

# Shareholder Engagement as a Tool for Risk Management and Disclosure

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Since 2009, shareholders in natural gas companies have been asking energy companies to provide fuller disclosure of the environmental risks and community impacts of their shale energy operations and the steps companies are taking to reduce these risks and impacts. These requests have been most visible in 31 shareholder resolutions at 19 companies asking for company boards of directors to report.<sup>1</sup> The requests have also come in letters to companies and in meetings with company management. On the basis of engagements with multiple companies, in December 2011, the Investor Environmental Health Network (IEHN) and the Interfaith Center on Corporate Responsibility published *Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations*,<sup>2</sup> which provides a detailed outline of investor disclosure expectations.

This chapter describes how investors have engaged companies, the impacts of these engagements, and the larger political/social context within which these engagements have occurred.

The shareholder engagements have been codirected principally by IEHN<sup>3</sup> and Green Century Capital Management.<sup>4</sup> IEHN is a collaboration of sustainability and faith-based investors, organized in 2004, concerned about the financial and public health risks associated with corporate toxic chemicals policies. IEHN, through dialogue and shareholder resolutions, encourages companies to adopt policies to continually and systematically reduce and eliminate the toxic chemicals in their products and supply chains. This concern about toxic chemicals extends to the community and occupational impacts of toxic chemicals, such as those associated with the production of energy from shale formations.

Companies adopting safer chemical policies can anticipate and avoid “toxic lockout” from the marketplace, such as government bans or restrictions on products, and consumer and institutional decisions to seek safer products. They also can reduce their reputational and legal risks and enhance long-term shareholder value. Companies producing and selling safer products can gain market share, grow their top- and bottom-lines, and enhance their brands.

By extension, energy companies can benefit in the market place by reducing the chemical and other environmental risks from their operations and, in so doing, protect their “social license to operate.” Put another way, they can avoid “toxic lockout” by reducing their “toxic footprint.”

According to the website [www.sociallicense.com](http://www.sociallicense.com), “social license” can be explained as follows:

The social license has been defined as existing when a project has the ongoing approval within the local community and other stakeholders, ongoing approval or broad social acceptance and, most frequently, as ongoing acceptance.

At the level of an individual project the social license is rooted in the beliefs, perceptions, and opinions held by the local population and other stakeholders about the project. It is therefore granted by the community. It is also intangible, unless effort is made to measure these beliefs, opinions, and perceptions. Finally, it is dynamic and non-permanent because beliefs, opinions and perceptions are subject to change as new information is acquired. Hence the social license has to be earned and then maintained.

The International Energy Agency (IEA), in its 2012 report, *Golden Rules for a Golden Age of Gas*, addressed the need of the

energy industry to maintain or earn its social license to operate, stating that “full transparency, measuring and monitoring of environmental impacts and engagement with local communities are critical to addressing public concerns.”<sup>5</sup> IEA continued, “Operators need to explain openly and honestly their production practices, the environmental, safety, and health risks and how they are addressed.”<sup>6</sup> IEA emphasized quantitative reporting. Following a heading of “measure, disclose, engage,” IEA described the need to establish baselines for key environmental indicators—provide operational data on water use, waste water, and air emissions; consider establishing emissions targets; and recognize the case for third party certification of industry performance.<sup>7</sup>

A similar call for enhanced quantitative reporting had been made in 2011 by an advisory panel to the secretary of the U.S. Department of Energy. The panel’s August 2011 report addressed public perceptions, adequacy of existing chemical disclosures, emissions of airborne contaminants, and other issues pertinent to practices and indicators.<sup>8</sup> In a November 2011 follow-up report, the panel urged that companies “adopt a more visible commitment to using quantitative measures as a means of achieving best practice and demonstrating to the public that there is continuous improvement in reducing the environmental impact of shale gas production.”<sup>9</sup>

The U.S. Securities and Exchange Commission (SEC) has also begun to push for greater disclosure. SEC staff have sought “detailed information about oil and gas companies’ hydraulic fracturing operations, including environmental impacts” and are looking for whether companies are disclosing risks associated with the practice.<sup>10</sup> The list of SEC areas of inquiry reportedly has included:

1. Established steps to ensure that drilling, casing, and cementing adhere to known best practices;
2. Real time monitoring of the rate and pressure of the fracturing treatment;
3. Evaluation of the environmental impact of chemical additives; and,
4. Efforts to minimize water use or minimizing the impact of disposal on surface waters.<sup>11</sup>

Natural gas production from shale formations in the United States has grown dramatically since the early 2000s, amidst expanding

controversy over the horizontal drilling and hydraulic fracturing used to access the gas. The supplies of newly accessible gas are an energy game changer, and companies are now examining the potential for shale exploitation on nearly every continent both for natural gas and petroleum production.

Many governments and communities around the world are looking to learn from the United States' experience before deciding whether and how to permit exploitation of their shale resources. In the United States, there have been numerous incidents of poorly constructed wells, equipment failures, degraded local and regional air quality, water contamination, strained community relations, and related government enforcement actions and private lawsuits. Moratoria or bans have been proposed in New York State, by the Delaware River Basin Commission, and by local governments in several U.S. states. Outside the United States, France, Bulgaria, and the Province of Quebec, Canada, among other jurisdictions, have acted to delay or ban hydraulic fracturing.

### ■ SOCIAL LICENSE TO OPERATE AND SHAREHOLDER ADVOCACY ■

Bans and moratoria are denials of companies' social license—denials of public consent—to operate arising from concerns about environmental and social risks. Bans and moratoria impose a wide range of costs on companies, ranging from the costs of delays to complete loss of access to valuable resources where sunk costs must be written off.

Companies must be publicly transparent about managing their environmental footprint and social impacts and engage with key community stakeholders to earn and maintain their social license. Transparency requires full disclosure of steps being taken to minimize risks, acknowledgment of challenges and failures, and clearly defined steps to continually improve operations.

Reducing environmental and community impacts requires not only strengthening federal, state, and local regulations, but encouraging the industry to take protective, precautionary steps where stringent regulations have not yet been adopted or where they are not well-implemented. Investors offer a unique voice. Shareholders advocate for reducing environmental and community risks, separate from grassroots activists and regulators. Shareholders also strengthen progressive company voices too often drowned out by trade associations and laggard companies.

## INVESTOR INFORMATION NEEDS AND THE BUSINESS CASE FOR BEST PRACTICES

Generally speaking, investors make decisions based on assessments of risks and rewards. Traditionally, these assessments have focused on dollars-and-cents financial numbers, but there has been growing recognition within the investment community that the value of investments can be affected by how well companies manage environmental, social, and governance challenges. In investor parlance, these have come to be known as “ESG” factors.<sup>12</sup> Within this broader context, investors require specific, detailed information about how companies manage natural gas operations’ risks and rewards. It is necessary for investors to have assurances that company managers are reducing business risks by addressing operational hazards and are capturing the genuine, measurable business rewards flowing from environmental management practices that have the potential to lower costs, increase profits, and enhance community acceptance. Investors require relevant, reliable, and comparable information about companies’ natural gas operations to make investment judgments based on a robust assessment of companies’ environmental, social, and governance policies, practices and performance.

From a business management perspective, companies adopting best practices can do the following:

1. drive operational efficiencies (reduced costs yield increased margins and profitability);<sup>13</sup>
2. provide insurance in case of accident or natural disaster (lower toxicities and volumes of chemicals reduce risks from chemical spills);<sup>14</sup>
3. reduce air emissions and fresh water withdrawals that trigger violations of environmental standards (regulators consequently may ban and limit operations); and,<sup>15</sup>
4. protect and enhance companies’ social license to operate by increasing the odds of positive community response to the best-managed, most transparent companies addressing community needs and concerns.

Since mid-2009, through dialogues with companies and shareholder resolutions, investors have been seeking increased disclosure by companies of the environmental risks and community (social) impacts associated with natural gas operations in shale formations

and the policies and procedures they are adopting to reduce or eliminate these risks (e.g., traffic congestion and housing shortages). Risks are associated with the entire life cycle of operations, although much public discussion focuses on fracturing or “fracking.” Fracturing and horizontal drilling combined has made a substantial recovery of gas from shale economically possible and has brought drilling and production to localities on a scale previously not experienced.

The operations include:

1. taking steps to minimize surface footprint—disruption of natural ecosystems and damage to human communities;<sup>16</sup>
2. transporting millions of gallons of water and thousands of gallons of chemicals to each well site;
3. selecting chemical additives for fracturing;
4. placing layers of pipes and protective cement in the bore hole to prevent leaks;
5. breaking apart (fracturing) subsurface shale formations by injecting water, sand,<sup>17</sup> and chemicals under thousands of pounds of pressure;
6. storing the water and chemicals that return to the surface during the fracturing process (including naturally occurring toxic chemicals in the formation that also surface during gas production);
7. moving and treating waste waters; and
8. managing air pollutants.

### ■ **EXTRACTING THE FACTS—INVESTOR DISCLOSURE GUIDELINES** ■

In 2011, IEHN and the Interfaith Center on Corporate Responsibility published *Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations*. The guidelines identify core management goals, best management practices, and key performance indicators for assessing progress. They have earned support from investment managers and advisors and asset owners responsible for \$1.3 trillion in assets under management in North America, Europe, and Australia.<sup>18</sup>

*Extracting the Facts* emerged from two sets of engagement processes—the traditional shareholder resolutions and dialogues on the

one hand, and Chatham House Rule<sup>19</sup> conversations on the other, described in the next section. From both these processes emerged the idea that both companies and investors would be well-served by a published set of guidelines capturing investor reporting expectations of oil and gas companies.

The guide is organized around 12 core management goals, recommended practices to implement them, and indicators for reporting progress.

Twelve core management goals for natural gas operations include:

1. *Manage risks transparently and at the Board level.* Ensure environmental, health, safety, and social risks are core elements of corporate risk management strategy.
2. *Reduce surface footprint.* Minimize surface disruption from natural gas exploration and production activities.
3. *Assure well integrity.* Achieve zero incidences for accidental leaks of hazardous gases and fluids from well sites.
4. *Reduce and disclose all toxic chemicals.* Comprehensively disclose and virtually eliminate toxic chemicals used in fracturing operations.
5. *Protect water quality by rigorous monitoring.* Identify baseline conditions in neighboring water bodies and drinking water sources and routinely monitor quality during natural gas operations.
6. *Minimize fresh water use.* Draw the minimum potable water necessary to conduct fracturing operations, substituting non-potable sources to the fullest extent practicable.
7. *Prevent contamination from waste water.* Store waste water in secure, closed containers, not in pits open to the atmosphere, and recycle and reuse waste water to the maximum extent practicable.
8. *Minimize and disclose air emissions.* Prevent/minimize emissions of greenhouse gases and toxic chemicals by systematically identifying emission sources of all sizes, implement operational practices to reduce emissions, install emission control equipment, and monitor ambient air quality prior to and during operations.
9. *Prevent contamination from solid waste and sludge residuals.* Minimize risks and impacts by deploying closed loop systems for solid waste and sludge residuals from drilling and

fracturing operations and fully characterizing and tracking toxic substances.

10. *Assure best in class contractor performance.* Systematically assess contractor performance against the company's own BMPs and KPIs across the entire range of environmental, health, safety, and social concerns, with the objective of engaging and retaining best-in-class, continually improving contractors.
11. *Secure community consent.* During the site selection process, identify all communities impacted and address major concerns central to community acceptance of company operations; establish community engagement process and third party conflict resolution mechanisms.
12. *Disclose fines, penalties, and litigation.* Acknowledge performance issues by disclosing infractions, legal controversies, and lessons learned.

Some of the practices are immediately implementable, for example systematic use of “green completions” to minimize air emissions, while some are more aspirational, such as “virtual elimination” of toxic chemicals from fracturing operations. The guide draws on documented examples of 17 different companies’ use of best practices.

The guide also addresses a central concern that invariably arises in discussions of best practices—that a one size fits all best practice may in fact not be best in all situations and might even create perverse incentives. To address this sticking point, the guide adopts the approach of “comply or explain.” “Comply or explain” provides companies with an off-ramp for not using best practices in all cases. For example, “green completions” to reduce emissions are increasingly used to reduce air emissions, but they are more relevant to development wells than to exploratory wells. So a company could report that its planning process makes “green completions” the default choice for well completion, except where such completions are not technically feasible.

The companies most likely to be trusted by investors and most readily welcomed by local communities will be those that:

1. Have an across-the-board, transparent record of voluntary actions to reduce the quantity and toxicity of chemicals;
2. Develop innovative methods for reducing use of fresh water—for example, recycling fracturing waste waters or using saline or industrial waste waters for fracturing;

3. Systematically inventory and reduce air emissions from operations, including using green completions where appropriate and substituting closed waste storage structures for open pits;
4. Closely oversee their contractors to prevent shoddy well construction and demonstrate rapid emergency response capability;
5. Know what's in their waste and what happens to it;
6. Anticipate and respond to local community noise, road damage, nuisance, and broader social concerns, such as public safety, public health, and community disruption; and,
7. Acknowledge regulatory transgressions and lessons learned from them.

### ■ GUIDELINES IN PRACTICE—A CASE STUDY OF PROMOTING CHEMICAL TOXICITY REDUCTION ■

To help drive the market for safer chemicals, *Extracting the Facts* specifies a core goal to “reduce and disclose all toxic chemicals,” elaborating on that as “comprehensively disclose and virtually eliminate toxic chemicals used in fracturing operations.”<sup>20</sup> It specifies several best practices to achieve this goal and three key performance indicators for tracking progress. The case study below further describes models of best practice and available tools.

Risks of contamination by toxic chemicals strongly drive public fear of shale gas operations. The public fears known chemicals (such as acids and biocides that are toxic) as well as the unknown chemicals hidden behind claims of confidential business information. These fears, together with a wider array of concerns about the environmental and community impacts of shale energy operations, translate into the potential loss of companies' social license to operate.

Oil and gas producers have made sizeable strides in disclosing many of the chemicals. But three major questions remain substantially unaddressed:

1. Do producers have systems in place to evaluate whether they are using more toxic chemicals than necessary?
2. What are producers doing to encourage their suppliers to provide safer alternatives?

3. What tools can suppliers use to develop and market safer alternatives?

The economic benefits from smarter management of chemicals include lower costs when fewer chemicals are used and reduced environmental damage and litigation risks from operating errors and accidents. Another potential benefit is reduced delay on projects that might arise from community opposition.

The oil and gas industry understandably downplays the hazards from fracturing chemicals. It stresses they are a very small percentage of the fluids going down the bore hole—approximately 1 percent or less—and these chemicals are commonly found in household products. This rationale ignores scale and life cycle.

Millions of gallons of fluid (mainly water) are used for fracturing, so for a single well, thousands of gallons of chemicals will be hauled to the job site, stored on location, and then pumped down the hole. For example, a fracturing operation using three million gallons of water would likely use 15,000–30,000 gallons of chemicals. Multiply this by thousands of wells drilled in major shale plays and you will get the picture. Some of these fluids will return to the surface and require storage, treatment, and disposal. The greatest contamination risks appear to stem from spills on the surface and from poorly constructed wells.

Described below is a five-part prescription the energy industry should follow to lower hydraulic fracturing's chemical impact and address community concerns with more meaningful public disclosure.

*1. Develop a chemical reduction program.* Relatively few shale energy producers publicly describe their programs for reducing and eliminating worrisome chemicals. For example, Encana has established a Responsible Products Program.<sup>21</sup> Through its Responsible Product Assessment Tool that taps government toxicity databases, Encana assesses chemicals and decides whether to eliminate them or reduce their risks. Encana prohibits the use of any hydraulic fracturing fluid products containing diesel, 2-Butoxyethanol (2-BE) or benzene and has determined that none of its fracturing products contain arsenic, cadmium, chromium, lead, or mercury.

Chesapeake Energy established its Green Frac program<sup>22</sup> in 2009 to systematically review chemical use. Chesapeake states it eliminated 25 percent of the additives used in hydraulic fracturing fluids in

most of its shale plays. Chevron has claimed a reduction of 77 percent in the number of chemical additives requiring Material Safety Data Sheets (documents describing hazardous materials as defined under federal occupational safety law).<sup>23</sup> Neither company has provided further details on specific chemicals eliminated.

UK-based BG Group states,<sup>24</sup> “We do not use diesel or benzene, toluene, ethylbenzene, and xylenes (BTEX) chemicals in hydraulic fracturing fluids in any of our unconventional gas operations.”

To systematically reduce chemical risks, all energy-producing companies in shale plays should commit to quickly phasing out “the worst of the worst” chemicals. They should dedicate staff or consultants to continually evaluate chemical additive use and, in requests for proposals and other procurements, should ask their contractors to provide reduced toxicity options. Producing companies should routinely report the results of such efforts publicly.

2. *Create a chemical scoring system.* There’s money to be made from safer chemical alternatives. Oilfield services company Baker Hughes has developed a toxicity scoring system<sup>25</sup> and new product lines<sup>26</sup> so that producing companies can select less-toxic additives to meet their needs. Similarly, Halliburton has also developed a toxicity scoring system<sup>27</sup> and new product lines.<sup>28</sup> Halliburton even presents on its website a cumulative tally of gallons of biocide eliminated through use of its CleanStream process that relies on ultraviolet light for bacteria control.

3. *Develop safer alternatives.* Baker Hughes, one of the primary providers of hydraulic fracturing services to oil and gas producers in the United States, has demonstrated<sup>29</sup> how a scoring system can be used to drive competition among chemical suppliers to provide safer alternatives. It has placed the highest priority on eliminating diesel oil from its fracturing additives. In 2011, it reported successfully forgoing the use of at least 7.5 million gallons of diesel oil per year through product reformulation. By doing so, it has also removed benzene and some other toxic components of diesel oil.

4. *Press suppliers for alternatives.* Baker Hughes next pursued priority pollutants designated by EPA under the Clean Water Act. Naphthalene, one of these, was present in a 100,000-gallon-per-month product used by Baker Hughes. The company encouraged its chemical suppliers to

develop safer alternatives. An initial reformulation dropped the toxicity score by more than 50 percent and displaced 85 percent of the old product in the marketplace. A second chemical supplier then provided an even safer alternative whose toxicity score is roughly one-quarter of the initial safer alternative, and that's now been introduced into the market.

Baker Hughes also targeted a chemical known as 2-BE, a “poster child” toxic chemical, having figured in a high-profile legal settlement in which health damage from its use in hydraulic fracturing was alleged (Baker Hughes was not involved in the litigation<sup>30</sup>). Baker Hughes asked two suppliers to remove 2-BE from a surfactant product. One supplier removed the 2-BE but a second went even farther and also removed toxic methanol, dropping the toxicity score much farther. 2-BE has now been eliminated from Baker Hughes' environmentally preferred hydraulic fracturing product line.

5. *Increase disclosure.* Oil and gas producers point to the website [www.fracfocus.org](http://www.fracfocus.org)<sup>31</sup> as their primary means for disclosing chemical use. Fracfocus is a noteworthy improvement on the virtually nonexistent disclosure of several years ago, but it reveals chemical use only on a well-by-well basis and provides no readily discernible information on broader corporate toxicity reduction programs.

Moreover, its disclosures are principally the chemicals listed on Material Safety Data Sheets (MSDS). The limitations and omissions<sup>32</sup> of these data sheets have been noted by Baker Hughes and other commentators. Baker Hughes deliberately goes beyond MSDSs, incorporating evaluation of chemical components not disclosed in MSDSs in its product toxicity scores. Increasingly, states that are adopting Fracfocus as a disclosure tool are requiring information on non-MSDS chemicals to be listed. Regardless of whether states require it, more companies should be doing such reporting of non-MSDS chemicals.

Most shale energy producers discuss in only the most general terms<sup>33</sup> their efforts “[to develop] and use . . . more environmentally benign ingredients.” A toxicity scorecard pioneered by the consumer products company SC Johnson and Son, Inc. (SCJ) provides an example of how companies might better demonstrate to concerned communities their commitment to chemical risk reduction. SCJ's Greenlist<sup>34</sup> process ranks the materials in its products based on their impact on the environment and human health, rating materials from a 0 (restricted use) to a 3 (best). The detailed scoring criteria are elaborated in a superb SC Johnson case study<sup>35</sup> prepared for the Green

Chemistry and Commerce Council. The goal for individual products and the company as a whole is continual innovation away from the poorest-rated materials towards the best.

SCJ's corporate commitment has yielded impressive results. During the first 10 years of the program, beginning in 2000–2001, SCJ increased its use of “best” ingredients from 4 percent to 27 percent. The company's use of chemicals in both the two highest-rated categories—“better” and “best”—increased from 18 percent to 51 percent, while use of the lowest-rated materials decreased from 10 percent to 4 percent.

Shale gas and oil development is a far more diverse and dynamic market than the consumer market served by SCJ, so developing a toxicity reduction tracking system will be a far greater challenge. Notwithstanding this difficulty, if oil and gas producers and their contractors can report such quantitative results, they would clearly demonstrate how they are implementing a toxicity reduction policy. In view of immense public skepticism about the energy industry's environmental concern, their current vague expressions of support for “more environmentally benign ingredients” just don't cut it.

### ■ THE FUTURE COURSE OF CORPORATE REPORTING ON SHALE GAS OPERATIONS ■

*Extracting the Facts* has found substantial acceptance among key stakeholders beyond the investment community. Four energy companies (Southwestern Energy, Apache, Talisman, and BG Group) have expressed public support for the guidelines as have two national environmental organizations, Environmental Defense Fund and Natural Resources Defense Council.<sup>36</sup> A major New York City bank drew on the guidelines in developing its own portfolio risk assessment process in 2012 and European banks did the same in 2013.

There's a growing trend of individual energy companies developing their own guidelines against which they will report publicly. This began with Royal Dutch Shell<sup>37</sup> in mid-2011. UK-based BG Group<sup>38</sup> and Canada's Talisman Energy<sup>39</sup> have published similar guidelines. Talisman repeatedly emphasizes its focus on quantitative reporting on key performance indicators, though the first such report is not anticipated until 2013. Hess Corporation has indicated publicly<sup>40</sup> that it is working on such guidelines and two additional companies have indicated in dialogues with investors their plans to do so. Chesapeake

Energy has published a list of “focus programs” that also responds to many investor concerns, though the company’s numerous regulatory violations and sizeable fines in the Marcellus Shale of Pennsylvania raise questions about how Chesapeake has carried out its espoused policies on the ground.<sup>41</sup>

### ■ **SHAREHOLDER ADVOCACY—THE LETTER, DIALOGUE, AND RESOLUTION PROCESS** ■

The world of shareholder advocacy is opaque to those not involved with it. So here’s a basic overview, based on investors’ shale energy engagement experiences.

The shareholder fracking campaign has been one of the most successful environmental shareholder advocacy campaigns in history, as measured by 30 to 40 percent average votes for shareholder fracking resolutions during the campaign’s first three years. Most environmental issues raised for the first time at companies often garner supporting votes in the single digits and take several years to rise into double digits if they get there at all. Although there’s a common perception outside the world of shareholder advocates and corporate directors of investor relations that resolutions securing less than a 50 percent are losses, within this world there’s shared recognition that a double digit supporting vote signals an issue deserving serious response.

When the numbers of “yes” or supporting votes rise into the 30 to 40 percent range, this indicates that resolution proponents have secured support from a sizeable number of large institutional investors and very likely from the proxy voting advisory services, such as Institutional Shareholder Services, on whose voting recommendations many major institutional investors rely. In the case of the shareholder fracking campaign in 2010, its first year, the votes on six resolutions ranged from a low of 21 percent to a high of 42 percent. During the second year, the votes on five resolutions ranged from a low of 28 percent to a high of 49.5 percent. Shareholder resolutions generally are nonbinding, so even if an additional one-half percent vote had been garnered at the company where 49.5 percent support had been gained, the company would not have been under any legal obligation to respond.

During the third year (2012), the votes on three resolutions ranged from 27 percent to 35 percent. Over the course of the three

years, a total of 31 resolutions were introduced at 19 companies. Most not voted on were withdrawn when companies and filers reached mutually satisfactory agreements while a very small number failed to satisfy SEC procedural requirements described in part below.

Companies can vary dramatically in the extent of experience dealing with investors inquiring about environmental and social issues and display a wide variety of responses. Investor engagement customarily begins with a letter from investors to senior management requesting answers to questions. These “inquiry letters” may or may not draw a response from the company, either in writing or by phone. A written or phone response may prove satisfactory to investors or may not. Where there’s no response or the response is inadequate, this can lead investors to file a formal resolution (also termed a shareholder proposal) for consideration at the company’s annual shareholders meeting to provide a more visible public airing for the issue. The resolution must satisfy certain SEC procedural and substantive requirements that have evolved through SEC guidelines and interpretive rulings.<sup>42</sup>

For example, a resolution cannot exceed 500 words. It must be filed by a date established in advance by the company. An appropriate level of stock ownership for a specific period must be demonstrated. Companies may seek SEC permission to exclude a shareholder resolution from the proxy form if, for example, it can successfully argue it has substantially implemented the shareholder request, or if the shareholder request is so detailed that it inappropriately delves into “ordinary business” that the SEC has deemed beyond the reach of shareholder proposals.

Some companies are more aggressive than others in challenging shareholder resolutions at the SEC. When a resolution is challenged by a company, the filers can elect to withdraw the resolution or rebut the company challenge. The SEC then decides the outcome. Both Chesapeake Energy and ExxonMobil mounted extensive challenges to shareholder fracking resolutions contending they had substantially implemented shareholders’ disclosure requests, but the SEC rejected these contentions.<sup>43</sup>

Even if a resolution has survived a corporate challenge, it may still be withdrawn prior to a company’s annual meeting if the company and the filers reach agreement on how the resolution’s requests can be satisfied. In the case of fracking resolutions, agreements have focused on increasing disclosures by companies about the environmental risks

and community impacts of their shale gas operations and the management steps they were taking to minimize them.

Some companies are more comfortable than others in entering conversations with shareholders about environmental and social issues. Many experienced companies see shareholder activism as a “canary in a coal mine”—a signal of an emerging issue of potentially great significance that needs to be understood and addressed sooner rather than later. Investors can be a useful antidote to senior management group-think. Group-think can cause senior management to fool both themselves and less engaged investors, to the detriment of both. Investors can also be silo-busters.<sup>44</sup>

A shareholder request for dialogue can raise management issues that cut across departments and supply chains. Investors can prompt senior management to bring together individuals from diverse corporate departments who should be discussing emerging issues with one another but are not. But then there are other companies who are less comfortable with such direct engagements. The management of one company declined to respond to investor inquiries about hydraulic fracturing, even after two years of resolutions receiving votes in the 20 to mid-thirties percent range.

Most shareholder-company engagements about hydraulic fracturing have followed the tried-and-true process just described. Recognizing the limitations and sometimes adversarial character of these bilateral engagements, Boston Common Asset Management and Apache Corporation embarked on a different, innovative approach. Having evolved a high degree of mutual trust after following the more traditional route of shareholder engagement that started initially in 2003 on the topic of climate change, the two organizations convened a series of “Chatham House Rule” meetings of multiple companies and investors for a candid discussion of shale gas development operational issues. Under the Chatham House Rule, a safe space for discussion is created because nothing said inside can be attributed outside by name or organization. Six meetings were held in 2010 and 2011 including a shifting mix of investors and companies. In addition, one company’s technical expert offered a half-day well construction course to educate investors on how to distinguish larger from smaller risks and what companies can do about them.

During the course of both sets of engagement processes, companies were in various ways gradually increasing their disclosures about selected facets of their shale gas operations. Some detailed their waste water recycling and reuse efforts. Others described the steps they were

taking to minimize air emissions. Still others discussed their sourcing of millions of gallons of water for hydraulic fracturing operations and their efforts to substitute nonpotable water for fresh water. But overall disclosure remained uneven. They were more qualitative than quantitative and overly reliant on anecdotes telling positive stories rather than on systematic data. As noted in the preceding section, this unevenness led to development of *Extracting the Facts*.

### THE EVOLVING CONTEXT OF INVESTOR ENGAGEMENT

Since investor engagement began in 2009, some noteworthy developments have underscored the urgency and timeliness of enhanced corporate risk management and disclosure. Foremost among these is increasing regulation at the federal, state, and local levels. These emerging regulations address chemical identification and disclosure concerns, water management, well construction, and other issues, though there remain serious questions about the adequacy of state oversight budgets and the efficacy of state enforcement.<sup>45</sup> State regulators have been moving to catch up with the sizeable growth of natural gas development in shale formations, but state regulation remains uneven. Many companies report implementing risk-management practices better than their state's requirements. Compliance with existing regulations is just a starting point for risk reduction.<sup>46</sup>

Technological innovation in the energy industry continues at breakneck speed. New approaches to waste treatment and water sourcing, more benign chemical additives, and analytical software for comparative assessment of chemical toxicity have emerged at a rapid pace. Companies seeking to reduce their risk profile and lower costs have a broadened array of tools from which to choose. Waste water recycling and reuse practices continue to grow in popularity amidst increasing awareness of the economic benefits of such practices and tightened government regulations on off-site disposal in treatment plants. Increasing numbers of companies have been voluntarily adopting measures—such as green completions—to reduce emissions of airborne contaminants at some of their locations before new mandatory rules by the U.S. EPA become effective in 2015. They have recognized the economic benefits from such practices and the need to reduce emissions to avoid violations of ambient air quality standards now and in the future.

*Extracting the Facts* makes it easy for senior managers to understand what they need to report to satisfy investors' needs for reliable

comparative information on companies' environmental and social performance with respect to shale gas operations, supplementing customary financial reports. Investor disclosure guidelines encourage senior managers to report systematically on how they are positioning their companies in a rapidly changing regulatory and technological environment to minimize their risks and maximize their returns from smart environmental management.

## NOTES

1. *Full List of Shareholder Resolutions*, INVESTOR ENVIRONMENTAL HEALTH NETWORK, <http://iehn.org/resolutions.shareholder.php> (search "Search" box for "hydraulic fracturing").
2. Richard Liroff, *EXTRACTING THE FACTS: AN INVESTOR GUIDE TO DISCLOSING RISKS FROM HYDRAULIC FRACTURING OPERATIONS (VERSION 1.0)*, available at <http://iehn.org/documents/frackguidance.pdf> (last visited Aug. 18, 2013).
3. INVESTOR ENVIRONMENTAL HEALTH NETWORK, <http://www.iehn.org> (last visited Aug. 18, 2013).
4. GREEN CENTURY CAPITAL MGMT., <http://www.greencentury.com/> (last visited Aug. 18, 2013).
5. INTERNATIONAL ENERGY AGENCY, *GOLDEN RULES FOR A GOLDEN AGE OF GAS: WORLD ENERGY OUTLOOK SPECIAL REPORT ON UNCONVENTIONAL GAS (2012)*, available at [http://www.worldenergyoutlook.org/media/weowebiste/2012/goldenrules/WEO2012\\_GoldenRulesReport.pdf](http://www.worldenergyoutlook.org/media/weowebiste/2012/goldenrules/WEO2012_GoldenRulesReport.pdf) [hereinafter *GOLDEN RULES REPORT*], at 9.
6. *Id.* at 43.
7. *Id.* at 43, 48.
8. SEC'TY OF ENERGY'S ADVISORY BOARD, *SHALE GAS PRODUCTION SUBCOMMITTEE: NINETY-DAY REPORT (Aug. 18, 2011)*, available at [http://energy.gov/sites/prod/files/Final\\_90\\_day\\_Report.pdf](http://energy.gov/sites/prod/files/Final_90_day_Report.pdf). The DOE shale gas advisory panel, in its November 2011 "second 90 day report draft" urged "leading companies to adopt a more visible commitment to using quantitative measures as a means of achieving best practice and demonstrating to the public that there is continuous improvement in reducing the environmental impact of shale gas production." (SEC'TY OF ENERGY'S ADVISORY BOARD, *SHALE GAS PRODUCTION SUBCOMMITTEE: SECOND NINETY-DAY REPORT (Nov. 18, 2011)*, available at [http://energy.gov/sites/prod/files/90day\\_Report\\_Second\\_11.18.11.pdf](http://energy.gov/sites/prod/files/90day_Report_Second_11.18.11.pdf), at 9.) Detailed recommendations for best practice have also been provided in the July 2011 report from Pennsylvania of the Governor's Marcellus Shale Advisory Commission. (See GOVERNOR'S MARCELLUS SHALE ADVISORY COMMISSION, *REPORT (Jul. 22, 2011)*, available at [http://www.mde.state.md.us/programs/Land/mining/marcellus/Documents/MSAC\\_Final\\_Report.pdf](http://www.mde.state.md.us/programs/Land/mining/marcellus/Documents/MSAC_Final_Report.pdf).)

- Guidelines have also been issued by the American Petroleum Institute (AMERICAN PETROLEUM INSTITUTE, OVERVIEW OF INDUSTRY GUIDANCE/ BEST PRACTICES ON HYDRAULIC FRACTURING (HF) (2011), *available at* [http://www.api.org/policy/exploration/hydraulicfracturing/upload/Hydraulic\\_Fracturing\\_InfoSheet.pdf](http://www.api.org/policy/exploration/hydraulicfracturing/upload/Hydraulic_Fracturing_InfoSheet.pdf)) and by grassroots community activists. (E.g., EARTHWORKS, DRILL-RIGHT TEXAS: BEST OIL & GAS DEVELOPMENT PRACTICES FOR TEXAS, *available at* [http://www.earthworksaction.org/files/publications/Drill\\_Right\\_Texas\\_FINAL.pdf](http://www.earthworksaction.org/files/publications/Drill_Right_Texas_FINAL.pdf) (last accessed Aug. 18, 2013).) The University of Colorado's Natural Resources Law Center has developed a free-access, searchable website of BMPs for oil and gas development in five western U.S. states, characterizing BMPs as "mitigation measures . . . to promote energy development in an environmentally sensitive manner." See *Intermountain Oil and Gas BMP Project*, UNIV. COLO. GETCHES-WILKINSON CENTER FOR NAT. RES., ENERGY, AND THE ENV'T, <http://www.oilandgasbmps.org/> (last accessed Aug. 18, 2013).
9. SEC'TY OF ENERGY'S ADVISORY BOARD, SHALE GAS PRODUCTION SUBCOMMITTEE: NINETY-DAY REPORT (Aug. 18, 2011), *available at* [http://www.shalegas.energy.gov/resources/111811\\_final\\_report.pdf](http://www.shalegas.energy.gov/resources/111811_final_report.pdf).
  10. Deborah Solomon, *SEC Bears Down on Fracking*, WALL ST. J., Aug. 25, 2011, *available at* <http://online.wsj.com/article/SB10001424053111904009304576528484179638702.html>.
  11. Gislar R. Donnenberg et al., *Oil and Gas Companies Should Expect Increased SEC Scrutiny of Operations and Reserves*, MARTINDALE-HUBBELL (Sept. 21, 2011), *available at* [http://www.martindale.com/natural-resources-law/article\\_Andrews-Kurth-LLP\\_1345720.htm](http://www.martindale.com/natural-resources-law/article_Andrews-Kurth-LLP_1345720.htm).
  12. See, e.g., Robert Kropp, *Studies Find Positive Link Between ESG Integration and Investment Performance*, SOCIAL FUNDS (Nov. 18, 2009), *available at* <http://dev.socialfunds.com/news/article.cgi/article2826.html>.
  13. This is often the case with 1. "green completions" that reduce air emissions and create marketable products, and 2. wastewater recycling and reuse that reduces transport emissions and lowers the need for sourcing fresh water.
  14. In the simplest of terms, if a company's using a food grade additive in its fracturing operations rather than an acute toxicant or known carcinogen, it's running a lower risk if a pipe breaks, a truck turns over, or some other unfortunate accident occurs.
  15. For example, portions of sparsely populated regions in western states have bumped up against the National Ambient Air Quality Standard for ozone because of the cumulative impact of energy operations. See, e.g., Press Release, WYO. DEPT. OF ENVTL. QUALITY, *DEQ Plans for the Possible Issuance of Ozone Advisories in the Upper Green River Basin* (Dec. 22, 2010), *available at* <http://deq.state.wy.us/out/downloads/Press%20Release%20ozone%20advisories%202011.pdf>. The Susquehanna River Basin Commission, as a result of local drought conditions in both 2011 and 2012, has cut off water supply privileges for companies needing water to conduct fracturing

operations. See Press Release, SUSQUEHANNA RIVER BASIN COMM'N., *64 Water Withdrawals for Natural Gas Drilling and Other Uses Suspended to Protect Streams* (Jul. 16, 2012), available at <http://www.srbc.net/newsroom/NewsRelease.aspx?NewsReleaseID=90>.

16. For a quantitative comparative assessment of risks from natural gas operations in shales, see George E. King (Apache Corporation) *Hydraulic Fracturing 101: What Every Representative, Environmentalist, Regulator, Reporter, Investor, University Researcher, Neighbor and Engineer Should Know About Estimating Frac Risk and Improving Frac Performance in Unconventional Gas and Oil Wells*, SPE 152596 that was presented at the SPE Fracturing Conference, The Woodlands, TX, USA, 6–8 February 2012. For another version of this analysis, see George E. King, *Estimating Frac Risk and Improving Frac Performance in Unconventional Gas and Oil Wells* (Jan. 23, 2012) (unpublished manuscript), available at [http://gekengineering.com/Downloads/Free\\_Downloads/Estimating\\_and\\_Explaining\\_Fracture\\_Risk\\_and\\_Improving\\_Fracture\\_Performance\\_in\\_Unconventional\\_Gas\\_and\\_Oil\\_Wells.pdf](http://gekengineering.com/Downloads/Free_Downloads/Estimating_and_Explaining_Fracture_Risk_and_Improving_Fracture_Performance_in_Unconventional_Gas_and_Oil_Wells.pdf).
17. Sand is commonly used to prop open fractures in shale, but manufactured ceramic “proppants” can also be used.
18. Press Release, *Groups: IEA “Golden Rules” for Fracking Track Closely with Steps Already Called for by Investors* (May 29, 2012), available at <http://iehn.org/news.press.pressreleaseIEA5-29-12.php>.
19. The Chatham House rule is described as follows at the website of Chatham House in the United Kingdom: “The Chatham House Rule reads as follows: When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed.  
The world-famous Chatham House Rule may be invoked at meetings to encourage openness and the sharing of information.” See *Chatham House Rule*, CHATHAM HOUSE, <http://www.chathamhouse.org/about-us/chatham-house-rule> (last visited Aug. 18, 2013).
20. This section was originally published as a blog at [greenbiz.com](http://greenbiz.com) and is reprinted with permission of GreenBiz Group. See Richard Lirioff, *5 Ways to Clean Up Fracking’s Chemical Act*, THE RIGHT CHEMISTRY BLOG (Sept. 21, 2012), available at <http://www.greenbiz.com/blog/2012/09/21/5-ways-clean-frackings-chemical-act>.
21. ENCAN A CORP., RESPONSIBLE PRODUCTS PROGRAM, <http://www.encana.com/environment/water/fracturing/products.html> (last visited Aug. 18, 2013).
22. CHESAPEAKE ENERGY CORP., GREEN FRAC HYDRAULIC FRACTURING PROCESS, <http://www.askchesapeake.com/Pages/Green-Frac.aspx> (last visited Aug. 18, 2013).
23. CHEVRON CORP., RESPONSIBLE GAS DEVELOPMENT, <http://www.chevron.com/deliveringenergy/naturalgas/shalegas/responsible-shale-gas-development/> (last visited Aug. 18, 2013).

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25. ANDY JORDAN ET AL., QUANTITATIVE RANKING MEASURES OIL FIELD CHEMICALS ENVIRONMENTAL IMPACT (Soc'y Petrol. Eng'rs 135517, 2010), available at [http://public.bakerhughes.com/ShaleGas/collateral/Quantitative\\_Ranking\\_Measures\\_Oil%20Field\\_Chemicals\\_Environmental\\_Impact.pdf](http://public.bakerhughes.com/ShaleGas/collateral/Quantitative_Ranking_Measures_Oil%20Field_Chemicals_Environmental_Impact.pdf).
26. BAKER HUGHES, THE BJ SMARTCARE SYSTEM (2010), available at [http://public.bakerhughes.com/ShaleGas/collateral/31157.SmartCare\\_PO\\_1210.pdf](http://public.bakerhughes.com/ShaleGas/collateral/31157.SmartCare_PO_1210.pdf).
27. HALLIBURTON, CHEMISTRY SCORING INDEX FOR PRODUCTION ENHANCEMENT (2013), [http://www.halliburton.com/public/pe/contents/Data\\_Sheets/web/H/H09731.pdf](http://www.halliburton.com/public/pe/contents/Data_Sheets/web/H/H09731.pdf) (last visited Aug. 20, 2013).
28. HALLIBURTON, CLEAN INNOVATIONS, [http://www.halliburton.com/public/projects/pubsdata/Hydraulic\\_Fracturing/CleanSuite\\_Technologies.html](http://www.halliburton.com/public/projects/pubsdata/Hydraulic_Fracturing/CleanSuite_Technologies.html) (last visited Aug. 18, 2013).
29. HAROLD D. BRANNON ET AL., PROGRESSION TOWARD IMPLEMENTATION OF ENVIRONMENTALLY RESPONSIBLE FRACTURING PROCESSES (Soc'y Petrol. Eng'rs Ann. Tech. Conf. and Exhibition, 30 Oct.-2 Nov. 2011, Denver, Colo., 147534-MS, 2011).
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41. *Pennsylvania Fines Chesapeake Energy \$1.1 million*, BUSINESSWEEK.COM, May 17, 2011, <http://www.businessweek.com/ap/financialnews/D9N9C7981.htm> and *Commitment to Environmental Excellence*, CHESAPEAKE ENERGY CORP., <http://www.chk.com/About/Commitment/Pages/default.aspx> (last visited Aug. 18, 2013).
42. SEC Rule 14a-8, 17 CFR § 240.14a-8, available at <http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=1&SID=97c522ab7f56bd2d595a12cb522ac960&h=L&r=SECTION&n=17y3.0.1.1.1.2.88.226>.
43. See *Green Century Equity*, SEC No-Action Letter, available at <http://www.sec.gov/divisions/corpfin/cf-noaction/14a-8/2010/greencentury041310-14a8.pdf> (last visited Aug. 20, 2013) and *As You Sow*, SEC No-Action Letter, available at <http://www.sec.gov/divisions/corpfin/cf-noaction/14a-8/2012/asyouow032212-14a8.pdf> (last visited Aug. 20, 2013).
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46. For example, a March 2011 review by STRONGER, a collaborative effort of state regulators and other stakeholders, found that Louisiana’s spill prevention and control plan regulations require development of a Spill Prevention and Control Plan within 180 days *after* a facility becomes operational and to be fully implemented within one year after the facility begins operation. “Consequently, there is a gap in time between the drilling and hydraulic fracturing of a well and the time that the Spill Prevention and Control Plan is required.” See STATE REVIEW OF OIL & NATURAL GAS ENVIRONMENTAL REGULATIONS [hereinafter STRONGER], *Louisiana Hydraulic Fracturing State Review* (Mar. 2011), available at <http://www.strongerinc.org/documents/Final%20Louisiana%20HF%20Review%203-2011.pdf>. For more information on STRONGER and its state regulatory reviews, see STRONGER, <http://www.strongerinc.org/> (last visited Aug. 18, 2013).