Fall 2014

The Business of Fracking and Corporate Power

By Elizabeth Pines
LEHIGH UNIVERSITY

The Business of Fracking and Corporate Power
Elizabeth Pines
Fall 2014

Introduction

As drilling for natural gas increases through a process known as hydraulic fracturing, or fracking, public scrutiny has sharpened and visibility of oil and gas companies has increased. This visibility has drawn both support and criticism from various stakeholders, including environmentalists, scientists, politicians, citizens, corporations, and investors. A number of key players exist in the fracking industry, ranging from multinational corporations to national and regional companies. This paper will examine some of the largest drillers in the country, their trade associations, the ways in which they disclose risks of fracking to investors, and their impact on public policy and the political climate through lobbying and contributions to political candidates.

Delving deeper into the companies that participate in fracking and their impact will give a context to the political issues currently faced by the industry. Having knowledge of the companies involved in fracking and their lobbying expenditures will allow for greater transparency and understanding of fracking practices and the companies behind them.

As fracking and related issues have become politicized, controversy surrounding the process of fracking itself and the oil and gas industry will intensify. One of the largest controversies relating to the oil and gas industry more broadly is the immense power corporations have because of their lobbying expenditures and political partnerships. This paper will provide detailed information about campaign spending and other lobbying efforts, and will highlight the controversy surrounding political contributions, the ways in which companies are disclosing risks of fracking to investors, and how investors are pressuring companies to increase transparency.

Understanding the major players in natural gas drilling and their impact on the political climate in the United States is important for both Lehigh University students and the general public. In general, Lehigh students and the public will gain a basic understanding of the role corporate funding plays in politics. Perhaps more specifically, ExxonMobil, one of the companies highlighted in this paper, is a top recruiter at Lehigh. Understanding a major component of its business will give Lehigh students a different perspective on Exxon's role in fracking, as well as other similar companies.

The public will also gain information about fracking, and the ways in which companies ally themselves with trade associations to advertise and lobby on their behalf. It is important to understand how political contributions play a role in government decision-making and the broader financial implications of lobbying. Additionally, investors and potential investors in stocks and bonds of oil and gas companies will gain a better understanding of the steps corporations are taking to disclose risks of fracking to shareholders.

Highlights of Major Gas Drillers: ExxonMobil, Chesapeake Energy, & Range Resources

With roots in John D. Rockefeller's Standard Oil Company, ExxonMobil was formed in 1999 by a merger of Exxon and Mobil, and is the world's largest oil and gas producer today. Exxon's history has been filled with political contention and widespread debate. In 1911, the U.S.

Supreme Court mandated that Standard Oil split into 34 unrelated companies, including Vacuum Oil, which would become Mobil Oil Corporation in 1966, and Jersey Standard, which would become Exxon in 1972 (ExxonMobil, Our History).

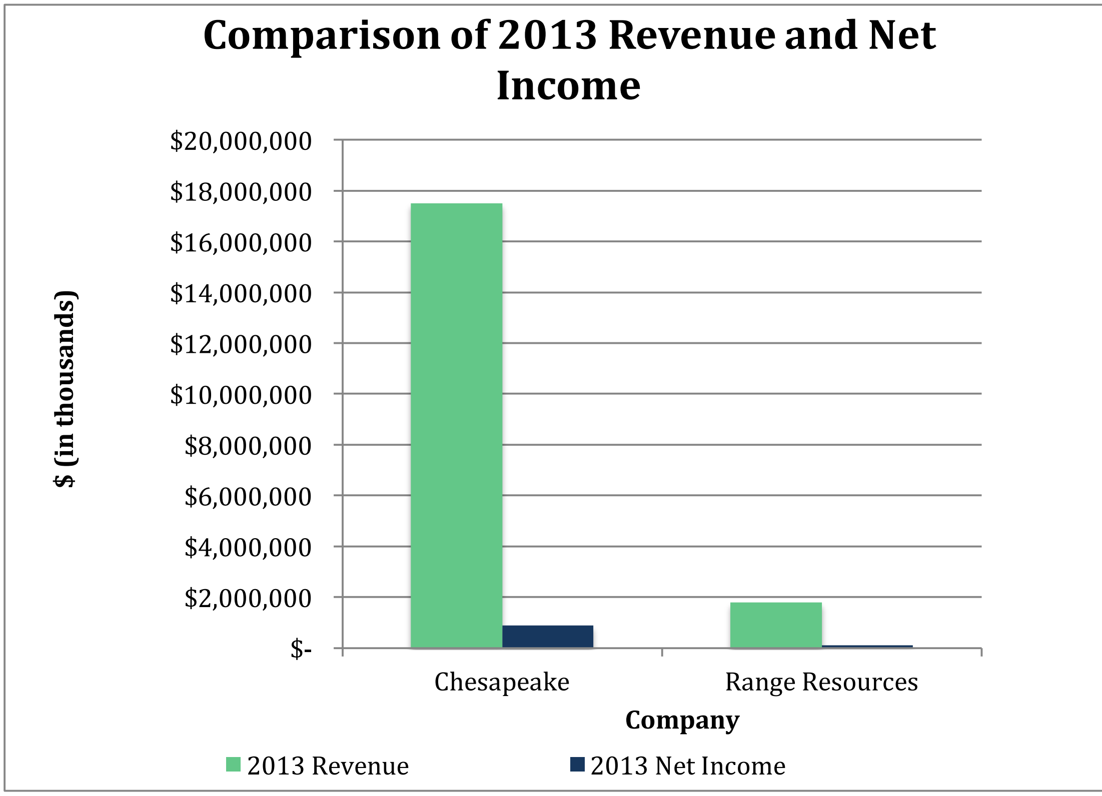
Headquartered in Irving, Texas, Exxon currently operates on every continent except Antarctica, and in over 45 countries (Progressive Digital Media, 2013). Exxon's financial results have given the company the title of the largest publicly traded oil and gas company. Its 2013 revenue was reported at $430 billion and profits reported at $32.6 billion. In 2011, Exxon's average daily natural gas production was 3.9 billion cubic feet, or 29 billion gallons (Kusnetz, 2011). By 2012, that number rose to 12.322 billion cubic feet, or 92 billion gallons, which is enough to fill over five billion 16'x32' in-ground swimming pools (Progressive Digital Media, 2013).

Exxon boasts over 60 years in safe hydraulic fracturing. However, after public skepticism about the processes companies use to extract natural gas and shareholder questions regarding the undisclosed risks associated with fracking, Exxon released a report in 2014 titled "Unconventional Resources Development – Managing the Risks." This report detailed to shareholders how Exxon will utilize risk management practices associated with the development of unconventional resources, which the company defines as "natural gas and oil found in shale and tight sand formations," to ensure safety in the process of hydraulic fracturing. The report discussed the economic and environmental benefits of unconventional resources development, the steps Exxon has been taking to be accountable to regulators and stakeholders, the impact fracking has on drinking water and water use, transparency of chemicals used in fracking, and air emissions related to fracking (Unconventional Resources Development Risk Management, 2014).

While Exxon is the largest producer of oil and gas, smaller companies have taken the lead in the hydraulic fracturing industry. Headquartered in Oklahoma City, OK, Chesapeake Energy is the second largest producer of natural gas in the United States and focuses on exploring and drilling onshore in major natural gas and liquids plays, areas that have been selected for exploration of oil and gas, across the United States (Chesapeake Energy, Operations). Chesapeake owns approximately 46,800 natural gas and oil wells at the end of 2013 that produce roughly 4.1 billion cubic feet, which is enough natural gas to meet the needs of approximately 20,000 homes in the United States for an entire year (How To Measure Natural Gas, 2014).

Chesapeake separates its divisions for reporting purposes into southern and northern components. The Southern Division includes the Eagle Ford Shale in South Texas, the Barnett Shale in North-Central Texas, and the Haynesville/Bossier Shale in northwestern Louisiana and East Texas. Its Northern Division includes the Utica Shale in Ohio, West Virginia, and Pennsylvania, and the Marcellus Shale in West Virginia and Pennsylvania. Chesapeake's 2013 revenues totaled $17.5 billion and net profit was reported at $894 million (SEC, Chesapeake Oilfield Operating, L.L.C., Form 10-K, 2014). Chesapeake is heavily involved in political participation and in an effort to be transparent, lists its Political Action Committee and trade association contributions in 2012 directly on its website (http://www.chk.com/about/corporate-governance/political-participation).

Range Resources in another major natural gas driller that primarily focuses on the Appalachian and Southwestern regions. Its areas of operation include Pennsylvania, Virginia, West Virginia, the Texas Panhandle, northern Oklahoma, and Kansas (Range Resources, Strategy, 2014). Based in Fort Worth, Texas, Range Resources was founded in 1976 and participated in a series of mergers and acquisitions between 1988 and 2000 that allowed it to grow and expand. The company is best known for its activity in the Marcellus Shale, where it has increased its activity since 2004, when it drilled the first successful vertical well in Washington County, PA. Financial data show 2013 revenues of $1.8 billion and net profit of $115 million, both of which have been on an upward trend, increasing 55% and 147% since 2009, respectively (SEC, Range Resources Corporation, Form 10-K, 2014).



This graph compares the 201 total revenue and net profit o Chesapeake Energy and Range Resources. (Sources: http://services.corporate-ir.net/SEC.Enhanced/SecCapule.aspx?c=104617&fid=929176 https://www.sec.gov/Archive/edgar/data/315852/00015649014000349/rrc-10k_20131231.htm)

Reporting Risks of Fracking to Investors: The Role of Institutional Investors

As stakeholder concerns have increased about the risks of fracking, a number of efforts have been made to pressure companies to disclose these risks to investors. In 2011, Exxon and Chevron's shareholder vote resulted in a 28% and 41% vote to better disclose risks of fracking, respectively. As You Sow, an activist organization whose mission is to "promote environmental and social corporate responsibility through shareholder advocacy, coalition building, and innovative legal strategies" (As You Sow, About Us), has been pushing large corporations that engage in fracking to disclose risks to investors, specifically related to the chemicals they use in the process. Disclosures in annual financial statements filed with the U.S. Securities and Exchange Commission (SEC), could be a revolutionary first step to disclosing information to investors and other external users, and could set a precedent for other fracking companies (Inside Washington Publishers, 2011).

While companies argue that their practices conform to all regulations related to fracking, advocacy groups and environmental activists urge that fracking disclosures are important for investors. Exxon has particularly been feeling the increased pressure. After several institutional investors co-filed a proposal, including New York City's pension funds, which own $1.02 billion in Exxon stock, Exxon agreed to report on fracking risks in April 2014. (Scheyder, 2014). Following this immense pressure, Exxon released its first report in September 2014, discussed previously, titled "Unconventional Resources Development – Managing the Risks".

In 2011, the Securities and Exchange Commission (SEC) requested that oil and gas companies provide it with information about their fracking processes, including the chemicals and amount of water used and their efforts to reduce the environmental impact of fracking. This request was not mandatory, nor was it publicized. The purpose was for the SEC to ensure "investors are being told about risks a company may face related to its operations, such as lawsuits, compliance costs or other uncertainties" (Solomon, 2011). At the time, oil and gas companies were being asked to disclose certain information to the SEC, which then would be publicly disclosed at the discretion of the federal agency. The industry criticized this effort, partly due to concerns of adding another layer of regulation in an already highly regulated industry.

The SEC's involvement in fracking brings another interesting perspective to the fracking debate: when environmental disasters occur or political attention is brought to safety issues related to oil and gas practices, stock prices drop dramatically. The SEC has attempted to mitigate effects felt by shareholders by requesting preemptive information. Thomas P. DiNapoli, New York State Comptroller, said, "Only through appropriate disclosure do you get the information you need to make informed and sound investment decisions" (Solomon, 2011).

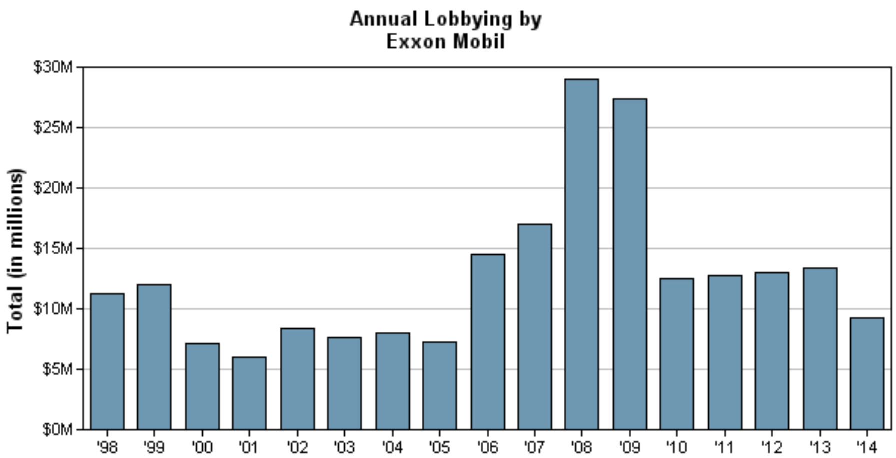
Trade Associations and Their Influence

Due to the heavily regulated nature of the oil and gas industry, many companies ally themselves with trade associations that participate in the political and legislative process to influence laws and regulations. Trade associations range from national to regional and have various degrees of leverage and power. The American Petroleum Institute (API) is the only national trade association that represents all of the activities in the oil and gas industry (About API). Based in Washington D.C., API currently has approximately 400 members from all activities in the oil and gas industry. API is actively involved in lobbying and politics and spent over $9.3 million in 2013 lobbying (Center for Responsive Politics). About 70% of API's campaign contributions go to Republican candidates, and not all political contributions relate to fracking or other oil and gas interests. API has donated to several tax organizations, including the Sixty Plus Association, which desires to end the estate tax, and Americans for Tax Reform, which seeks to lower taxes (Mufson, 2012).

While API is the largest trade association, a number of smaller organizations prove to be just as vital to the oil and gas industry. The Marcellus Shale Coalition is powerful in the Pennsylvania region. With 40 energy companies as members, including Range Resources and Chesapeake Energy, the Marcellus Shale Coalition works on behalf of these companies to "influence drilling-related legislation, stage conferences and educational events on gas extraction, and represent the industry in the press" (Colaneri, 2014). The Marcellus Shale Coalition also provides educational resources and information about several natural gas topics, including land leasing, exploration, drilling, and site restoration. Although the Marcellus Shale Coalition is not as nationally known as the API, the coalition still participates in the political process, with lobbying spending of $90,000 since the beginning of 2014 (Center for Responsive Politics, Marcellus Shale Coalition). The company's lobbying issues all relate to the development of natural gas.

Lobbying and Political Contributions in the Oil and Gas Industry

The oil and gas industry has tremendous political power due to its size, the public's reliance on oil and gas, and the influential of trade associations and political action committees with which they partner. Lobbying efforts and political contributions in the oil and gas industry have been exorbitant on the national and state levels and have drawn both support and criticism. Oil and gas interests are among the top sectors for lobbying spending, with over $359 million in 2013 (Center for Responsive Politics, Ranked Sectors). Exxon and Chevron are the top lobbyists, with over $13 million and $10.5 million, respectively, in 2013.



Annual lobbying spend by ExxonMobil.
Source: https://www.opensecrets.org/orgs/lobby.php?id=D000000129

The largest multinational oil and gas companies, including Exxon Mobil, Chevron, Koch Industries, Royal Dutch Shell, BP, and ConocoPhillips cumulatively spent over $51 million in lobbying efforts in 2013, ranging from tax provisions and policy, to natural gas exploration, to specific hydraulic fracturing bills. However, Chesapeake and Range Resources cumulatively spent $1.9 million in 2013. The energy and natural resources sector as a whole has a significant party split in terms of political contributions to Congress. In 2012, political contributions were over $60 million to Republican congressional candidates and $17 million to Democratic congressional candidates (Center for Responsive Politics, Energy/Natural Resources).

The Center for Responsive Politics, a nonpartisan aggregator of data about money in politics, reports information from various sectors and companies about lobbying spending dating back several years, and breaks down its information by political party and even individual congressional candidates. Additionally, companies themselves report spending on their websites. For example, Chesapeake includes lists of 2012 political contributions and trade associations to which it paid over $50,000 in dues in 2012 (see list below).

Overall annual lobbying in the oil and gas industry has been steadily increasing since 2007, reaching a peak of approximately $170 million in 2009, then steadily declining and stabilizing around $140 million annually since then (Center for Responsive Politics, Oil & Gas Annual Lobbying). Although lobbying efforts are diverse and data compilations include lobbying efforts for interests that are not directly related to hydraulic fracturing, the nature of the exorbitant amount of money spent demonstrates the influence corporations have on policy. Major questions and debates remain about the impact political contributions have on public policy and the level of transparency corporations should adopt.

2012 Trade Associations Receiving $50,000 or More in Total Dues

American Clean Skies Foundation
American Petroleum Institute
America's Natural Gas Alliance
Business Roundtable
Independent Petroleum Association of America
Louisiana Oil & Gas Association
Marcellus Shale Coalition
National Association of Manufacturers
Natural Gas Vehicles for America
South Texas Energy and Economic Council
Texas Oil & Gas Association
The State Chamber of Oklahoma
U.S. Chamber of Commerce

This list shows Chesapeake Energy's expenditures of $50,000 or more to trade associations.
Source:
http://www.chk.com/documents/governance/chesapeake-energy-2012-trade-association-dues.pdf

My personal viewpoint is that the political process is too far influenced by large corporations with deep pockets and strong influence and that a large principal-agent problem exists, in which both corporations and politicians act on behalf of themselves rather than their constituencies. I applaud those individuals and organizations that have pressured corporations to disclose the risks of fracking to investors but remain skeptical of the impact this will have. Because a corporation's primary concern is to create a return for shareholder investment, I worry the current level of transparency is purely beneficial on an economic level, but does little to address the concerns of communities in which fracking occurs and people who are directly impacted by fracking. I urge individuals and groups to continue placing pressure on corporations to act socially responsibly, but wonder how much impact can be made without billions of dollars in investments as leverage for social and economic change.

Interview with Vaughn Cook, Partner at Ernst & Young

Vaughn Cook is a Central Region Assurance Partner with Ernst & Young, a global public accounting firm, and has 18+ years of experience serving various industries, including energy and utilities. Specific companies he has served include CONSOL Energy Inc., CNX Gas Corporation, and EQT Gas Corporation. Cook's responses have been consolidated and edited for clarity.

1. How do corporations currently disclose risks of fracking and other environmental risks to investors?

Disclosures of matters such as these generally manifest themselves in the Risk Factors discussion within a company's annual report that is filed on Form 10-K with the SEC. The Risk Factors are presented in Item 1A, which places them in the front portion of the annual filing, near the beginning of the document. To the extent that a company concluded that such risks were significant, it would also include a similar discussion in any securities offerings that it may issue. Finally, to the extent that a company has had any environmental actions taken against it that have or may have a significant impact on the company's financial statements, disclosure of those matters would be included in the footnotes to the company's financial statements.

2. From an audit perspective, how important is it for companies to disclose the risks of fracking to investors?

While fracking has been a very popular topic in the media, in my experience with various public and private companies operating in the industry in our Appalachian region, I have not encountered any instances where issues related to fracking have had a significant impact on the financial statements. As a result, from an audit perspective, fracking has not introduced any significant risks to the financial statements and, therefore, audit-related disclosures regarding fracking are generally not necessary and have not been included. While disclosures and discussion regarding fracking may be relevant to investors to better understand the operations and strategy of the companies in which they invest, the perspective of those disclosures would come from a topic other than the audit.

3. In the past few years, shareholder concerns have been increasing about the risks of fracking. What responsibility do you think corporations have to disclose the risks of fracking to investors?

Companies face a difficult balancing act relative to providing shareholders appropriate insight into their operations while trying to provide information that isn't overly technical such that an average investor actually gains less clarity, rather than more, from that information. In my opinion, fracking has received excessive focus when, in reality, the limited issues that have arisen from well development in this area have been unrelated to fracking. For the most part, the developers in this region have operated responsibly and have worked diligently to ensure that their well development operations have minimal impact on the surrounding environment. However, given the excessive attention that fracking has received, it may be beneficial for some corporations to provide more information in an effort to dispel the misconceptions associated with this development technique.

4. How much power do investors have in pressuring corporations to release reports detailing risks of fracking?

As shareholders, investors always have the right to put forth proposals for consideration by the Board of Directors and direct vote by the shareholders. Any appropriately submitted shareholder proposal will be put forth to the overall shareholder group for a vote. Certain companies have received such shareholder proposals that have been voted on by the overall shareholder group. However, I am not aware of any such proposals that received the necessary levels of shareholder support and votes for passage.

5. Because the role of financial reporting is to give investors, creditors, and other external users relevant information to make decisions, what role do you think annual reports can play in corporations disclosing risks to investors?

From a pure financial reporting perspective, unless a company's fracking activities have led to financial reporting consequences, the financial reporting process does not provide a relevant platform to discuss fracking, as the financial statements may have appropriately not reflected any impact from fracking. However, as a company's annual report may be the only financial document reviewed by an average investor, the Risk Factor discussion of fracking and other environmental matters may provide an effective platform to discuss any such potential risks that a company may face. In the current state of investor reporting, annual reports are highly regulated and consistent among SEC registered companies. Therefore, a separate investor report may introduce more confusion relative to this topic because no regulatory framework exists to ensure consistency for such reporting.

6. As environmental concerns increase, do you see an increasing number of investors, communities, and advocacy groups increasing pressure on corporations to disclose risks of fracking and other activities that have potential negative impacts on the environment?

Shareholder and advocacy group activity in this area has increased, likely fueled by the attention on fracking within the media. However, although I've seen and heard of shareholder proposals at certain SEC registrants, companies that file financial statements or other documents with the SEC, to provide deeper insight and information relative to a company's fracking and overall well-development activities, I am not aware of any such proposals receiving adequate shareholder support for passage.

Profiles of Key Groups and Organizations

Independent Petroleum Association of America (IPAA)
The Independent Petroleum Association of America (IPAA) is a national trade association that represents oil and gas companies whose mission is to ensure "a strong, viable domestic oil and natural gas industry, recognizing that an adequate and secure supply of energy is essential to the national economy" (http://www.ipaa.org/about-ipaa/). IPAA releases educational information and reports regarding industry statistics, employment, and government relations. Similarly to the American Petroleum Institute, one of the largest purposes of the IPAA is to represent oil and gas companies in the political process through lobbying. IPAA can be contacted through their office in Washington, D.C. at (202) 857-4722.

U.S. Securities and Exchange Commission (SEC)
The SEC has become increasingly involved in fracking processes from the perspective of ensuring companies are fully disclosing relevant information to investors. The SEC has been asking for companies to disclose chemicals used in fracking, although it is difficult to tell at this time how transparent this disclosure will be to the public. Additionally, the SEC has regulatory authority to set and enforce accounting standards, many of which greatly impact oil and gas companies' quarterly and annual earnings reports to shareholders. The Regional Director for the Philadelphia Regional Office of the Securities and Exchange Commission is Sharon Binger. Her phone number is (215) 597-3100 and her email is philadelphia@sec.gov.

As You Sow
As You Sow is a shareholder advocacy group that promotes environmental and corporate social responsibility. The organization works with corporations on a number of environmental and social efforts, including reducing energy consumption during production, reducing water contamination, and sourcing raw material responsibly. Its Hydraulic Fracturing initiative seeks to reduce the financial and environmental impacts of fracking. In 2014, they released a report called "Disclosing the Facts: Transparency and Risk in Hydraulic Fracturing Operations" (http://disclosingthefacts.org/), which grades and ranks 30 companies on their disclosures of environmental and community impacts to shareholders. As You Sow has been at the forefront of the movement to increase corporate transparency to shareholders and its efforts have been realized most recently by ExxonMobil, which has agreed to increase disclosures to investors. The Operations Manager for As You Sow is Betsy McMahon. Her phone number is (510) 735-8155 and her email is bmcmahon@asyousow.org.

Common Cause: Deep Drilling Deep Pockets Reports
Common Cause is a nonpartisan organization that strives to maximize citizen participation on politics and government. Common Cause calls itself a "citizen's lobby" (Common Cause, Issues) and works to strengthen voting rights, decrease money in politics, and increase ethical standards in government. Its "Deep Drilling Deep Pockets" series provide an in-depth report of campaign contributions and lobbying at the state level by both pro-fracking and anti-fracking interest groups. These reports have highlighted data in Ohio, New York, and Pennsylvania, and track the millions of dollars from corporations influencing politics. Common Cause can be contacted at CauseNet@commoncause.org, or at their office in Washington D.C. at (202) 833-1200.

Important Web Resources

Center for Responsive Politics: https://www.opensecrets.org/
The Center for Responsive Politics is a nonpartisan non-profit organization that researches and reports on money in politics in the United States. It's mission is to "Inform, Empower, & Advocate" and it reports comprehensive data on lobbying and political contributions in a variety of industries, and across political parties and elections (Center for Responsive Politics, Our Mission). It provides detailed graphics that demonstrate lobbying expenditures annually, as well as political contributions by party.

Oil Change International: Dirty Energy Money: http://www.dirtyenergymoney.com/
Oil Change International is nonprofit research and advocacy organization focused on "exposing true costs of fossil fuels and facilitating the coming transition towards clean energy" (Oil Change International, About Us). Its major project, "Dirty Energy Money," an online database shows political contributions by Senator and House Representative and their affiliations with various fossil fuel companies. Although the Oil Change International website demonstrates its biased view, the Dirty Energy Money database is a large interactive graphic that allows for high user interaction.

FracFocus: http://fracfocus.org/
FracFocus is a national registry disclosing chemicals used in the fracking process. It is managed by the Ground Water Protection Council and Interstate Oil and Gas Compact Commission and provides factual information without bias (FracFocus, About Us). FracFocus provides information about companies that disclose chemical use to the website, as well as the chemicals used at specific well sites. While the site provides detailed information, users must be specific with data input for particular wells.

ProPublica: http://www.propublica.org/series/fracking
ProPublica is an independent nonprofit investigative journalism organization that provides detailed reports and research on many topics, fracking among them. Its reports range from health impacts to water contamination, and business impact on fracking regulation. While some may view ProPublica as anti-fracking, it presents comprehensive information that is rarely published in traditional news outlets.

State Impact: NPR: http://stateimpact.npr.org/
StateImpact is a National Public Radio project that researches and reports on energy, the environment, and community impacts. Its reporting on issues in Pennsylvania include regulation,

economy and financial influence on government. The website is easy to use and navigate and provides reports and news in additional to general fracking information.

ExxonMobil 2013 Annual Report:
http://www.sec.gov/Archives/edgar/data/34088/000003408814000012/xom10k2013.htm
ExxonMobil's annual report shares important information regarding revenues, expenses, profits, assets, liabilities, and business risks. Fracking is briefly mentioned in a broader discussion regarding risks to business operations, but might be more detailed in the future if fracking risks will be disclosed in annual reports.

For More Information

1. http://www.propublica.org/article/natural-gas-politics-526
2. http://www.claimsjournal.com/news/national/2014/07/11/251654.htm
3. http://www.dispatch.com/content/stories/local/2013/08/01/fracking-lobby-helps-fund-gop-campaigns.html
4. http://thinkprogress.org/climate/2014/05/30/3443332/california-fracking-ban-fails/
5. http://www.taxpayer.net/images/uploads/downloads/Political_Footprint_of_the_Oil_and_Gas_Industry_Lobby_April_2014_FINAL.docx.pdf
6. http://www.commoncause.org/states/new-york/research-and-reports/NY_040711_Report_Natural_Gas_Lobbying_Expenditures.pdf
7. http://www.commoncause.org/states/new-york/research-and-reports/NY_010912_Report_Deep_Drilling_Deep_Pockets_Campaign_Contributions.pdf
8. http://www.polluterwatch.com/blog/big-oil-front-group-poured-millions-lobby-against-fracking-regulation

References

About API. (2014). *American Petroleum Institute.* Retrieved from http://www.api.org/globalitems/globalheaderpages/about-api

About us. (2014). *As You Sow.* Retrieved from http://www.asyousow.org/about-us/

About API. (2014). *American Petroleum Institute.* Retrieved from http://www.api.org/globalitems/globalheaderpages/about-api

Activists urge companies to disclose fracking risks to shareholders. (2011). *Inside EPA's Risk Policy Report,18*(22) Retrieved from http://search.proquest.com/docview/922545588?accountid=12043

Chesapeake Energy Corporation. (2014). 10-K Annual Report 2013. *United States Securities and Exchange Commission.* Retrieved from http://services.corporate-ir.net/SEC.Enhanced/SecCapsule.aspx?c=104617&fid=9294176

Colaneri, K. (27 march 2014). Pennsylvania's top drilling trade group going grassroots. *StateImpact NPR.* Retrieved from http://stateimpact.npr.org/pennsylvania/2014/03/27/pennsylvanias-top-drilling-trade-group-going-grassroots/

Energy/Natural resources: Top contributors to federal candidates, parties, and outside groups. (2014). *Center for Responsive Politics.* Retrieved from https://www.opensecrets.org/industries/contrib.php?cycle=2014&ind=E

How to measure natural gas. (2014).*American Gas Association.* Retrieved from http://www.aga.org/KC/ABOUTNATURALGAS/ADDITIONAL/Pages/HowtoMeasureNaturalGas.aspx

Kusnetz, N. (1 September 2011). Who are America's top 10 gas drillers? *Propublica.* http://www.propublica.org/article/who-are-americas-top-10-gas-drillers

Lobbying Ranked Sectors. *Center for Responsive Politics.* Retrieved from https://www.opensecrets.org/lobby/top.php?indexType=c&showYear=2014

Marcellus Shale Coalition annual lobbying. *Center for Responsive Politics.* Retrieved from https://www.opensecrets.org/lobby/clientsum.php?id=F16125%20%20%20%20&year=2014

Mufson, S. (7 April 2012). Jack Gerard, the force majeure behind Big Oil. *The Washington Post.* Retrieved from http://www.washingtonpost.com/business/economy/jack-gerard-the-force-majeure-behind-big-oil/2012/04/06/gIQA1hjC0S_story.html

Oil & Gas annual lobbying. *Center for Responsive Politics.* Retrieved from https://www.opensecrets.org/lobby/indusclient.php?id=E01&year=2014\

Operations. (2014). *Chesapeake Energy.* Retrieved from http://www.chk.com/Operations/Pages/Default.aspx

Our history. (2014). *Exxon Mobil Corporation.* Retrieved from http://corporate.exxonmobil.com/en/company/about-us/history/overview

Range Resources Corporation. (2014). 10-K Annual Report 2013. *United States Securities and Exchange Commission.* Retrieved from http://phx.corporate-ir.net/phoenix.zhtml?c=101196&p=irol-SECText&TEXT=aHR0cDovL2FwaS50ZW5rd2l6YXJkLmNvbS9maWxpbmcueG1sP2lwYWdlPTk0MjE2MjAmRFNFUT0wJlNFUT0wJlNRREVTQz1TRUNUSU9OX0VOVElSRSZzdWJzaWQ9NTc%3d#Stockholders_Return_Presentation

Scheyder, E. (3 April 2014). *Exxon Mobil agrees to share more data on fracking risks.* Thomson Reuters. Retrieved from http://www.reuters.com/article/2014/04/03/us-exxonmobil-fracking-data-idUSBREA3227020140403

Solomon, D. (25 August 2011). SEC bears down on fracking. *The Wall Street Journal.* Retrieved from http://www.wsj.com/articles/SB10001424053111904009304576528484179638702

Strategy. (2014). *Range Resources.* Retrieved from http://www.rangeresources.com/company/strategy

The world's biggest oil and gas companies. (2013, Nov 12). *Progressive Digital Media Oil & Gas, Mining, Power, CleanTech and Renewable Energy News* Retrieved from http://search.proquest.com/docview/1547370574?accountid=12043

Unconventional resources development: Managing the risks. (September 2014). *Exxon Mobil Corporation*. Retrieved from http://cdn.exxonmobil.com/~/media/Files/Other/2014/Unconventional_Resources_Development_Risk_Management_Report.pdf

Graphics References

Chesapeake Energy Corporation. (2014). 10-K Annual Report 2013. *United States Securities and Exchange Commission.* Retrieved from http://services.corporate-ir.net/SEC.Enhanced/SecCapsule.aspx?c=104617&fid=9294176

Range Resources Corporation. (2014). 10-K Annual Report 2013. *United States Securities and Exchange Commission.* Retrieved from https://www.sec.gov/Archives/edgar/data/315852/000156459014000349/rrc-10k_20131231.htm

ExxonMobil lobbying totals, 1998-2013. *Center for Responsive Politics.* Retrieved from https://www.opensecrets.org/orgs/lobby.php?id=D000000129

2012 trade associations receiving $50,000 or more in total dues. *Chesapeake Energy.* Retrieved from http://www.chk.com/documents/governance/chesapeake-energy-2012-trade-association-dues.pdf

Key Profiles References

About IPAA. *Indepdendent Petroleum Association of America.* Retrieved from http://www.ipaa.org/about-ipaa/

Contact Us. *Indepdendent Petroleum Association of America.* Retrieved from http://www.ipaa.org/contact-us/

Disclosing the facts 2014: Transparency and risk in hydraulic fracturing operations. *As You Sow.* Retrieved from http://disclosingthefacts.org/

Issues. *Common Cause.* Retrieved from http://www.commoncause.org/issues/

Contact Us. *Common Cause.* Retrieved from http://www.commoncause.org/contact-us.html

Important Web Resources

Our mission: Inform, empower & advocate. *Center for Responsive Politics.* Retrieved from https://www.opensecrets.org/about/

About us. *Oil Change International.* Retrieved from http://priceofoil.org/about/

About us. *FracFocus.* Retrieved from http://fracfocus.org/welcome