. The securities discussed do not represent an account's entire portfolio and may represent only a small portion of an account's holdings. It should not be assumed that any securities transactions we discuss were or will prove to be profitable. Past performance does not guarantee future results. All investments involve risk, including the risk of losing principal.

Boston Common Asset Management

is an investment manager and a leader in global sustainability initiatives. We specialize in long-only equity and balanced strategies and pursue long-term capital appreciation by seeking to invest in diversified portfolios of high quality, socially responsible stocks. Through rigorous analysis of financial, environmental, social, and governance (ESG) factors we identify what we believe are attractively valued companies for investment. As shareholders, we urge portfolio companies to improve transparency, accountability, and attention to ESG issues. Our focus is global; we manage U.S. and international portfolios to meet the needs of institutional and individual investors. We are independent, employee-owned, and field a seasoned, close-knit team of professionals.