FOSSIL FUEL DIVESTMENT 101

By Swarthmore Mountain Justice

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**Why Fossil Fuel Divestment 101?**

Since October 2011, Swarthmore Mountain Justice has been calling on Swarthmore College to divest its endowment from the fossil fuel industry. Throughout the campaign, we’ve published op-eds, held teach-ins and study breaks, been in over 25 closed-door meetings with administrators and board members, and had countless individual conversations where we’ve presented our research, our ethical reasoning, and our specific divestment proposal.

And we’re not alone. Since our campaign began, a national movement has grown around fossil fuel divestment, with over 300 campuses now running campaigns. And the movement has spread beyond campuses too - to cities, states, places of worship, foundations, and pension funds. The fossil fuel divestment movement has already been successful at shifting the debate on climate change, getting national media attention, and mobilizing hundreds of people to take action for climate justice. Already 4 campuses and 11 cities have pledged to divest from fossil fuels. Many more are bound to follow. Swarthmore still has a chance to be a leader, to pave the way for our peer institutions, to live up to our stated values.

With Fossil Fuel Divestment 101, we hope to publish our research and perspectives for those who feel they need more information or clarification. In this booklet you’ll find answers to all your burning questions about the divestment tactic, its feasibility, and its political strategy. We’ve learned a lot through dialog and debate throughout the course of our campaign. We believe more firmly than ever that divestment is the morally, politically, and financially correct course of action. We’d love to hear further comments and questions. You can reach us at SwarthmoreMJ@gmail.com.

- Swarthmore Mountain Justice
Fossil Fuels: A Primer

The climate is changing because we’re burning fossil fuels. Not only is there consensus among scientists\(^1\), the observable impacts are innumerable - record temperatures, extreme weather events, desertification, displacement of communities, and countless others. Climate change is already causing 400,000 deaths a year by some measures - more than 100 million people are expected to die by 2030 if we don’t stop runaway climate change.\(^2\)

Climate change and fossil fuel extraction most severely impact populations that are already marginalized. In the United States that means low income communities and communities of color who have been fighting the pollution and political corruption of fossil fuel companies for decades.\(^3\) Globally, climate change disproportionately impacts poor communities in the global south - those least responsible for climate change.\(^4\)

2 degrees Celsius - that’s the limit of warming before positive feedback loops in the climate trigger irreversible climate change. How much carbon dioxide would we have to pump into the atmosphere to reach a 2-degree warming? 565 gigatons. Right now, the fossil fuel industry has 2,795 gigatons of carbon in their oil and gas reserves. In other words, the fossil fuel industry is sitting on five times more carbon than the planet can handle without causing irreversible climate change.\(^5\)

At the same time, the top 5 oil companies - BP, Chevron, ConocoPhillips, ExxonMobil, and Royal Dutch Shell - made $137 billion in profits in 2011. In the same year, those companies spent $65.7 million in lobbying and $1,665,859 in campaign contributions\(^6\). In the years between 1994 and 2009 (adjusted for inflation), the oil and gas industry received $446.96 billion in federal subsidies, while renewable energy industries received only $5.93 billion.\(^7\)

If we are to stop runaway climate change, existing carbon reserves must remain in the ground against the will of the fossil fuel industry, an industry with immense political and economic power.

Swarthmore Mountain Justice’s Divestment Proposal

We are calling for divestment from our list of "Sordid Sixteen" fossil fuel companies, which entails selling these companies' stocks and committing to never buy them again. Our list includes sixteen domestic oil, natural gas, coal and utility companies with the dirtiest environmental and human rights records (see Appendix I for the full list).

Our Proposal:

1. Immediately freeze all new investments in the “Sordid Sixteen.”
2. Divest the college’s direct holdings in the “Sordid Sixteen.”
3. Over a period of 3 years, divest and screen our direct holdings and co-mingled funds from the entire fossil fuel industry.
4. Institutionalize a collaborative process between students, faculty, the administration, and the Board of Managers to address future divestment proposals, and to work to make sure the endowment is invested in a socially responsible manner.

Divestment from fossil fuels would be a commitment to remove college money from those companies outlined above, and to refuse to invest in them in the future. Swarthmore is not currently invested in all of these companies. Divestment ensures that Swarthmore never will be invested in any of these sixteen companies, so long as they continue dirty energy extraction, which currently accounts for the vast majority of their profits.

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\(^1\)<http://climate.nasa.gov/scientific-consensus>
\(^2\)<http://www.reuters.com/article/2012/09/25/us-climate-inaction-idUSBRE8O1HG20120925>
\(^3\)<http://news.medill.northwestern.edu/washington/news.aspx?id=95563&print=1>
\(^4\)<http://www.democracynow.org/2009/12/7/climate_change_and_the_global_south>
FREQUENTLY ASKED QUESTIONS

Why divestment?

Divestment is a powerful tactic for several reasons. First, it dramatizes the political and economic injustices and instabilities of the fossil fuel industry (whose economic interests are at odds with the climate), shifting the conversation to the realities of global warming and the struggles of frontline communities.

Second, divestment is a base-building tactic. It empowers everyday people to transform their local institutions, including schools, churches, cities, and states. In the course of local organizing, people gain the knowledge and skills necessary to build a civil society movement strong enough to confront the economic and political power of the fossil fuel industry at the national legislative level. The threat of higher education potentially moving billions of dollars makes decision-makers and the media pay attention; already the divestment movement has gained widespread media attention, been mentioned on the U.S. Senate floor, and caused a threatened American Petroleum Institute to issue a report defending oil stocks as a good investment for colleges.

Third, divesting is a moral stand and a chance for Swarthmore to live up to its stated values. The “Greening of Swarthmore” document states, “The way we invest our endowment funds is inextricably linked to long term sustainability. Greening investments is more than a symbolic gesture, it is a concrete display of our commitment to fostering healthy communities and environments.” Swarthmore President Rebecca Chopp has said, “Can there be any doubt that we must do all we can to sustain the beauty of this good earth; together, in this collection, can there be any question that we must care for one another and, equally important, for those who live without our resources?”

In contradiction to its stated values and claims of leadership in campus sustainability, Swarthmore currently sponsors injustice by funding fossil fuel companies and climate change.

Why don’t we file a shareholder resolution?

Shareholder resolutions are useful in cases where a company can reform its practices, principles, or procedures, but are virtually impossible when the reform undermines the economic purpose of the company in question. Companies can, and frequently do, throw out shareholder resolutions that are “related to the company’s ordinary business operations.”

There has in fact been an attempt to use shareholder action to change the behavior of the fossil fuel industry. While there have been some limited successes — instituting sustainability practices inside the company, for instance — there haven’t been any resolutions that have been able to address the core problem with the industry: the massive amounts of carbon they dump into the atmosphere to make their profits. Voting for climate friendly resolutions is a good thing to do, but it’s not going to solve the problem. Again, in order to keep warming below 2 degrees C, we’re going to need to leave about 80% of the fossil fuel industry’s current reserves underground. This is an achievable goal, but it’s the type of move that no group of shareholders in a fossil fuel company would ever vote for willingly.

Some have claimed that shareholder resolutions are a way to engage with social issues, whereas divestment is merely a disavowal of responsibility. In many cases, we would agree - but not in the context of the fossil fuel industry. As we’ve seen, it’s virtually impossible to pass a shareholder resolution strong enough to keep fossil fuel reserves in the ground. Regarding our investments, divestment is the most direct, powerful way to engage with the issue and fulfill our ethical responsibility - especially when done publicly in the midst of a growing national movement as we have now.

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8 http://www.good.is/posts/divestment-now-the-best-solution-for-environmental-justice
10 from President Chopp’s inaugural speech, titled “Hope in an Age of Clamor,” as reprinted on the Swarthmore website

11 The following link leads to a report on a shareholder resolution proposed by Green Century Capital Management at an ExxonMobil shareholders meeting. The proposal called on ExxonMobil to prepare a report on the possible social and environmental risks of the oil sands. However, the U.S. Security and Exchange Commission allows companies to dismiss a shareholder resolution if it “deals with matters related to the company’s ordinary business operations.” Hence, ExxonMobil dismissed the resolution. This particular shareholder resolution was merely asking for a report on the effects of ExxonMobil’s practices. Now imagine how quickly a proposal to stop drilling for oil, or to even drill for oil more “safely,” would be shut down. http://www.sec.gov/divisions/corpfin/cf-noaction/14a/8/2012/greencentury012312-14a8-incoming.pdf
But will divestment affect the financial bottom-line of fossil fuel companies?

Divestment isn’t primarily an economic strategy, but a moral and political one. Morally, it sends a clear message that if it’s wrong to wreck the planet, it’s also wrong to profit from that wreckage. Politically, divestment builds political power by forcing our nation’s most prominent institutions and individuals (many of whom sit on college boards) to choose which side of the issue they are on. Even if it doesn’t immediately impact the bottom line of companies, divestment sparks a big discussion and - as we’re already seeing in campaigns across the country - gets prominent media attention, moving the case for action forward. Hardly anyone pushing for divestment believes that divestment alone will solve the problem - rather it works to bolster and build political action on many fronts, including national legislation. This strategy parallels the South Africa divestment movement against apartheid, where divestment helped build a multi-tactic movement out of a period of public silence on a political issue.

At the same time, there are certain economic impacts. The top 500 or so College and University endowments hold nearly $400 billion. But that’s just colleges and universities. Add in big state pension funds, church, synagogue and mosque investments, and cities - already 11 cities, including San Francisco, Seattle, Santa Fe, and Boulder, have pledged to divest from fossil fuels! - and the financial impact becomes more significant.

Okay, so divestment is more political than economic. But then why not work toward legislative change instead?

For some, divestment seems like an indirect route to effect political change. In fact, administrators and faculty members at Swarthmore have offered that public policy and governmental intervention are what’s really needed to avert us from climate disaster. And we agree! Government action is undoubtedly a major part of the solution. The real question is how to get there. Many who advocate for direct legislative lobbying fail to account for its ineffectiveness in recent history.

Since James Hansen first testified to congress on the dangers of global warming in 1988, no meaningful climate legislation has passed in the United States. We did not ratify the Kyoto Protocol in 1997, and the US has failed to commit to binding emissions reduction pledges at every United Nations Framework Convention on Climate Change (UNFCCC). We are far from passing any legislation to tax carbon. For over two decades, no administration has made any significant progress on this issue despite countless grassroots lobbying efforts endorsed by large environmental NGOs.

Powerful lobbying interests—the oil, coal, and gas industry—have spent an unprecedented amount of money in lobbying and campaign finance, and have been successful at waging a war on science to portray climate change as a liberal hoax.

We’ll remain unsuccessful if we rely solely on appealing to power-holders in government - if we keep playing a game where our opponent has a clear advantage. Even many divestment skeptics agree - a massive nonviolent social movement is required to beat the political stranglehold of the fossil fuel industry and realize the policy changes needed to save the planet. In this way, we don’t see divestment and policy change as mutually exclusive. Divestment is one way to help build the powerful climate justice movement we need to enact legislation. The question we must ask is whether Swarthmore as an institution is doing everything it can to make a political impact on the side of climate justice.

When well-known colleges, universities, places of worship, and cities publicly divest from fossil fuels it sends a clear message to power-holders that their constituencies don’t support fossil fuels. Already, we’re far from passing any legislation to tax carbon. For over two decades, no administration has made any significant progress on this issue despite countless grassroots lobbying efforts endorsed by large environmental NGOs.

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12 http://daily.swarthmore.edu/2013/02/15/why-mainstream-economists-should-take-a-step-back-from-the-divestment-conversation/

13 Keynote Address by Ellen Dorsey of Wallace Global Fund, Power Up! Convergence; https://www.youtube.com/watch?v=YP2Jmi9ioKY

14 While sale of stock might not have an immediate impact on a fossil fuel company, especially one as gigantic as Exxon, what it does do is start to sow uncertainty about the viability of the fossil fuel industry’s business model. The industry’s 2,795 gigatons worth of reserves may be below ground physically, but they’re already above ground economically and factored into the share price of every fossil fuel company. Globally, the value of those reserves is around $20 trillion, money that will have to be written off if governments finally decide to regulate carbon dioxide as a pollutant. By divesting from fossil fuels, colleges and universities are not only building the case for that government action, they’re starting this important discussion about the fossil fuel industry’s “stranded assets” (Adapted from http://gofossilfree.org/faq/).

15 http://www.commondreams.org/headline/2012/12/08
Divestment victories have brought national attention to climate change more than almost any recent effort. By bringing attention to the issues and highlighting the corruption and injustices of the fossil fuel industry, divestment helps build and feed other tactics. For example, in February of this year, the “Forward on Climate” rally brought almost 40,000 people to Washington D.C. in one of the largest actions for climate justice in U.S. history.16

By not taking a political stance through divestment, Swarthmore and other peer institutions replicate the regressive behavior of the U.S. government by stalling, deferring, and waiting for someone else to take action. By divesting, Swarthmore can embody what necessarily bold change looks like - it can model the change that’s needed in our public policy and in every other institution in the country.

Doesn’t Swarthmore work hard on campus sustainability? Why don’t we green our campus instead of divestment?

We applaud Swarthmore’s campus sustainability efforts. They are basic requirements of any institution claiming to care about social justice and ethical responsibility, and we’re glad Swarthmore has made significant improvements over the years. But again we don’t see fossil fuel divestment and campus sustainability as mutually exclusive, and certainly not as interchangeable.

Divestment allows Swarthmore to engage in the national political struggle against fossil fuel companies in ways that campus sustainability does not do. It doesn’t matter how energy efficient Swarthmore is if the fossil fuel industry ends up burning their reserves and poisoning other communities across the globe and in the US.

It’s inconsistent for us to green our buildings and reduce energy consumption while pouring money into the companies that are wrecking the climate and poisoning communities outside our bubble. It’s also inconsistent for Swarthmore to be looking for renewable energy sources to power our buildings, while supporting an industry that has actively prevented the development of alternatives.17

But don’t fossil fuel companies invest in green technology?

Sometimes fossil fuel companies do invest in alternative energy. But there are a couple things to be clear about. First, the fossil fuel industry invests a very small amount of money in alternative energy relative to their profits18: An American Petroleum Institute study states that over the past decade the entire fossil fuel industry has invested $9 billion in renewable energy, while the profits reported by just one company (Exxon Mobil) in just one year of that decade were $41 billion, over 4 times that amount.19 Secondly, fossil fuel companies spend far more on research to explore new fossil fuel reserves than they do exploring alternatives: compared to its $9 billion in renewables, the industry has poured $341 billion just into developing tar sands oil.20

But here’s the most important point: even if fossil fuel companies put massive amounts of their resources into developing clean energy, if they burn the carbon in their reserves it will all be for naught. It won’t matter how many windmills and solar panels Exxon Mobil installs as long as they also plan to burn fossil fuels.

It would only be acceptable to continue investing in fossil fuel companies if they could guarantee to leave 80% of their reserves in the ground. There is currently no indication that they would be willing to do so. Fossil fuel companies won’t earnestly start their shift toward clean energy without massive public and legislative pressure. Divestment is a powerful way to communicate this reality, and build the political power needed to check their power.

How does Swarthmore divesting make a difference?

A single campus divestment campaign won’t solve the climate crisis. That’s why we are working with a national movement of students from universities across the US who are all pushing for fossil fuel divestment.21 There are currently over 300 fossil fuel divestment campaigns around the country; four schools have already pledged

16 http://www.huffingtonpost.com/2013/02/17/forward-on-climate-rally_n_2702575.html
17 http://www.edf.org/blog/2013/04/26/oil-and-gas-industry%E2%80%99s-assault-renewable-energy
19 http://www.businessweek.com/articles/2012-05-10/big-oils-big-in-biofuels
20 http://www.businessweek.com/articles/2012-05-10/big-oils-big-in-biofuels
to divest from fossil fuels (Sterling College, College of the Atlantic, Unity College, and Santa Fe Art Institute). And the movement has moved off-campus! There are over 100 other campaigns to divest cities, states, places of worship, pension funds, and more. As previously reported, 11 cities in the US have already pledged to divest.

The fossil fuel divestment movement has generated more discussion and mobilized more people than most climate justice efforts in recent history. This is the political stage where divestment’s moral and political impacts have the strongest reverberations.

Other schools, like Brown and Middlebury, are close to divesting. More schools, cities, and institutions are bound to follow. Will Swarthmore sit idly by, or will we join our peer institutions and be a leader in higher education by making the bold changes we need to stop runaway climate change?

Is divestment feasible?

The short answer is yes! A number of institutional investors currently use socially responsible screened funds. Negative or avoidance screening—used as far back as the 1920s—works by avoiding investment in companies whose practices are inconsistent with the values of the investor. Many colleges “screen” (choose not to invest in) tobacco, firearms, gambling, military contractors and nuclear weapons manufacturers. Divestment from fossil fuels would work in essentially the same way: Swarthmore’s investment managers would screen out the sixteen domestically owned, publicly traded companies when making investment decisions.

As mentioned, four colleges and universities have passed responsible investment policies that include full divestment from fossil fuels. President Stephen Mulkey of Unity College wrote,

> With respect to fiscal responsibility for the College...our estimates show that divesting is consistent with maintaining a return that will continue to beat the market averages under current prices. Thus, we feel this is a win-win approach for the College and for the planet.23

It is a myth that socially responsible investing necessarily lowers returns. Many empirical studies have shown otherwise.24 Even our own Professor Mark Kuperburg, of the Economics Department, has stated on multiple occasions that he doesn’t expect fossil fuel divestment to significantly affect the endowment at Swarthmore.25

Sixteen fossil fuel companies make up a small percentage of our total investments. According to Swarthmore’s 2011-2012 Financial Report, the college invested around 20% of its endowment in domestic stocks.26 The “Sordid Sixteen” makes up only a very small fraction of the possible domestic stocks we hold.

A recent study by the investment management firm Aperio Group suggests that even if a college endowment divested from the entire fossil fuel industry (classified by Standard and Poor’s), it would only increase absolute portfolio risk by 0.01%, with a theoretical penalty to return of 0.0034%—a negligible amount by investment standards.27

We’ve heard from administrators and board members that they are responsible for the “intergenerational equity” of the student body and as such can’t take any risk of lowering returns on our investments. But isn’t it contradictory to take responsibility for intergenerational equity while at the same time investing in fossil fuel companies that are creating an uninhabitable planet for future generations of students? Former college president of both Oberlin and Reed College, Lawrence Powell, says it best:

> The overriding obligation of those responsible for a college endowment is to ensure that future student generations benefit to the same relative extent as the current generation...But global warming puts a new slant on the matter. By investing in fossil fuel companies, colleges are using their current financial resources in a way that jeopardizes the quality of life of their future

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22 http://www.socialfunds.com/media/index.cgi/screening.htm
24 A study by Phillips, Hager & North Investment Management states that “the chief finding of this research is that socially responsible investing does not result in lower investment returns.” https://www.phn.com/portals/0/pdfs/Articles/20071012DoesSRIHurtInvestmentReturns.pdf
25 “Focal Points: Divestment” by the Daily Gazette; https://vimeo.com/63042887
alumni. By any reasoned and humane interpretation, this violates colleges’ professed commitment to intergenerational equity."^{28}

Of course, nobody can say for sure what the exact financial impact will be for Swarthmore. However, our research indicates that a loss in returns is definitely not a guarantee, and any change in returns would be more negligible than drastic.^{29}

**Won’t divestment hurt financial aid?**

As stated above, it’s not likely that divesting from fossil fuels will significantly affect our returns. But in the chance that it did lower returns, some have asked if it would affect financial aid.

*To be completely clear, Swarthmore Mountain Justice will not accept any plan to divest from fossil fuels that would harm financial aid in any circumstances.*

For an institution that holds financial aid as such a high priority, reducing financial aid should be the last measure taken any time the college loses money for any reason. Due to the uncertainty of the market, the rate of return on the endowment has sometimes fluctuated widely from year to year. A decrease in returns has happened in the past, and the college has been able to manage its money without hurting financial aid. There is no reason why we shouldn’t expect the same for divestment unless the Board makes an active decision to cut financial aid, in which case they would hold the responsibility for that outcome.

Even if divestment causes a loss in returns, there are ways to make up the loss without touching financial aid. The college could manage the deficit by borrowing money from the endowment or interest accrued that year. The college pays for roughly 40% of the operating budget using only the interest from the endowment, and there is often interest leftover that is re-invested into the endowment. If there were a decrease in returns, the difference could be made up using this extra interest, or by borrowing a small amount from the ever-growing principle of the endowment. Second, the college could deal with a potential decrease in returns, as it has in the past, by cutting other items in the budget other than financial aid.^{30} As Swarthmore has historically been successful at dealing with decreased returns without harming financial aid, we see threats to financial aid as a scare tactic used to intimidate students asking for structural change in the way we invest.

**Have you been working through Swarthmore’s administrative channels to propose divestment?**

Yes! Over the past two years Swarthmore Mountain Justice has had over 25 meetings with administrators and Board members, where we’ve presented our research, our ethical reasoning, and our specific divestment proposal.

We’ve made every effort to convince the Board that divestment is the morally, politically, and financially correct course of action. We have presented numerous studies demonstrating that divestment will make a powerful political impact at little cost to Swarthmore. For all this, we have very little to show, aside from an unpublished promise from the Board to educate itself about climate change.

We believe that board members and administrators care deeply about the challenge of climate change. But it’s becoming crystal clear that the administrative channels currently available to students are not enough for our community to adequately deal with the urgency of the climate crisis. The Board of Managers will not seriously engage with the question of divestment in closed-door meetings. They will only be persuaded by a movement of students, faculty, staff, and alumni publicly calling for Swarthmore to cut its financial ties with the fossil fuel industry.

As we teeter on the brink of climate crisis, now is the time to act boldly. Swarthmore College can draw on its long legacy of social engagement and political confrontation moving forward. We have the power to make fossil fuel divestment a reality at Swarthmore.

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30 [http://www.swarthmore.edu/Documents/administration/finance_investment_office/approved_budget_adjustment_Dec09.pdf](http://www.swarthmore.edu/Documents/administration/finance_investment_office/approved_budget_adjustment_Dec09.pdf)
How do I get involved?

Swarthmore Mountain Justice is always open to new members. You can come to regular meetings, or join a working group, depending on your capacity and interest. If you want to get plugged in or have additional questions or concerns, send us an email: SwarthmoreMJ@gmail.com

Acknowledgements

This booklet was written and compiled by Swarthmore Mountain Justice members in April 2013. Some research and wording was adapted from Tufts fossil fuel divestment proposal “Tufts Student Proposal for Fossil Fuel Divestiture” and GoFossilFree.org’s “Frequently Asked Questions” page.
APPENDIX I: THE SORDID SIXTEEN

Alpha Natural Resources
ANR is the third-largest coal producer in the U.S., producing approximately 126 million tons of coal from approximately 150 active mines in Virginia, West Virginia, Kentucky, Pennsylvania, and Wyoming. ANR is currently the single largest company using mountaintop removal,31 a particularly invasive method of coal mining that directly correlates with high rates of cancer, birth defects, and poverty.32 In 2010, ANR received 1,453 notices of violations — over 4 a day — from the Mine Safety and Health Administration (MSHA) for breaches of health or safety standards that could cause a serious injury.33 ANR is also responsible for the 2010 Upper Big Branch explosion, which resulted in the deaths of 29 miners.

Arch Coal
Arch is the second-largest coal producer in the U.S.,34 Arch is currently in a court battle to build the Spruce No. 1 mine, which would be the largest mountaintop removal mine in the U.S.35 In 2009, the company spent over $2.32 million on lobbying efforts, and has also developed the Arch Coal Political Action Committee, which is a substantial donor to West Virginia politicians.36

Cabot Oil & Gas
Cabot Oil & Gas Corporation is a natural gas exploration and production company based in Houston. The company has been cited for numerous spills of toxic hydrofracking fluids in northeastern PA. Cabot had 412 violations on 213 wells drilled in the Marcellus Shale region from 2008-2011, roughly 2 violations per well.37 EPA tests of well water in the area show dangerous levels of arsenic, glycols, barium, and other carcinogens.38 These wells are also the site of the famous images of families lighting their tap water on fire.

Chesapeake Energy
Chesapeake is, in its own words, “the second-largest producer of natural gas, a Top 15 producer of oil and natural gas liquids and the most active driller of new wells in the U.S.”39 While natural gas is often touted as a cleaner alternative to coal, recent studies show that high levels of methane released through hydrofracking result in greater overall greenhouse gas emissions for natural gas than for coal.40 In 2011, Chesapeake was implicated in 141 health and safety violations in Pennsylvania alone. Chesapeake was fined $565,000 in February 2012 for previous violations that resulted in contamination of local waterways. In May of 2011, Chesapeake was fined $1.09 million.41

Chevron
Chevron is a U.S. based multinational energy company that is active in over 180 countries. It is considered one of the 6 “supermajor” oil companies in the world and is one of the largest 5 corporations in the U.S.42 It has a long history of ethical violations, excerpted here. In 1950, it was one of three companies responsible for buying streetcar systems nationwide and replacing them with bus systems to increase petroleum sales. The three companies were charged and convicted for conspiracy.43 Chevron is responsible for sickening local residents and damaging forests and rivers in Ecuador by dumping 18 billion gallons of toxic formation water into the rainforest with no remediation.44 Its Richmond, CA refinery has bypassed wastewater treatment and released 11 million gallons.

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32 http://lovemountains.org/the-human-cost
36 “Annual Lobbying by Arch Coal,” OpenSecrets.org, accessed 1 August 2011,
pounds of toxic materials into the environment.\textsuperscript{45} Chevron may have paid for Nigerian military forces to commit human rights abuses, such as shooting protesters from helicopters.\textsuperscript{46} Chevron is also responsible for a large oil spill off the coast of Brazil in 2011.\textsuperscript{47}

**ConocoPhillips**

ConocoPhillips is a U.S. multinational energy company and one of the six “supermajor” oil companies. It is operating in over 40 countries worldwide. Within the U.S., it is the second-largest refiner of oil, and the 13\textsuperscript{th} worst corporate air polluter.\textsuperscript{48} ConocoPhillips’ Trainer Oil Refinery is the second-largest industrial polluter in Delaware County. A 2006 Swarthmore study found that this facility released over 138 tons of nitrate compounds into the Delaware River each year, putting area infants at greater risk of “Blue Baby Disease.” The study also found that ConocoPhillips emits substantial amounts of napthalane, an airborne toxicant, from this same facility.\textsuperscript{49}

**Dominion Resources**

Dominion Resources is a power and energy company headquartered in Richmond, Virginia. In 2010, pollution from Dominion’s coal-fired power plants contribute to 332 deaths, 519 heart attacks, 5,528 asthma attacks, and 205 cases of chronic bronchitis per year.\textsuperscript{50} Dominion also recently received approval from the U.S. Department of Energy to export natural gas from its Cove Point Liquefied Natural Gas terminal.\textsuperscript{51} This move to export natural gas belies industry and governmental assurances that increased natural gas exploration will result in U.S. energy independence.

**Duke Energy**

Duke is a utility based in Charlotte, North Carolina. Duke will soon be the largest utility in the U.S., pending approval of a merger with Progress Energy.\textsuperscript{52} In 2010, pollution from Duke and Progress’ coal plants caused 1,248 deaths, 1,887 heart attacks, 20,511 asthma attacks, and 758 cases of chronic bronchitis per year.\textsuperscript{53} The company has also been implicated in numerous ethics scandals and is a major contributor to political candidates.\textsuperscript{54}

**Exelon**

Exelon is a utility based in Chicago but with a significant presence in greater Philadelphia. Exelon owns the Eddystone Station coal-fired power plant in Crum Lynne, PA. A 2006 Swarthmore study found that Eddystone Station releases nearly one ton of arsenic, one ton of lead, and 200 tons of sulfuric and hydrochloric acids into the atmosphere each year.\textsuperscript{55} Eddystone Station also releases 162 pounds of mercury per year, more than all but two other power plants in the U.S. All of these contaminants have significant health effects for residents of Delaware County, with the impacts concentrated on the low-income and majority black residents of Chester.\textsuperscript{56}

**ExxonMobil**

ExxonMobil, formerly Rockefeller’s Standard Oil, is a U.S. multinational oil and gas corporation, and is the second-largest company in the world. Exxon has refineries in 21 countries, producing 6.3 million barrels a day, making it the largest refiner in the world. It is the largest “supermajor” oil company. The Exxon Valdez Spill in 1989, the second-largest spill in U.S. history, spilled 11 million gallons of crude oil. The company continues to suffer environmental mishaps; in July 2011, oil spilled from an ExxonMobil pipeline running from Silver Tip to Billings, Montana. The spill leaked 750 to 1,000 barrels of oil into the Yellowstone River in the 30 minutes before it was shut down.\textsuperscript{57} Exxon allegedly assisted human rights violations in Indonesia by giving aid to the


\textsuperscript{46}Egelko, Bob (August 15, 2007). “Chevron can be sued for attacks on Nigerians, U.S. judge rules”. The San Francisco Chronicle.

\textsuperscript{47}“Chevron Takes Responsibility for Brazil Oil Spill, May Face $51M Fine.” Fox News. 11 Nov 2011.

\textsuperscript{48}“Toxic 100 Air Polluters Detailed Company Reports.” Political Economy Research Institute.

\textsuperscript{49}Mapping Environmental Justice in Delaware County, PA. Swarthmore College Environmental Studies Capstone, 2006.


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\textsuperscript{55}Mapping Environmental Justice in Delaware County, PA. Swarthmore College Environmental Studies Capstone, 2006.

\textsuperscript{56}Ibid.

\textsuperscript{57}“Spill sends 40km oil slick into river.” Herald Sun. 3 July 2011.
Indonesian military to torture and murder opposition.\textsuperscript{58} 90\% of scientists who deny climate change are connected with Exxon, and are often the direct recipients of Exxon funding.\textsuperscript{59}

**Halliburton**

Halliburton is one of the world’s largest natural gas companies, with operations in over 70 countries. Halliburton invented hydraulic fracturing, and is indirectly responsible for its recent expansion; the “Halliburton Loophole,” passed in 2005 at the behest of former CEO Dick Cheney, removed the EPA’s authority to regulate the practice.\textsuperscript{60} In addition to numerous environmental disasters caused by fracking, Halliburton also shares culpability for the 2010 Deepwater Horizon explosion and oil spill. The National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling found that Halliburton used an unstable sealant on the well, helping cause the worst oil spill in U.S. history.\textsuperscript{61}

**Occidental Petroleum**

Occidental is an oil and gas exploration and production corporation operating in the United States, the Middle East, North Africa, and South America. It is the fourth largest U.S. oil and gas company. Hooker Chemicals, later purchased by Occidental, was responsible for disposing chemical waste in the Love Canal beginning in the 1940s. The waste site was later the site of a school and residential community that experienced high instances of health problems; Occidental was eventually forced to pay $129 million in restitution for the damage done.\textsuperscript{65} In 2007, indigenous Peruvians filed a lawsuit against Occidental demanding that they clean up and pay reparations for environmental damage caused over the course of three decades of dumping chemical byproducts (totaling 9 billion barrels) into local watersheds that were sources of drinking water and fish.\textsuperscript{66}

**Patriot Coal**

Patriot is a St. Louis-based coal extraction company. It is the second-largest practitioner of mountaintop removal in the U.S.\textsuperscript{67} In 2010, Patriot was found in contempt of court for selenium pollution at two mountaintop removal sites in West Virginia.\textsuperscript{68} From 2000 to 2010, Patriot Coal had nearly 3,000 “significant” violations from the Mine Safety and Health Administration, one death on the job, and close to $10 million in fines.\textsuperscript{69} Patriot Coal is a member of and contributor to the National Mining Association, which since 1997 has spent over $40 million lobbying against issues such as clean air, clean energy and green jobs, and for carbon capture and storage.\textsuperscript{70}

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\end{itemize}
Peabody Energy

Peabody is the largest private-sector coal company in the world. In the U.S., it owns 20 coal mining operations in Wyoming, Colorado, Arizona, New Mexico, Illinois, and Indiana. In 2010, it averaged nine daily safety violations from the Mine Safety and Health Administration. In addition to its U.S. operations, Peabody is rapidly expanding into China, where it has plans to develop several enormous surface mines. Peabody spent almost $6.6 million on lobbying in 2010 and in the first 5 months of 2011 the company spent $3.7 million, including on a bill aimed at preventing the EPA from taking action relating to greenhouse gas emissions to address climate change. In 2007, the Kentucky state legislature passed a law that will provide approximately $300 million in incentives to Peabody to build a coal gasification plant in that state.

Range Resources

Range is a natural gas company based in Fort Worth, Texas, but with major operations in southwestern Pennsylvania. Range’s operations in PA have led to skyrocketing levels of water-borne and aerial carcinogens. As of May 2010, Range had made over $200,000 in fines to the state for regulatory violations. Range has also engaged in campaigns of intimidation against communities who threaten to pass unfavorable zoning regulations. A company spokesman stated on record that the company employs Army-trained counterinsurgency experts to deal with angry local populations.

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