



Hydraulic Fracturing – Quantitative Reporting

Occidental Petroleum

Annual Meeting: May 2, 2014, Houston, TX

RESOLUTION

Shareholders request the Board of Directors to report to shareholders by October 30, 2014, and annually thereafter, using quantitative indicators, the results of company procedures and practices, above and beyond regulatory requirements, to minimize any adverse environmental and community impacts from the company's hydraulic fracturing operations associated with shale formations. Such reports should be prepared at reasonable cost and omit confidential information.

RATIONALE FOR A YES VOTE – OCCIDENTAL FAILS TO DISCLOSE QUANTITATIVE RISK METRICS ASSOCIATED WITH HYDRAULIC FRACTURING OPERATIONS

Hydraulic fracturing and associated productions operations have been linked to significant environmental and social impacts including, spills, leaks, well accidents, competition for water resources, road damage, noise, and air pollution, among others. These impacts can have significant financial and reputational implications for the company. This proposal reflects rising public expectations for *quantifiable* disclosure from companies undertaking hydraulic fracturing activities. As public expectations for company disclosure and transparency rise, investment value may be undermined by company environmental policies, practices, and disclosures that lag public and regulatory expectations as is the case with Occidental.

To measure the effectiveness of company policies and practices, investors need rigorous, detailed reporting on key indicators, on a regional or play by play basis. Currently, Occidental is not providing the data necessary for investors to verify whether the company's policies and practices effectively manage the many impacts and risks associated with hydraulic fracturing and shale gas extraction across its multiple plays. The general information it does provide is neither quantitative (failing to demonstrate the effectiveness of its management policies) or, for the most part, specific to its different plays. Further, its general statements of practices can be misleading where not applicable across its multiple plays. In summary:

1. Horizontal drilling and hydraulic fracturing operations result in significant environmental and social impacts, which increase financial risks to shareholders.
2. Public expectations are on the rise for better company disclosure and environmental protection measures. Proponents are concerned that Occidental's investment value may be undermined if the Company fails to respond effectively to these rising expectations.
3. Occidental does not provide investors with sufficient information to determine if the company is mitigating the risks associated with fracturing operations.



FILER

Lead filer of this proposal is As You Sow (on behalf of Ellen Stone).

This memo, which was prepared in part by IEHN and Green Century, details why a vote for this proposal is important. It identifies the risks facing the natural gas production sector as a whole, identifies risks specific to Occidental, and describes the rising public and regulatory expectations for better disclosure by companies.

This is not a solicitation to vote your proxy. Please DO NOT send us your proxy card; As You Sow is not able to vote your proxies, nor does this communication contemplate such an event. We urge shareholders to vote for Item number 10 following the instruction provided on the management's proxy mailing.

BACKGROUND ON GROWING CONCERNS REGARDING HYDRAULIC FRACTURING OPERATIONS

As natural gas production has expanded in the United States, controversies associated with the hydraulic fracturing process have grown. In the rush to drill for natural gas, there have been incidents of poorly constructed wells, equipment failures, degraded local and regional air quality, water contamination, private lawsuits, strained community relations, and related government enforcement actions. As a result of the many impacts communities have experienced, the industry has faced increasing public backlash including costly bans and moratoria.

Companies that fail to transparently mitigate the significant environmental and community impacts of their operations face significant business risks including enforcement actions, loss of reputation, mitigation costs, liability, and loss of their social license to operate. The banning of hydraulic fracturing operations was recently upheld by an appellate court which ruled that New York municipalities can use local zoning laws to ban the practice of hydraulic fracturing for natural gas.¹ In the face of these issues, investors have become more concerned about how companies are managing and disclosing information regarding their hydraulic fracturing operations and, especially, how their management practices affect the environmental and social impacts that may affect financial performance.

Rising Expectations for Quantitative Disclosure

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 18 states are pressing for increased

¹ George M. Walsh, "Appeals Court Upholds Local Fracking Bans in NY" *Associated Press*, May 2, 2013, <http://abcnews.go.com/US/wireStory/appeals-court-upholds-local-fracking-bans-ny-19094214>.¹ George M. Walsh,



disclosure requirements regarding hydraulic fracturing operations. In particular, and as noted in proponent's 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." (emphasis in original). Significantly, two recent investor reports² analyzing companies' disclosures have found that the industry generally provides inadequate reporting of its fracking activities and impacts. The reports also review individual company disclosures, finding that certain companies are ahead of their peers in their reporting practices, while other companies lag their peers. Occidental has been identified as a company whose quantitative reporting on its hydraulic fracturing activities lags its peers.³

INVESTOR CAMPAIGN

This is the fifth year investors with concerns regarding the impacts of hydraulic fracturing operations have engaged companies. Proposals have consistently received high votes averaging over 30% since initial proposals were filed in 2010. These high votes send a clear message to the entire sector that investors need specific, relevant disclosure as to how companies are managing the risks and impacts associated with their operations.

ANALYSIS OF OCCIDENTAL'S CURRENT REPORTING AGAINST THE GUIDELINES OF THE PROPOSAL

At present, Occidental's disclosures are primarily limited to narrative, anecdotal descriptions of company risk management practices. Occidental generally provides little or no quantitative reporting on requested key performance indicators. Where it does provide quantitative data, the data either (1) reflects aggregate information across all areas of its extensive international operations, from oil and gas, to energy production, to chemical production, which is not useful for understanding risks and impacts from particular hydraulic fracturing and shale gas extraction operations, or (2) is limited to a small percentage of its operations, as is the case with its recently improved water source and recycling disclosures, where information pertains to approximately 20% of its operations. In comparison with its peers, Occidental provides little quantitative data on its website and 10-K on key environmental and social indicators of its hydraulic fracturing operations on a play by play basis.⁴

The following analysis serves to benchmark Occidental's current reporting against that requested in the proposal.

1. Percentage of recycled water used regionally.

² *Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing Operations* (2011) <http://disclosingthefacts.org/>; See <http://www.unpri.org/press/pri-signatories-target-fracking-disclosure/>.

³ See *Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing Operations (Scorecard)*, <http://disclosingthefacts.org/> p.5 .

⁴ Occidental scored 2 points out of a possible 32, earning one of the lowest scores for disclosures across a range of metrics. <http://disclosingthefacts.org/>, p.5.



Much of the controversy surrounding hydraulic fracturing has centered on water use and wastewater management. The high volumes of water and chemicals used during the extraction process have prompted concerns about potential water contamination and water shortages, and have increased tension with communities from competition over finite water resources.

Proponents believe that Occidental is exposed to significant risks associated with water use in its hydraulic fracturing operations. According to a 2014 research report from Ceres, Occidental operates in at least two water constrained areas and is thus subject to water stress exposure.⁵ The Permian Basin in west Texas where Occidental operates is an area with water demand pressures, drought concerns, high groundwater use, and concurrent groundwater stress.⁶ Occidental is in the top eight companies with the highest exposure to water stress in that region.⁷ Similarly, Occidental's California wells are in areas of high or extremely high water stress.⁸ Between groundwater concerns in California and the state's recently declared "drought emergency," any expansion of water use for hydraulic fracturing in this region will likely spark strong public concern that could jeopardize the company's social license to operate.

Consequently, the resolution specifically asks Occidental's board to report via quantitative indicators the percentage of recycled water used regionally. 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.⁹

Occidental has made some limited progress in this arena. For five specific locations, Occidental provides quantitative data on the percentage of recycled water used and the source of the water.¹⁰ This reporting addresses only a small slice of Occidental's wells, however. An analysis of wells listed in FracFocus indicates that these 5 areas represent only 20 percent of Occidental's U.S. wells and that the information provided does not address wells in the most water stressed regions in which Occidental is operating. As such, investors cannot rigorously and objectively evaluate Occidental's progress in minimizing water impacts and associated risks across the full range of the company's shale gas operations.

⁵ Water stress is a measure of the ratio of water withdrawal to mean annual available supply, and is useful for showing where there is high competition for limited water resources among use. A more complete definition is available at page 15 of the Ceres report, "Hydraulic Fracturing and Water Stress: Water Demand by the Numbers", <https://www.ceres.org/resources/reports/hydraulic-fracturing-water-stress-water-demand-by-the-numbers/view>

⁶ <https://www.ceres.org/resources/reports/hydraulic-fracturing-water-stress-water-demand-by-the-numbers/view>, p.55.

⁷ *Id.*, see p.55-58.

⁸ *Id.*, see p. 59-63.

⁹ For ASRPG, see http://asrpg.org/pdf/ASRPG_standards_and_practices-April2012.pdf. For the IEA report, see Appendix 2 and http://www.worldenergyoutlook.org/media/weowebiste/2012/goldenrules/weo2012_goldenrulesreport.pdf.

¹⁰ See e.g.,

<http://www.oxy.com/sr/EnvironmentalStewardship/WaterManagement/Pages/WaterWithdrawal.aspx>.



Other more general statements by Occidental, such as “Produced water is sometimes reused during drilling, completions and well stimulation—including hydraulic fracturing,”¹¹ are not helpful to investors in understanding the extent of recycling Occidental undertakes or how effectively the company is addressing the risks of water constraints, increasing costs, and public perceptions about overuse of water in Occidental’s hydraulic fracturing activities. Similarly, information about recognition the company has received for recycling programs or statements that “throughout our operations, Oxy is increasingly recycling and reusing water, which both decreases our freshwater withdrawals and the need for transportation and disposal of water”¹² provide useful but insufficient information. As discussed above, broad statements about activities such as increased recycling are not helpful if investors do not know the baseline recycling quantities or the amounts by which recycling has increased or where that increased recycling is being implemented.

Peer comparison: At least one other company reports more specifically. For instance, EQT states that it “routinely collects nearly 100% of the water that flows back from completed wells.”¹³

Proponent applauds Occidental for its improved reporting in providing detailed recycling and certain source information for five areas. We seek such reporting for all of Occidental’s hydraulic fracturing operations.

2. Percentage of drilling residuals managed in closed-loop systems; and targets and progress in eliminating open pits.

Naturally occurring contaminants found in drilling residuals, and the large volumes of water brought to the surface when wells are drilled and completed -- from chemicals such as benzene to high salinity to radioactive materials -- can cause significant harm if spilled. These drilling residuals and produced water present potential hazards to water quality as identified by the Center for Sustainable Shale Development and the International Energy Agency.¹⁴ Open pit storage of these materials presents hazards of leaks into groundwater, spills into surface waters and onto soil, and air quality problems. Closed loop management systems and closed storage containers can be used in place of open pits to help prevent water, air, and soil contamination.

Occidental provides the following statement on its website on this issue: “Oxy separates produced water, which is typically saline, from the oil and gas and, *in many places*, recycles it in a closed loop by reinjection into oil and gas reservoirs as part of our improved or enhanced oil recovery operations.”¹⁵ (emphasis added). This statement is uninformative as to what the company means by “many places.” Is it referring to ten wells or thousands of wells? Where are such systems used -- In some or all of its plays? in areas most subject to flooding and storms?

¹¹

<http://www.oxy.com/sr/EnvironmentalStewardship/WaterManagement/Pages/ProducedWaterManagement.aspx>.

¹² <http://www.oxy.com/sr/EnvironmentalStewardship/Pages/HydraulicFracturing.aspx>.

¹³ http://www.eqt.com/docs/pdf/EQT_CSR_Report_2011-2012.pdf, page 10.

¹⁴ CSSD performance standard 3, <https://www.sustainableshale.org/performance-standards/>; IEA Golden Rules Report, page 23.

¹⁵ <http://www.oxy.com/sr/EnvironmentalStewardship/watermanagement/Pages/WaterManagement.aspx>



When are these systems put in place? Are they being used only when new wells are created or are they replacing older pits that are more subject to leaks? At best, shareholders are left to guess the answers to such questions, at worst they are misled into assuming that more areas are covered by this statement than is factually the case.

Occidental also provides for 5 specific areas, produced water management information, i.e., amount of produced water generated and amount recycled or reused. While useful, this information is limited, addressing only approximately 20% of Occidental's total wells (as calculated using well information provided in FracFocus).

Peer comparison: In contrast, Anadarko explicitly states the plays in which it uses closed loop management, stating that in both its Marcellus and Wattenberg operations it conducts closed-loop management of solid material and drilling fluids, eliminating the need to dispose of these materials in pits.¹⁶ Similarly, Consol Energy has stated that it has “fully implemented closed loop processes that allow for the capture and disposal of drill cuttings into containers, eliminating the use of open pits on site” in its Marcellus operations.¹⁷

Proponents seek similar report by Occidental on its efforts to implement best practices for managing drilling residuals and produced water, including disclosure of percentage of drilling residuals managed in closed-loop systems and/or stored in tanks, and identifying the regions or plays where such systems are used.

3. Total Amount of Air Emissions Reduced Annually On a Categorical and Regional/Site Basis.

The contribution of hydraulic fracturing and natural gas extraction activities to declining regional air quality has prompted strong concerns and outcry among local residents, increasing the likelihood of tightened oversight and regulation of the industry,¹⁸ community opposition to new wells and, potentially, claims for health-based harms. Emissions from shale gas operations have also been linked to increased ozone and methane levels, further tarnishing natural gas's reputation as the more 'climate-friendly' alternative. Technical experts generally agree that a sizeable number of cost-effective emission reduction measures are currently available to

¹⁶http://www.anadarko.com/SiteCollectionDocuments/PDF/Fact%20Sheets/2013_APC_Marcellus%20Fact%20Sheet_2013.pdf;

<http://www.anadarko.com/SiteCollectionDocuments/PDF/WattenbergHZ/Wattenberg%20HZ%20Overview.pdf>.

¹⁷ Consol Corporate Responsibility Report 2012, pages 41, 42, <http://consolenergy.com/corporateresponsibilityreport/>.

¹⁸ This is particularly a problem in Western states. See, for example, “Wyoming's Smog Exceeds Los Angeles' Due to Gas Drilling”, <http://content.usatoday.com/communities/greenhouse/post/2011/03/wyomings-smog-exceeds-los-angeles-due-to-gasdrilling/1#.UknyblZ6ZAc>. See also, For Colorado, see “Tighter Emissions Control Standards Next Challenge for Oil and Gas Industry in Weld”, <http://www.greeleytribune.com/news/7260650-113/emissions-gas-oil-industry>. For California, see “SCAQMD Adopts New Notification and Reporting Requirements for 'Fracking' and Other Oil and Gas Well Drilling Activities,” <http://www.aqmd.gov/news1/2013/bs040613.htm>.



substantially reduce air pollution emissions, from criteria pollutants to greenhouse gas emissions.

Air pollution is a highly galvanizing issue to communities and thus something about which investors should be informed. Yet, Occidental provides no quantitative information to investors about the practices it is taking to reduce air emissions from its hydraulic fracturing and shale gas operations in any given play or region, or how effective such measures are, if they exist. Although Occidental does provide a single chart of company-wide emissions data for four air pollutants,¹⁹ the chart represents yearly emissions from the company's world-wide operations including oil and gas, chemical plants, energy plants, and a variety of other operations. Such aggregate air pollution statistics are not useful in understanding risks posed to the company from hydraulic fracturing and shale gas operations. Criteria air pollution is a localized human health problem and must be reported and addressed on a localized basis. Aggregated information does not allow Investors to assess whether air pollution from the company's shale gas operations is increasing or decreasing in any given region or play. As currently reported by Occidental, pollution in a particular play or region could be increasing but those increases would be masked by statistics that address reductions half way across the world.

In its 2011 Sustainability report, Occidental mentions that it devotes capital to install energy-efficient electrical equipment and distribution systems to provide electric power to operations that formerly required gas or diesel engines.²⁰ Occidental does not state, however, whether this information is applicable to its hydraulic fracturing operations or just its energy generation operations, where or when such substitution is occurring, or whether this applies to outside contractors.

Peer comparison: Occidental's peers provide a range of specific disclosures on activities to reduce air pollutants. For example, Devon provides the specific percent of green completions achieved and provides information on activities such as replacement of valves and the associated emissions reductions achieved.²¹ Anadarko indicates the annual emissions achieved by its green completions.²² Noble reports reduction of truck mileage by using pipelines instead of trucks.²³ Chesapeake and Apache discuss the specific percentages of their vehicle fleets

¹⁹ <http://www.oxy.com/sr/EnvironmentalStewardship/Pages/OtherAirEmissions.aspx>

²⁰ http://www.oxy.com/sr/Documents/Oxy_SR_11.pdf, p.22.

²¹ Devon Energy 2011/2012 Corporate Responsibility Report, <http://www.dvn.com/CorpResp/Documents/DVN-2012CSR-FINAL-REV.pdf>;

²² Anadarko 2010 and 2011 CDP Air reports, http://www.anadarko.com/SiteCollectionDocuments/PDF/CDP8%20Response_APC_FINAL.pdf page 9, and http://www.anadarko.com/SiteCollectionDocuments/PDF/Climate%20Change/CDP9_ProgrammeResponse.pdf (response to question 3.3a).

²³ Noble Energy 2011 Sustainability Report, page 31. <http://www.nobleenergyinc.com/Responsibility/Sustainability-Report-306.html>.



converted to natural gas.²⁴ Ultra describes a patented proppant it uses to eliminate the need for diesel engines.²⁵

Proponents seek similar reporting by Occidental on its specific activities to reduce air pollution, where those activities are being implemented, and the results achieved.

4. Goals and Systems for Reducing the Use of Harmful Chemicals in Fracturing Fluids

Hydraulic fracturing uses millions of gallons of water mixed with thousands of gallons of toxic chemicals to extract natural gas from underground shale formations. The toxicity of chemicals used for drilling and fracturing wells, especially those used for fracturing, have been the subject of considerable public debate due to their potential to contaminate ground and surface water. Managing chemical-related risks can be one of the most important steps a company takes to maintain its social license to operate, reduce its impacts on communities and the environment, and protect its bottom line.

Occidental fails to disclose progress in minimizing toxicity of its drilling fluids, a key performance indicator for managing the risks of ground and water contamination associated with the chemicals used in hydraulic fracturing fluids.

The only reference Occidental makes to chemical use is the following: “Hydraulic fracturing is a carefully designed and engineered practice conducted by specialized service companies with oversight by Oxy engineers. Typically, hydraulic fracturing fluids are comprised of water and an inert material, such as sand, with other ingredients making up less than 5 percent of the total. Service companies have developed expertise in formulating hydraulic fracturing fluids with specific properties based on the subsurface geology in the oil and gas reservoir. As with all activities for which we retain contractors, Oxy carefully selects companies that have strong health, safety and environmental performance to conduct hydraulic fracturing in our operations.”²⁶ This information is generalized and uninformative and does not answer the specific questions posed.

Peer comparison: In contrast, Chevron, reports quantitatively on its reduction in chemical use noting, for example, that in its operations in the Marcellus Shale it has reduced use of MSDS-listed chemicals by 77%, from 31 chemicals to 7.²⁷ Suppliers of fracturing fluids, such as Baker-Hughes and Halliburton, have developed scoring systems by which they rank the toxicity of their

²⁴ Chesapeake CSR report, page 16, <http://www.chk.com/Media/Publications/Corporate-Responsibility-Report/Documents/pdf/2011CorporateResponsibilityReport.pdf>. Apache Corporation 2013 Summary Sustainability Report 2013, page 1, http://www.apachecorp.com/Resources/Upload/file/sustainability/APACHE-Sustainability_Report_2013.pdf.

²⁵ Ultra 2013 fracturing update, accessible from <http://www.ultrapetroleum.com/Corporate-Responsibility/Hydraulic-Fracturing-150.html>.

²⁶ <http://www.oxy.com/sr/EnvironmentalStewardship/Pages/HydraulicFracturing.aspx>.

²⁷ Chevron, “Partnering in the Marcellus”, <http://www.chevron.com/documents/pdf/PartneringMarcellus.pdf>. Material Safety Data Sheets (“MSDS”) are produced pursuant to U.S. Occupational Safety and Health Administration (OSHA) guidelines and are intended to inform workers of potentially harmful substances handled in the workplace



products. Baker-Hughes, for example, has used scoring systems to report its progress in toxicity reduction efforts.²⁸

Proponents request that Occidental disclose goals and quantitative reporting on the company's progress to reduce toxicity of drilling fluids.

5. Numbers and Types of Community Complaints and Number Resolved.

Extraction of natural gas from shale has grown dramatically across the U.S., outpacing effective regulatory controls and, seemingly, the ability of companies to effectively address community impacts and concerns. Sudden expansion of industrial activity in an area can be socially disruptive -- often damaging roads, creating traffic jams, increasing rents, increasing rates of crime, and impacting social services, among others. These impacts can lead to strained community relations and can have financial implications for companies when not appropriately addressed.

The expansion of oil and gas activities will continue to face fierce opposition unless companies effectively and openly manage community concerns. More than 100 local governments in the U.S. have already enacted bans and moratoria on hydraulic fracturing,²⁹ with the latest moratoria in Colorado and Los Angeles.

Investors need and have requested specific, detailed assurances that companies are transparently and proactively managing the impacts of their operations on communities. The proposal therefore asks for numbers and types of community complaints and number resolved in order to assess how effective Occidental is in engaging with and addressing the communities' concerns. The company fails, however, to provide any such detail.

6. Numbers of Violation Notices or Administrative Actions in Association with Hydraulic Fracturing Operations.

The number and extent of violation notices received, penalties assessed, and administrative or legal actions brought, are important indicators of the quality of operational management, the importance placed on health and environment by the company and its employees, and whether employees know, understand, or are incentivized to follow environmental laws and regulations. These enforcement activities can reveal patterns of lack of attention, equipment failures, contractor errors, reporting failures, and episodes of environmental contamination.

Occidental provides statistics on companywide: (1) reportable events and (2) citations and penalties paid. While this information provides some insight into company practices generally, because it covers all Occidental's operations in the U.S. and across the world, the numbers do not provide any information about Occidental's compliance with laws in the hydraulic fracturing arena. Proponents seek similar reporting for its shale gas production operations on a play by play basis. This information should be readily available as it is, presumably, gathered as part of the companywide reporting. A specific example of information which shareholders would seek

²⁸ <https://www.greenbiz.com/blog/2012/09/21/5-ways-clean-frackings-chemical-act?page=0%2C1>

²⁹ JISEA Report, Chapter 2, page 61.



to understand under such a reporting system is, for instance, that the company's subsidiary was fined this year by California's Central Valley Regional Water Quality Control Board for discharging fracking fluid into an unlined pit in violation of California law.³⁰

Occidental's Opposition Statement

In its Opposition statement, Occidental points to its early adoption of reporting in FracFocus and the greater amount of information it provides there in comparison to other industry members. While proponent commends Occidental for the disclosures it makes in FracFocus, these disclosures do not address the issues raised in the proposal at issue here. Similarly, while Occidental has improved its reporting on water management, as discussed above, and as noted in its opposition statement, proponent seeks that level of reporting detail across all of the company plays and in a number of other management areas as discussed above.

Evidence of Growing Calls from Prominent Government Agencies and Investor Coalitions for Companies to Disclose Practices for Managing Risks Associated with Hydraulic Fracturing Operations.

A central concern for communities across the country is a desire to have a better understanding of the practices taking place, sometimes literally, in their back yards. As community wariness of and opposition to hydraulic fracturing operations increase, there is growing recognition that companies must be publicly transparent about managing their environmental footprint and social impacts, and must engage with key stakeholders to earn and maintain their social license to operate.

The following illustrate the calls for increased disclosure:

1. The Department of Energy's (DOE) Shale Gas Production Subcommittee recommended in 2011 that companies "adopt a more visible commitment to using *quantitative measures* (emphasis in the original) 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."³¹
2. The International Energy Agency (IEA), in its 2012 report, *Golden Rules for a Golden Age of Gas*, declared "that full transparency, measuring and monitoring of environmental impacts and engagement with local communities are critical to addressing public concerns. IEA's golden rules call for companies to:
 - "Establish baselines for key environmental indicators, such as groundwater quality, prior to commencing activity, with continued monitoring during operations."

³⁰ <http://sanfrancisco.cbslocal.com/2013/11/26/oil-company-caught-illegally-dumping-fracking-discharge-in-central-valley/>

³¹ Secretary of Energy Advisory Board Shale Gas Production Subcommittee Second Ninety Day Report (2011) http://energy.gov/sites/prod/files/90day_Report_Second_11.18.11.pdf, page 9



- “Measure and disclose operational data on water use, on the volumes and characteristics of waste water ...alongside full, mandatory disclosure of fracturing fluid additives and volumes.”³²
- 3. In 2011, a coalition of investors released *Extracting the Facts: An Investor Guide to Disclosing Risks from Hydraulic Fracturing Operations*, which serves as a framework for companies to improve disclosure to best serve investor needs. It identifies 12 core management goals, best management practices, and key performance indicators on which investors require disclosure to adequately assess risk management practices. *Extracting the Facts* is supported by investors representing \$1.3 trillion in AUM, from Europe, Australia, and North America.
- 4. Building from *Extracting the Facts*, investors subsequently released a scorecard report in 2013- *Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing Operations*- benchmarking companies engaged in hydraulic fracturing against investor expectations for disclosure of best practices and relevant risk management metrics.
- 5. In 2013, a “guidance note for financiers” was released under the auspices of “The Climate Principles: A Framework for the Finance Sector”. The guidance note, *Shale Gas Exploration and Production: Key Issues and Responsible Business Practices*, builds on *Extracting the Facts* in noting that successful operators will need “to be equipped with a combination of robust management frameworks and accountabilities, as well as strong operating practices”, and that “companies’ quantitative disclosure of their performance against KPIs will be fundamental to their credibility and to track progress.”³³
- 6. In 2014, PRI (Principles for Responsible Investment) conducted an assessment finding that global oil and gas production and servicing companies currently provide very limited disclosure of the risks and impacts associated with their hydraulic fracturing activity. This research was commissioned by PRI to support a group of 40 of its signatories that have recently launched a 3-year engagement to improve disclosure and practices in the sector. ³⁴
- 7. Several energy companies have also recognized the growing demands for disclosure and have released explicit sets of principles and practices for shale gas operations on which they plan to report. These include Shell’s “Onshore Tight/Shale Oil & Gas Operating Principles”³⁵, Talisman’s “Shale Operating Principles”, and BG Group’s “Public Position on Unconventional Gas.”³⁶ Talisman has stated “we will measure our progress by setting quantitative performance metrics”³⁷, and they plan to audit their operations and report publicly on their progress. Most recently, the Center for Sustainable Shale Development

³²http://www.worldenergyoutlook.org/media/weowebsite/2012/goldenrules/weo2012_goldenrulesreport.pdf, page 11.

³³ <http://iehn.org/documents/CPFIShaleGasGuidanceNoteApril2013.pdf>.

³⁴ <http://www.unpri.org/press/pri-signatories-target-fracking-disclosure/>.

³⁵ “Shell Onshore Tight Sand/Shale Oil & Gas Operating Principles.”

http://www.shell.us/home/content/usa/aboutshell/shell_businesses/onshore/principles/

³⁶ BG Group Operating Principles for Unconventional Gas” http://www.bg-group.com/OurBusiness/OurBusiness/Pages/UnconventionalGasResources_position.aspx

³⁷ “Talisman Energy: Shale Gas Operating Principles” http://www.talisman-energy.com/operations/north_america/shale-operating-principles.html.



("CSSD") has released new performance standards calling for pre- and post-drill monitoring. Participants in the CSSD include Chevron, Consol, EQT, and Shell.

CONCLUSION

Proponents are concerned that Occidental currently fails to provide the transparent and sufficiently detailed reporting necessary for shareholders and the public to assess Occidental's progress towards achieving best practices and reducing impacts of its hydraulic fracturing and shale extraction activities. As highlighted in proponent's resolution, the Department of Energy panel has urged companies to "adopt a more visible commitment to using *quantitative measures*." We encourage shareholders to vote in support of this proposal calling on the company to provide quantitative reporting to measure the company's effectiveness in minimizing adverse environmental and community impacts of its hydraulic fracturing operations.

Respectfully,

Danielle Fugere

