

EXXON MOBIL CORP
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2015 Proxy Memo: EXXON MOBIL
Impacts of Hydraulic Fracturing Operations

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Shareholder Proposal No. 11 on EXXON MOBIL's 2015 Proxy Statement:
REPORT ON HYDRAULIC FRACTURING

EXXON MOBIL, Symbol: XOM
Filed by: As You Sow

Resolution

This Proposal asks “the Board of Directors to report to shareholders, by December 31, 2015, and annually thereafter, the results of company policies and practices, above and beyond regulatory requirements, to minimize the adverse environmental and community impacts from the company’s hydraulic fracturing operations associated with shale formations.”

Rationale for a Yes Vote

Horizontal drilling and hydraulic fracturing operations have the potential to create significant environmental and social impacts – from air pollution and water quality harm, to community disruption, to greenhouse gas emissions, and even earthquakes -- resulting in increased risk to the company and shareowners from community opposition, regulatory scrutiny, and potential legal liability.

This Proposal reflects rising public expectations for quantifiable disclosure from companies undertaking hydraulic fracturing activities. Shareholder proposals requesting enhanced reporting have earned support from 28% - 40% of shareholders, indicating sustained concern from shareholders about the inadequacy of existing company risk management disclosures.

As public expectations for company disclosure and transparency rise, investment value may be undermined by company environmental policies and practices that lag public and regulatory expectations. In order to measure the effectiveness of company policies and practices intended to mitigate environmental and community impacts, investors need: rigorous disclosure of steps to minimize risk, reporting on key indicators of success, and clearly defined steps undertaken by the company to continually improve operations. Companies that fail to transparently mitigate the environmental and community impacts of their operations face significant, ongoing business risks including regulatory enforcement, litigation, brand damage, and loss of social license to operate. Currently, Exxon is not providing the data necessary for investors to verify whether the company’s policies and practices effectively manage the impacts and risks of hydraulic fracturing.

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Prominent regulatory bodies are echoing investor calls for increased transparency and disclosure of company policies and progress toward achieving best practices. The International Energy Agency, the Department of the Interior, and an array of states are pressing for increased disclosure requirements regarding hydraulic fracturing operations. In particular, and as noted in proponents' resolution, the Department of Energy secretary's shale advisory panel recommended in 2011 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."¹ (emphasis in original).

GROWING CONCERN REGARDING THE ENVIRONMENTAL AND SOCIAL IMPACTS
OF HYDRAULIC FRACTURING OPERATIONS

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As natural gas production has expanded in the United States, controversies associated with hydraulic fracturing have increased. In the rush to drill for natural gas, incidents have occurred of poorly constructed wells, equipment failures, degraded local and regional air quality, water contamination, lawsuits, disruptive community impacts, and strained community relations. As a result, the industry has faced public backlash that has led to costly bans and moratoria.

WATER-RELATED IMPACTS - Much of the controversy surrounding hydraulic fracturing has centered on water use. Hydraulic fracturing operations typically use millions of gallons of water and thousands of gallons of chemicals, prompting concerns about potential water contamination and water shortages. These concerns have prompted calls for increased chemical disclosure, restrictions on companies' access to water, and better water management practices. The high volumes of water used during hydraulic fracturing also pose substantial operational, and thus business, risks to companies as drought increases in many areas across the country.

WASTE DISPOSAL - Hydraulic fracturing results in significant amounts of waste that can pose risks to local air, waters, and soils. Large volumes of waste water -- typically fresh water contaminated by drilling fluids and naturally occurring contaminants -- are brought to the surface as wells are completed. Drilling residuals also contain toxic chemicals. Traditional methods of storage, such as open pits, are one of the highest risk pathways for surface water contamination.² Companies are increasingly opting to treat waste water themselves or send it to deep water injection sites. Deepwater injection, however, is under scrutiny as the source of increasing numbers of earthquakes.

¹ U.S. Department of Energy Secretary of Energy Advisory Board, "Shale Gas Production Subcommittee Second Ninety Day Report," November 18, 2011, page 9, http://www.shalegas.energy.gov/resources/111811_final_report.pdf; See also International Energy Agency, "golden rules for a Golden Age of Gas" (2012), http://www.iea.org/publications/freepublications/publication/WEO2012_GoldenRulesReport.pdf. APG, a \$450 billion Dutch pension fund (serving 4.5 million pensioners) noted in 2012 that it had decided not to invest in a U.S. company using hydraulic fracturing because of the company's "lack of transparency. . . and concerns about the social and environmental practices of the relevant manager." APG "requested more quantitative reporting on performance indicators and the application of best practice standards," see "Investing in Sustainability, May 2012," p.8, http://www.apg.nl/apgsite/pages/images/investing-in-sustainability-2012-1_tcm124_147592.PDF.

¹ Joel Berger and Jon Beckmann, "Sexual Predators, Energy Development, and Conservation in Greater Yellowstone," *Journal of Conservation Biology*, 24, no. 3 (June 2010):301-306, <http://onlinelibrary.wiley.com/doi/10.1111/j.1523-1739.2010.01449.x/abstract>.

² "Pathways to Dialogue: What the Experts Say About the Environmental Risks of Shale Gas Development: Overview of Key Findings," (Resources for the Future; 2013), p. 19, http://www.rff.org/Documents/RFF-Rpt-PathwaystoDialogue_FullReport.pdf

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AIR IMPACTS - Hydraulic fracturing can result in regional and local air emissions, raising concern in nearby communities about a range of harmful health impacts. Emissions from hydraulic fracturing operations have also been linked to increased ozone and methane levels, tarnishing natural gas's reputation as a 'climate-friendly' alternative to coal.

COMMUNITY IMPACTS - Hydraulic fracturing operations can cause a range of negative impacts to host communities:³ For example, hydraulic fracturing operations bring an influx of industrial activity and personnel that lead to damaged roads and infrastructure, extensive traffic congestion, noise and light pollution, increasing burdens on emergency services, and rising crime rates.⁴ Hydraulic fracturing can also increase local health risks, result in water degradation, and decrease property values, among others.

As a result of the growing public concern about these impacts, and industry's perceived lack of response, communities have enacted, or caused governments to enact, numerous bans and moratoria on hydraulic fracturing operations. Most prominently, the State of New York recently banned hydraulic fracturing across the state after conducting an exhaustive review of evidence and finding that the risks of fracking outweighed the economic benefits to the state. Moratoria have also been adopted throughout the United States, including in Denton, Texas, where Exxon's XTO unit honed its shale expertise. Community concerns about natural gas extraction operations near homes was underscored when Exxon's Chief Executive Officer joined his neighbors in a lawsuit alleging that water hauling associated with hydraulic fracturing activities has the potential to increase noise and traffic, and decrease property values. Moratoria and similar bans represent a rejection of companies' "social license to operate," which can have negative impacts on a company's profitability. Exxon has experienced such costs; it is the largest producer of natural gas in Germany, a country that has maintained a moratorium on fracking despite intense industry lobbying.

Community opposition to hydraulic fracturing operations has led to a growing recognition that companies must become more publicly transparent about managing their environmental footprint and social impacts, and that they must engage key stakeholders to earn and maintain their social license to operate. The public is no longer willing to simply trust large companies like Exxon when they assure communities that they have optimal practices in place. Further, investment value may be undermined by company environmental policies and practices that lag public and regulatory expectations, or that lag disclosures and management practices of their peers.

³ Grassroots Environmental Education, "Summary Report: Human Health Risks and Exposure Pathways of Proposed Horizontal Hydrofracking in New York State," (Presented in a meeting with officials from the NYSDEP and the NYS DOH on October 9, 2012),

<http://chej.org/wp-content/uploads/Summary-Report-Hydrofracking-In-New-York-State.pdf>.

⁴ Joel Berger and Jon Beckmann, "Sexual Predators, Energy Development, and Conservation in Greater Yellowstone," *Journal of Conservation Biology*, 24, no. 3 (June 2010):301-306,

<http://onlinelibrary.wiley.com/doi/10.1111/j.1523-1739.2010.01449.x/abstract>.

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Investors need specific, detailed assurances that companies are transparently and proactively managing the impacts of their operations. Such transparency requires full disclosure of steps being taken to minimize risk, acknowledgement of challenges and failures, and clearly defined steps to continually improve operations. In the absence of meaningful disclosure, investors and the public cannot adequately differentiate companies' management of hydraulic fracturing risks.

EXXON FAILS TO PROVIDE INVESTORS WITH RELEVANT METRICS NECESSARY TO ASSESS THE COMPANY'S EXPOSURE TO HYDRAULIC FRACTURING OPERATIONAL RISK AND TO DETERMINE WHETHER THE COMPANY IS EFFECTIVELY MITIGATING THOSE RISKS

Company Practices

Exxon has failed to meaningfully report on key performance indicators necessary to assure investors and the public that it is adequately managing risk. In comparison with its peers, many of which are improving reporting practices, Exxon provides little data on its website and 10-K regarding the environmental and social impacts of its hydraulic fracturing operations, relying instead on generalized assurances of good practices. However Exxon's assurances are insufficient to provide investors an understanding of whether the Company is effectively mitigating risk. An analysis of Exxon's lack of disclosure follows:

1. GOALS AND SYSTEMS TO REDUCE TOXICITY OF DRILLING FLUIDS

Exxon provides no information as to whether it has goals in place, or has established systems, to reduce the toxicity of its drilling fluids. Chemicals used in hydraulic fracturing can include carcinogens, biocides, and a range of other harmful constituents. Exxon provides no information as to whether it has set goals or put systems in place to reduce the toxicity of the chemicals it is using, or whether it has asked its suppliers do so.

Peer Comparison: Exxon's peers are taking action to reduce the toxicity of their fracking fluids. Chevron,⁵ EQT,⁶ and Hess⁷ provide quantitative measures of toxicity reductions they have undertaken. Other companies describe specific actions they have taken to reduce chemical toxicity of fracking fluids. BHP Billiton and EQT Corporation report replacing traditional biocides with non-chemical or less harmful alternatives.⁸ Apache Corporation has reported that 83 percent of the volume of fracturing chemicals it uses are listed by the U.S. EPA's Design for Environment Program, a set of criteria for safer chemicals.⁹ Anadarko Petroleum Corporation has developed a Chemical Assessment Rating Evaluator to improve the chemical profile of its fracking fluids, and Encana Corporation is expanding the scoring system for its Responsible Products Program, adding evaluation of drilling fluids to its current evaluation of fracking fluids.¹⁰

⁵ Partnering in the Marcellus (Chevron has reduced the number of hazardous materials requiring Material Safety Data Sheets (MSDS) in fracturing fluids by 77 percent, from 31 to 7)", p. 13,

<http://www.chevron.com/documents/pdf/PartneringMarcellus.pdf>

⁶ 2014 EQT Social Responsibility Report (50% reduction in acid utilization), p. 16,

<http://www.eqt.com/docs/pdf/2014%20EQT%20CSR%20Report.pdf>

⁷ 2014 Hess Social Responsibility Report (50 reduction in biocide use), pp. 45-46,

<http://www.hess.com/docs/default-source/sustainability/hess-corporation-2013-csr.pdf?sfvrsn=2>

⁸ "The Right Chemistry: Apache and ACS GI Collaborate to advance greener fracking fluids," R. Liroff, Green Biz, (January 2016), <http://www.greenbiz.com/article/apache-and-acsgci-collaborate-advance-greener-fracking-fluids>.

⁹ Id.

10 Id.

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2. PERCENTAGE OF DRILLING WASTE MANAGED IN CLOSED LOOP SYSTEMS; GOALS TO ELIMINATE THE USE OF OPEN PITS FOR STORAGE OF DRILLING FLUID & FLOWBACK WATERS

Exxon provides little to no information about its storage of toxic drilling wastes and flowback waters. Exxon provides no substantive information about its waste storage practices across the locations in which it conducts hydraulic fracturing. Storage of drilling wastes (which often contain toxic chemicals) and flowback waters in open pits is one of the highest risk pathways for surface water contamination¹¹ and can also cause infiltration into ground waters where ponds are unlined or improperly lined. Storing wastes in open air pits may also pose risks to community health as chemicals are released into air, a potential emission source that is rarely monitored.¹² The practice of storing wastes in closed loop systems is gaining ground as a means of minimizing these problems. While storage tanks are an improvement to open pits, they must still be properly maintained. In July 2014, Exxon's hydraulic fracturing subsidiary was found to have spilled 57,000 gallons of wastewater from a leaking tank into the Susquehanna River due to failure to provide adequate spill containment.¹³

Peer Comparison: Encana is adopting a closed-loop water management system across approximately 180 historic and active pits, and has committed to avoiding construction of any new drilling or flowback pits on pad sites in the Piceance Basin in Colorado.¹⁴ Six other companies report having moved to closed-looped systems in some portion of their operations,¹⁵ including Anadarko, which uses closed loop management systems in its Marcellus and Wattenberg operations and CONSOL Energy in its Marcellus operations.¹⁶

3. PRE- AND POST- DRILLING GROUNDWATER TESTING

Exxon provides no information on whether it conducts pre- and post- drilling groundwater testing. Groundwater contamination is one of the issues of greatest public concern about the hydraulic fracturing process. Pre- and post-drilling groundwater testing allows companies to monitor groundwater before and after operations, providing critical information about contamination, should it occur, and giving companies an opportunity to address any problems in a timely manner. This testing not only helps to allay public concern, but provides a baseline of data against which claims of contamination can be measured to both protect the public and the company. Wyoming and Illinois have already begun requiring this type of testing.¹⁷

11 See Resources for the Future, "Pathways to Dialogue: What the Experts Say About the Environmental Risks of Shale Gas Development, Overview of Key Findings," Krupnic, Hal Gordon, and Sheila Olmstead, p.6, (2013), http://www.rff.org/Documents/RFF-Rpt-PathwaystoDialogue_Overview.pdf,

12 See "Waste Pit Emissions – The Big Unknown," Inside Climate News, <http://insideclimatenews.org/news/20141002/graphic-frackings-waste-pit-emissions-big-unknown>

13 "Exxon fights over Fracking with Pennsylvania Attorney General," <http://www.wsj.com/articles/exxon-says-it-is-getting-singled-out-over-fracking-1405011974>.

14 "Caring About Water in Colorado," <http://www.encana.com/news-stories/our-stories/environment-caring-about-water-in-colorado.html>

15 See Chart Water and Waste Issues, "Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing," p. 14, <http://disclosingthefacts.org/>.

16 Id., at p. 21.

17 See <http://wyofile.com/dustin/wyoming-embarks-on-groundwater-monitoring-rule-for-oil-and-gas-development/> and Illinois Hydraulic Fracturing Regulatory Act, <http://www.ilga.gov/legislation/publicacts/98/PDF/098-0022.pdf>.

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Peer Comparison - Hess Petroleum states that it has adopted the practice of testing before and after conducting hydraulic fracturing, at a minimum of a 2,500 foot radius, except in North Dakota where the state monitors an established network of groundwater wells.¹⁸ Penn Virginia and Shell also state that they conduct post-drill monitoring in all plays. Six other companies report that they conduct some type of pre-drill monitoring.¹⁹

4. PERCENTAGE OF WELLS USING ‘GREEN COMPLETIONS’ TO REDUCE RELEASE OF METHANE;
METHANE LEAKAGE AS A PERCENTAGE OF TOTAL PRODUCTION

Exxon provides no quantitative information on green completions and does not report its methane leakage as a percentage of total production. Methane is a tremendously potent greenhouse gas, with a “global warming potential” 86 times that of carbon dioxide over a 20-year time frame, and 28-34 times more potent over a 100 year time frame.²⁰ The climate change benefits of natural gas, however, can be offset by leakage of methane in the production, transmission, and distribution processes. In particular, oil and gas well completion, and well leakage, can be sizeable sources of greenhouse gas emissions.

Current regulation of methane at oil and gas operations is limited in the types of emissions addressed, in the monitoring required, and in the actions required to be taken to reduce leaking, venting, and flaring. Exxon provides no information about whether it conducts green completions on wells that are not currently regulated, whether it monitors and fixes leaks across all its wells, or whether or how it uses leak detection technology. It also fails to provide the percentage leakage rate for methane from its drilling, completion, and production operations.

Peer Comparison: In a 2014 survey of 30 oil and gas companies, 16 of Exxon’s peers reported that they used methane leak detection technologies to identify leaks; ten companies reported the percentage of wells at which they used green completions; and three companies reported their percentage leakage rate for methane from drilling, completion, and production operations.²¹

5. QUANTITIES OF WATER USED BY REGION

Exxon does not provide data regarding its water use by region, even for operations in areas of drought. A recent study of water use in hydraulic fracturing operations in the U.S. found that most operations occur in areas currently experiencing “high water stress,” including the Permian Basin in Texas, in which Exxon operates.²² Metrics relating to amount of water used by region, the companies’ rates of recycling and reuse of produced water or waste water, and reductions in freshwater withdrawals are critical for investors in assessing the extent to which companies are mitigating exposure to water-related risks. The Appalachian Shale Regional Practices group (ASRPG) principles and the International Energy Agency’s Golden Rules for a Golden Age of Gas report both call for quantitative reporting on water use and recycling.²³

¹⁸ Hess Corporation 2011 Corporate Sustainability Report, p. 21,

<http://www.hesscorporation.com/downloads/reports/EHS/US/2011/default.pdf>

¹⁹ See “Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing,” pp. 16-17, <http://disclosingthefacts.org/>.

²⁰ See “Climate Change 2013: The Physical Science Basis, Intergovernmental Panel on Climate Change,” page 714, http://www.climatechange2013.org/images/report/WG1AR5_ALL_Final.pdf.

²¹ “Disclosing the Facts 2014”, p. 26, <http://disclosingthefacts.org/>.

²² A recent study of 25,000 shale wells revealed that nearly half were developed in water basins with “high” or “extremely high” water stress. For example, 92% of Colorado’s nearly 4,000 wells were drilled in “extremely high” water stress areas, and even in the Susquehanna River Basin, where water is abundant, drought conditions caused the

Susquehanna River Basin Commission to suspend water withdrawal privileges for companies during two recent summers. See Ceres, “Hydraulic Fracturing & Water Stress: Growing Competitive Pressures for Water”, (2013) <http://www.ceres.org/resources/reports/hydraulic-fracturing-water-stress-growing-competitive-pressures-for-water>.
23 For ASRPG, see http://asrpg.org/pdf/ASRPG_standards_and_practices-April2012.pdf. For the IEA report, see http://www.worldenergyoutlook.org/media/weowebiste/2012/goldenrules/weo2012_goldenrulesreport.pdf

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Peer Comparison: Occidental Petroleum provides one of the best examples of effective water use reporting. It provides key metrics on water use for many of its regional operations (e.g., South Texas, North Dakota, and Colorado) in easy-to-use charts, including amount of potable municipal fresh water and other fresh water used; percentage of total use from each source; amount of non-freshwater used; amount of produced water generated and recycled; and direct discharge to surface waters.²⁴ In contrast to Exxon, investors are able to objectively assess Occidental's risk exposure and risk management practices relating to impacts on local water sources.

6. NUMBERS AND TYPES OF COMMUNITY COMPLAINTS AND PORTION RESOLVED

Exxon does not report information on numbers and categories of community complaints received or its resolution of those community complaints. The impacts of hydraulic fracturing operations on local communities has frequently led to highly strained relations between oil and gas companies and the communities in which they operate. Failure to properly address these types of concerns has created financial implications for companies. In the recent past, shareholders have suffered losses in their investments when company operations have been curtailed by bans and moratoria enacted by communities concerned about the adverse impacts associated with hydraulic fracturing operations. As noted above, Exxon has directly experienced the effects of moratoria that impede its ability to operate.

Another risk of unresolved community complaints is litigation. In 2011, Exxon's XTO subsidiary was named as a defendant in a class action lawsuit in the U.S. District Court for the Eastern District of Arkansas for "noxious and harmful nuisance, contamination, trespass and diminution of property values that the Gas Wells have caused" including allegations of drinking water contamination.²⁵ While Exxon interacts with the communities in which it operates, Exxon does not report a systematic approach for identifying and addressing community concerns about the impacts of its operations, including quantifying the numbers and categories of community complaints and portion resolved. Thus, shareholders are unable to ascertain if Exxon is adequately addressing community concerns and complaints in a manner that will facilitate ongoing and successful operations.

²⁴ See <http://www.oxy.com/SocialResponsibility/Environmental-Stewardship/Pages/Water-Performance-Metrics.aspx> for specific metrics on: water withdrawals, produced water, water recycling and reuse, and produced water by region.

²⁵ "A fracking class action lawsuit,"

<http://desmogblog.com/2013/05/15/faulkner-county-exxonmobil-sacrifice-zone-tar-sands-pipelines-fracking>

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Peer Comparison: EQT launched an “issues tracking and resolution” process in 2013. Of the 113 issues reported in the database by the company’s network of designated community advisors, 54% related to construction traffic or road conditions, 20% to possible property damage, and the remaining 27% to a variety of additional issues. Company staff report quarterly to senior corporate management on “the number of complaints received per 100 wells spud [wells where drilling has begun].”²⁶ Such a system is readily accessible and provides information to shareholders and the public about how the company is addressing community issues. While this is only one type of system to effectively address community complaints, it provides a workable model for demonstrating how issues are being resolved by the company.

RESPONSE TO EXXON’S ARGUMENTS

In its Opposition statement, Exxon argues that its 2010 - 2013 Corporate Citizenship Reports (CCRs) “all discuss issues surrounding the development and production of unconventional resources.” (Exxon Proxy Memo 2015, p. 73). While Exxon does discuss, in general and non-quantitative terms, broad and generalized issues concerning hydraulic fracturing operations, the company does not disclose the specific information requested in this resolution, including information on adoption of best practices and the success of those practices across its various hydraulic fracturing operations. Where Exxon provides any data, it is generally aggregated, company-wide statistics, which reflect Exxon’s total oil, gas, chemical, and other operations around the world. Company-wide metrics, reflecting Exxon’s global operations, do not provide useful information for shareholders on what is occurring at each of Exxon’s natural-gas hydraulic fracturing and drilling operations. Similarly, Exxon’s recent report, Unconventional Resources Development, Managing the Risks, treats a range of issues generally, providing arguments for why hydraulic fracturing is beneficial, providing industry actions and studies, and providing non-specific statements about Exxon’s operations. It does not disclose information about Exxon’s actual practices as requested by this proposal, including how Exxon is minimizing risks associated with hydraulic fracturing operations.

In sum, Exxon seeks to substitute superficial, generalized, or industry-related information for the high quality, specific, in-depth reporting of Exxon’s practices requested by the proposal and required by investors. Exxon also claims that its environmental performance is managed through its Operations Integrity Management System (OIMS). While Exxon’s OIMS system provides general guidelines for operational decision making, it does not set forth actual practices.

CONCLUSION

Exxon currently fails to provide the transparent reporting necessary for shareholders and the public to assess Exxon’s progress towards achieving best practices. As highlighted in proponents’ resolution, the Department of Energy panel has urged 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.” (emphasis in original).²⁷ We encourage shareholders to vote in support of this proposal calling on the company to provide quantitative reporting on the results of its procedures and practices in order to measure the company’s effectiveness in minimizing the adverse environmental and community impacts of its hydraulic fracturing operations.

²⁶ <http://www.eqt.com/docs/pdf/2014%20EQT%20CSR%20Report.pdf>

²⁷ http://www.shalegas.energy.gov/resources/111811_final_report.pdf, page 9.

