



Fossil Fuel Divestment: An Industry Perspective for Colorado

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About Divestment Facts

Divestment Facts is a program of the Independent Petroleum Association of America (IPAA).

IPAA is the leading, national upstream trade association representing oil and natural gas producers that develop 90 percent of the nation's oil and natural gas wells.



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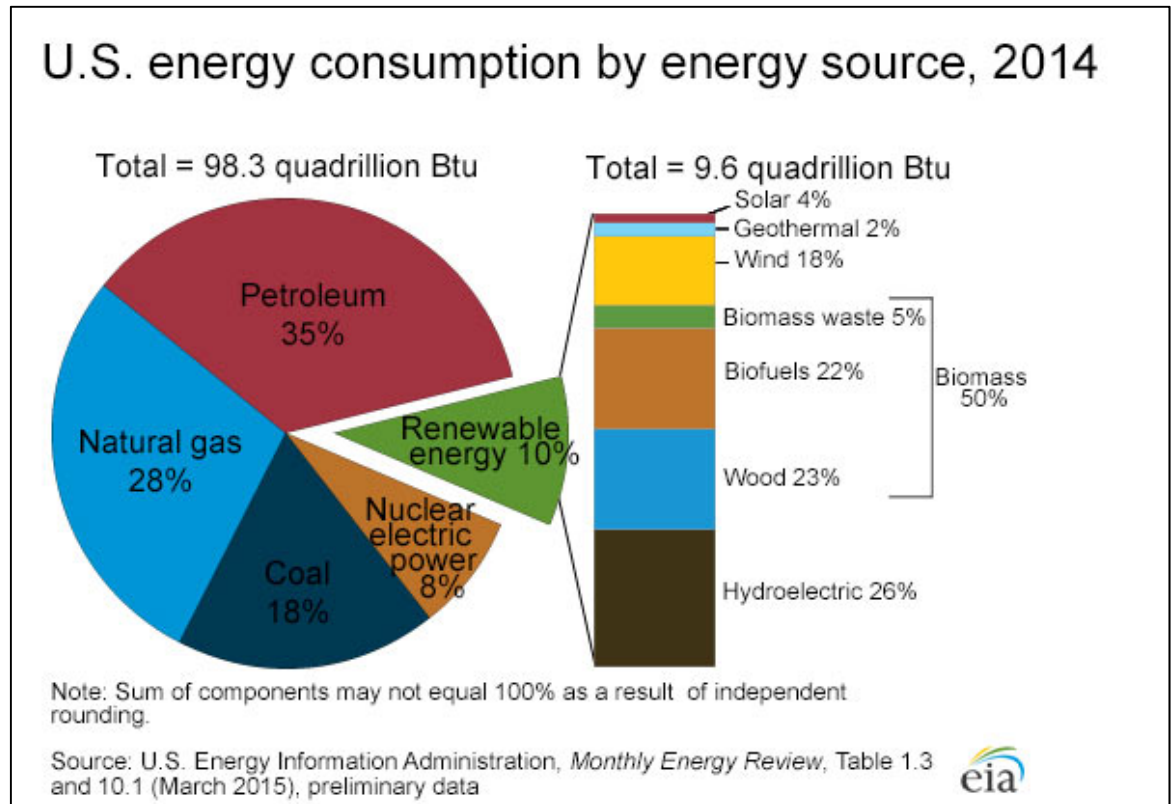
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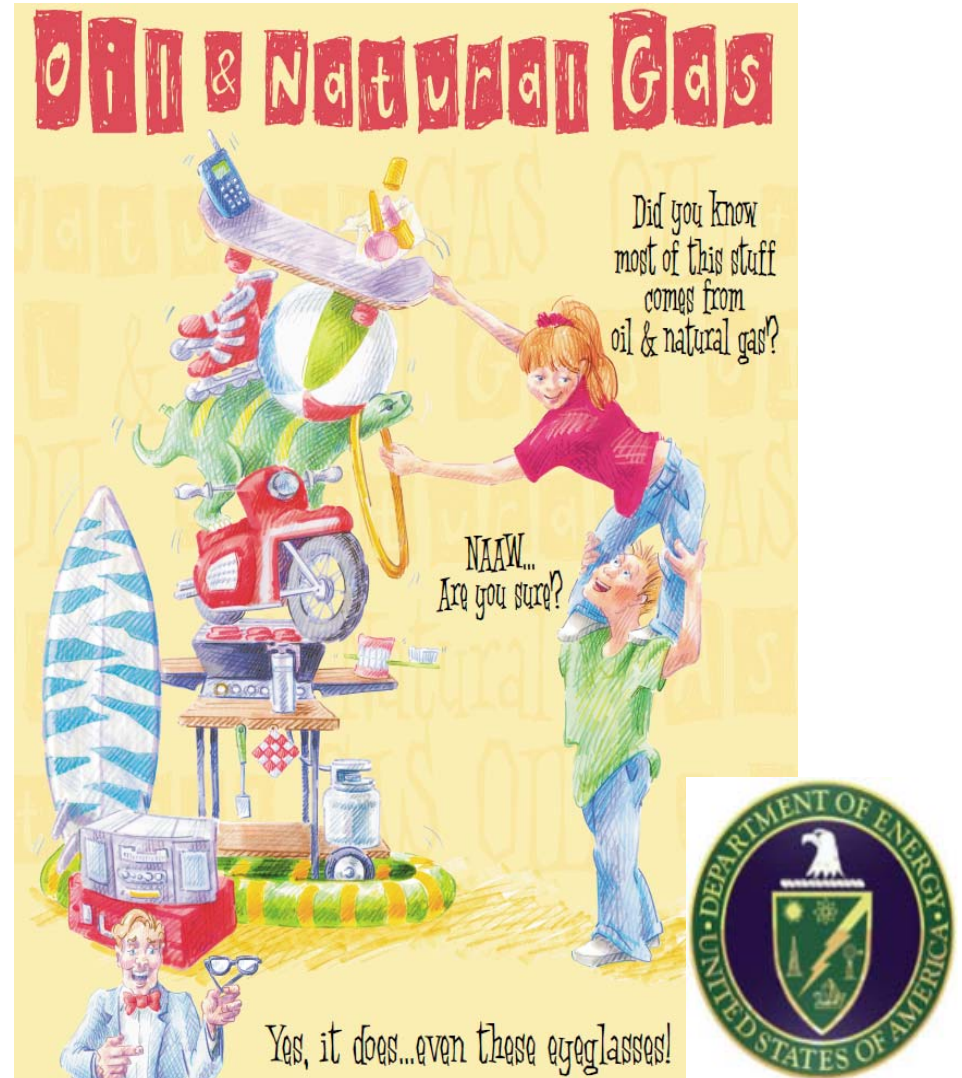
The role of fossil fuels today

- More than 80 percent of the U.S. economy runs on oil, natural gas and coal
- Eight percent of our energy comes from nuclear power
- Renewables contribute roughly 10 percent (wind & solar roughly 2 percent)



The role of fossil fuels today

- American Geosciences Institute:
“Most people associate petroleum with transportation — but we are surrounded by thousands of other everyday products that come from this vital natural resource.”



The role of fossil fuels today

- In Colorado, oil and natural gas production supports the livelihoods of more than 100,000 men and women
- Likewise, Colorado coal production supports almost 18,000 jobs



The role of fossil fuels in the future

- **EIA International Energy Outlook 2016:** “With government policies and incentives promoting the use of nonfossil energy sources in many countries, renewable energy is the world’s fastest-growing source of energy...”
- **AND YET:** “Fossil fuels continue to provide most of the world’s energy in the IE02016 Reference case: in 2040, liquid fuels, natural gas, and coal account for 78% of total world energy consumption.”
- **Vaclav Smil, University of Manitoba:** “Undoubtedly, the U.S. is experiencing two notable energy transitions, from coal to natural gas and from fossil fuels to new renewables in electricity generation. These shifts are welcome because they promise to bring cleaner and less carbon-intensive supplies. But they cannot be rapid, and they bring their own technical, economic and social challenges. Energy infrastructure is the world’s most elaborate and expensive, and the longevity and inertia of many large energy enterprises make it impossible for any large, complex national system (to say nothing of the global level) to reconfigure itself even in three or four decades.”



The role of fossil fuels in the future



“So false solutions like divestment or ‘Oh, it’s easy to do’ hurt our ability to fix the problems. Distinguishing a real solution from a false solution is actually very complicated...”

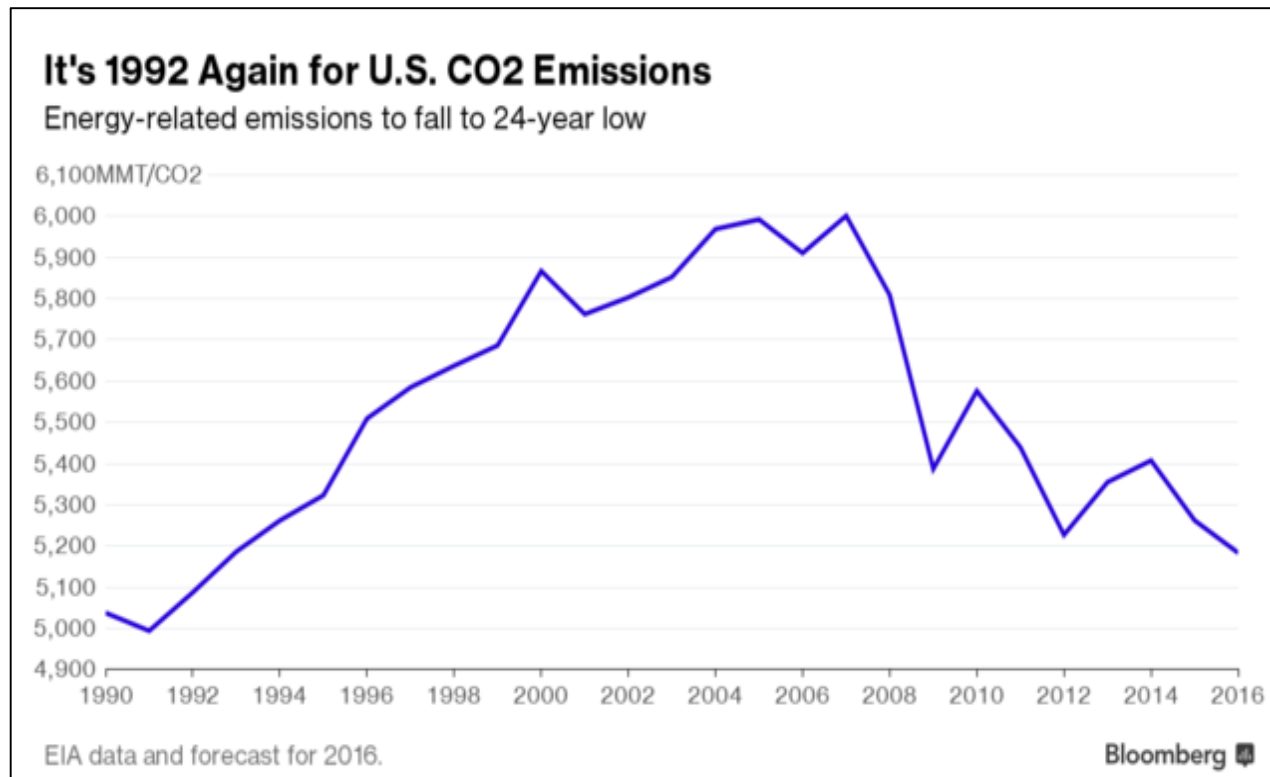
“[W]e have to have dramatic change here. It’s unprecedented to move this quickly, to change an infrastructure of this scale—it’s really unprecedented. And, when you turn to India and say, ‘Please cut your carbon emissions, and do it with energy that’s really expensive, subsidized energy,’ that’s really putting them in a tough position, because energy for them means a kid can read at night, or having an air conditioner or a refrigerator, or being able to eat fresh foods, or get to your job, or buy fertilizer.”

“That’s why we really need to solve that dilemma, we need innovation that gives us energy that’s cheaper than today’s hydrocarbon energy, that has zero CO2 emissions, and that’s as reliable as today’s overall energy system. And when you put all those requirements together, we need an energy miracle. That may make it seem too daunting to people, but in science, miracles are happening all the time.” - *Bill Gates, entrepreneur and philanthropist*



The role of fossil fuels in the future

- EIA: “The drop in CO2 emissions is largely the result of low natural gas prices...”
- The EIA’s 2016 forecast is roughly 13 to 14 percent below 2005 levels of energy-related carbon dioxide emissions.



The role of fossil fuels in the future

- **EIA:** “Over the past decade, the combination of horizontal drilling and hydraulic fracturing has provided access to large volumes of oil and natural gas that were previously uneconomic to produce from low permeability geological formations composed of shale, sandstone, and carbonate (e.g., limestone).”
- According to EIA data, U.S. oil production has increased by more than 80 percent since 2005, and natural gas has climbed by more than 50 percent.
- Meanwhile, EIA data shows all renewable energy sources have grown by roughly 65 percent since 2005, with much faster growth for particular technologies.
- Wind has grown by more than 1,060 percent – a 10-fold increase since 2005.
- Solar has grown by more than 940 percent over the same period, according to EIA data.



The role of fossil fuels in the future

The Washington Post

Turns out wind and solar have a secret friend: Natural gas

“Because of the particular nature of clean energy sources like solar and wind, you can’t simply add them to the grid in large volumes and think that’s the end of the story. Rather, **because these sources of electricity generation are “intermittent”** — solar fluctuates with weather and the daily cycle, wind fluctuates with the wind — **there has to be some means of continuing to provide electricity even when they go dark.** And the more renewables you have, the bigger this problem can be.

Now, a [new study](#) suggests that at least so far, **solving that problem has ironically involved more fossil fuels — and more particularly, installing a large number of fast-ramping natural gas plants, which can fill in quickly whenever renewable generation slips.**

The new research, published recently as a working paper by the National Bureau of Economic Research, was conducted by Elena Verdolini of the Euro-Mediterranean Center on Climate Change and the Fondazione Eni Enrico Mattei in Milan, Italy, along with colleagues from Syracuse University and the French Economic Observatory.”



The role of fossil fuels in the future

- In the political debate over energy policy, pro-divestment groups portray fossil fuels and renewables as mutually exclusive, i.e. you can only have one or the other
- The reality is very different. The U.S. has dramatically lowered its carbon emissions and the renewable industry has experienced explosive growth while the nation was also ramping up production of fossil fuels, especially oil and natural gas
- Cornell University President David Skorton – who now serves as Secretary of the Smithsonian Institution – cited the complex and interdependent relationship between fossil fuels, renewables and the overall economy in a 2013 decision rejecting divestment:

“The publicly traded energy companies in the portfolio collectively have the largest research and development budgets committed to alternative energy strategies. For example, the top five energy companies have more than \$20 billion committed to alternative/sustainable energy research and development. Divestment from these companies would be to divest from the very same entities that are making significant research efforts toward a revised energy future.”



What is the fossil-fuel divestment campaign?

- **Seattle Times:** “McKibben kicked off a national campaign Wednesday night at Benaroya Hall that seeks to demonize the oil and coal industries...”

THE HUFFINGTON POST ‘Fossil Free’ Campaign By 350.org’s Bill McKibben Aims To Convince Colleges Not To Invest In Oil

12/08/2012 08:39 am ET

- **350.org:** “Divestment is about stigmatizing fossil fuel companies.”
- **Bill McKibben, 350.org:** “The only way to short-circuit this zombie process is to fight like hell, raising the price, both political and economic, of new fossil fuel infrastructure to the point where politicians begin to balk...This business of driving stakes through the heart of one project after another is exhausting...But at least for now, there’s really no other way to kill a zombie.”
- **Bill McKibben, 350.org:** “We can’t bankrupt them, but by divestment we can help morally bankrupt them, reducing their power to set the agenda in DC and elsewhere.”
- **Bill McKibben, 350.org:** “If it polarizes the debate, it does so in a helpful way.”



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What is the fossil-fuel divestment campaign?



- **350.org:** “In the past, determined women and men have resisted and overcome the crimes of slavery, totalitarianism, colonialism or apartheid. ... Climate change is a similar challenge, and we are nurturing a similar uprising.”
- **Bill McKibben, 350.org:** “World War III is well and truly underway. And we are losing ... If Nazis were the ones threatening destruction on such a global scale today, America and its allies would already be mobilizing for a full-scale war.”
- **Brett Fleishman, 350.org:** “A growing stigmatization of fossil fuels ... leads to political space for restrictive legislation.”

What does “restrictive legislation” mean?

- The answer can be found in 350.org’s response to a proposal from Gov. John Hickenlooper (D) to cut Colorado’s power sector greenhouse gas (GHG) emissions 35 percent by 2035.
- **350.org:** “[T]he Colorado Coalition for a Livable Climate (CCLC) is calling for a 100% reduction in GHG emissions by 2030...”
- In practice, this would mean completely abolishing the production and consumption of fossil fuels in Colorado in less than 15 years.
- There is no Colorado cost estimate for this plan. But economists with Bloomberg LP have studied a proposal to run New York State’s electricity sector on 100 percent renewables by 2030. The estimated cost is \$382 billion, with 13% of the state’s landmass covered in wind turbines.



What does “restrictive legislation” mean?



- **Climate activist and retired NASA scientist Jim Hansen:** “Can renewable energies provide all of society’s energy needs in the foreseeable future? It is conceivable in a few places, such as New Zealand and Norway. But suggesting that renewables will let us phase rapidly off fossil fuels in the United States, China, India, or the world as a whole is almost the equivalent of believing in the Easter Bunny and Tooth Fairy.”



- **Robert Stavins, Director of the Harvard Environmental Economics Program:** “I’m very supportive of aggressive climate policies. But the message from the divestment movement is fundamentally misguided ... What we need to do is focus on actions that will make a real difference as opposed to actions that may feel or look good, but have very little real world impact.”



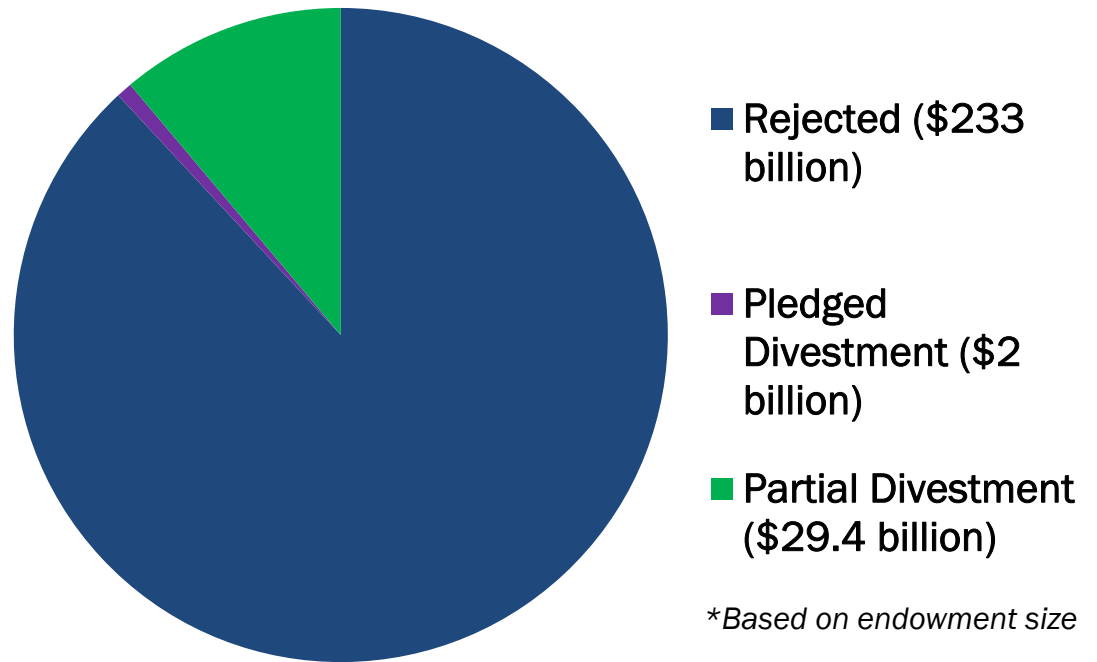
What is fossil-fuel divestment's track record?

- Activists claim to have secured fossil-fuel divestments of somewhere between \$2.6 trillion and \$4.2 trillion, based on different estimates they have issued. But these claims are highly exaggerated
- **350.org:** “The movement to divest from fossil fuels and invest in renewable energy and climate solutions has exploded, growing 50-fold in just one year and topping \$2.6 trillion...”
- **Mother Jones:** “That big number—\$2.6 trillion—has nothing to do with the amount of money that is actually being pulled out of fossil fuel stocks. In fact, the investment consultancy behind today's report has no idea how much money the institutions surveyed have invested in fossil fuels, and thus how much they have pledged to divest.”
- **MSNBC:** “The campaign to starve fossil fuel companies of cash announced a major milestone on Tuesday, a surge past the trillion dollar mark – to \$2.6 trillion, according to a new report by Arabella Advisors, a progressive consulting firm ... They don't know how much of that \$2.6 trillion was actually invested in fossil fuels in the first place. They can't say for certain that the hundreds of organizations and individuals 'committed' to divest have actually done so.”



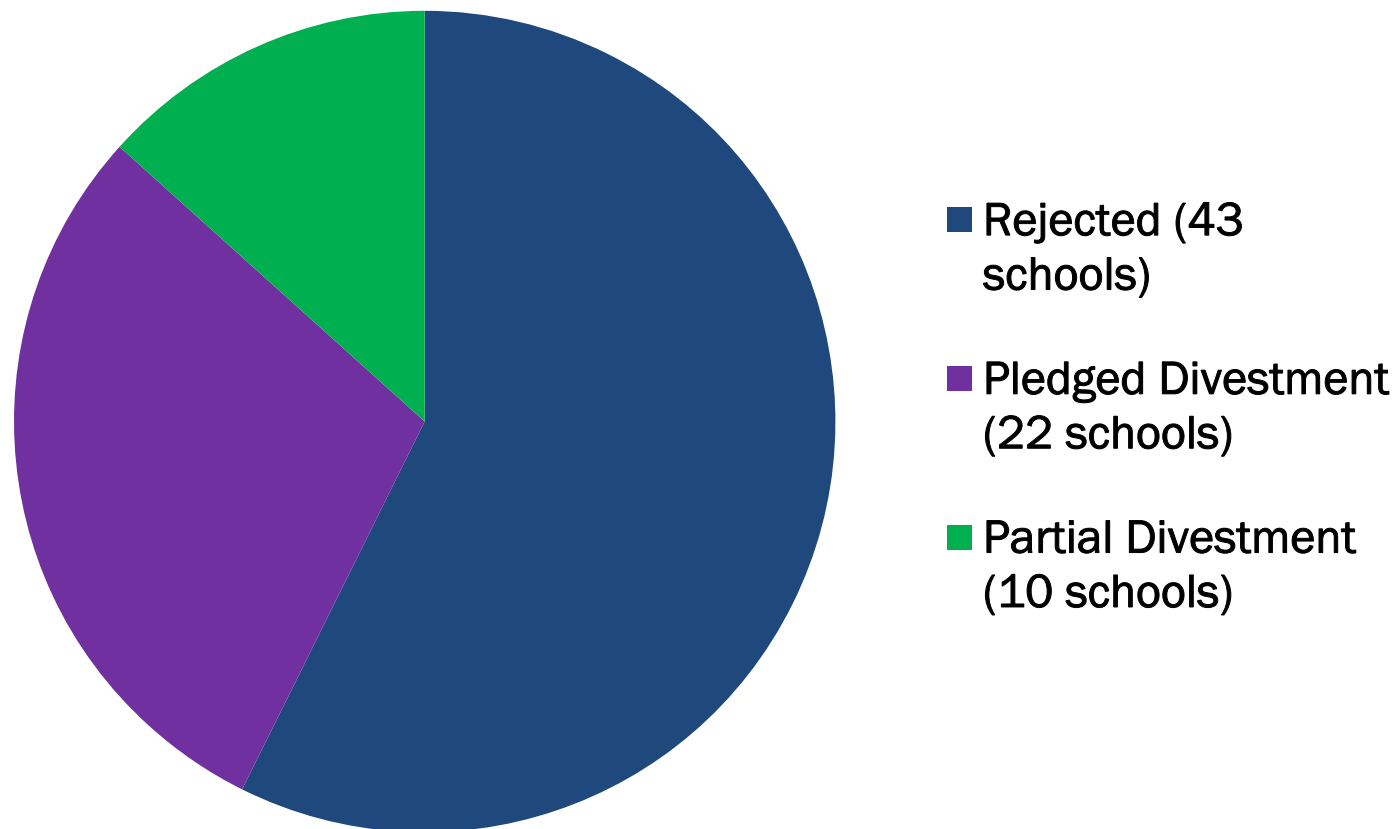
What is fossil-fuel divestment's track record?

- Based on endowment value, divestment has been rejected by a wide margin
- Divestment Facts has identified 75 U.S. universities where fossil-fuel divestment campaigns have received significant attention. They have combined investments of roughly \$265 billion
- The current value of U.S. university and college endowments rejecting divestment exceeds the value of those pledging to divest (full) by a ratio of roughly 111:1. The value of endowments rejecting divestment exceeds the value of those pledging to divest (full and partial) by a ratio of over 7:1



What is fossil-fuel divestment's track record?

- In terms of the number of universities, fossil-fuel divestment has also been rejected in the majority of cases. On average, schools that reject divestment have much larger investment pools than those that choose full or partial divestment.



What is partial divestment, or the “Syracuse model”?

- To placate fossil-fuel divestment activists, some universities have chosen to divest only their “direct” holdings in fossil-fuel companies.
- A Bloomberg News investigation concluded such actions are “empty gestures” because universities rarely have any direct fossil-fuel investments to begin with. If they do, they are a tiny fraction of an endowment’s overall value.
- This partial divestment – sometimes called “fake divestment” – completely avoids the complex and costly challenge of screening the comingled funds that represent a much larger share of a university’s endowment.
- Partial divestment won’t satisfy the divestment activists for long. Eventually, they come back for more. *Example: Stanford partially divested in 2014, refused full divestment in 2016.*

Bloomberg
**College Divestment
Pledges Are Mostly
Empty Gestures**



Which colleges have rejected divestment and why?

- **Stanford University (2016):** “Some oil and gas companies are themselves working to advance alternative energy sources and develop other solutions to climate change...given how integral oil and gas are to the global economy, the trustees do not believe that a credible case can be made for divesting from the fossil fuel industry.”
- **Harvard University (2013):** “The endowment is a resource, not an instrument to impel social or political change...I also find a troubling inconsistency in the notion that, as an investor, we should boycott a whole class of companies at the same time that, as individuals and as a community, we are extensively relying on those companies’ products and services for so much of what we do every day.”



Which colleges have rejected divestment and why?

- **NYU (2016):** “Divestment does not reduce the amount of capital or funding available to fossil fuel companies; rather, it simply transfers ownership of stock from one holder to another. Second, the decision to support investment in alternative energy technology is not mutually exclusive with investment in fossil fuel companies; in fact, many of the fossil fuel companies listed on the ‘Fossil Fuel 200’ are major investors in alternative energy research and ventures. And third, divestment is neither the only nor even among the most impactful steps NYU can take to address the underlying issue: atmospheric CO2 and climate change.”
- **Bates College (2014):** “In either scenario, the transition would result in significant transaction costs, a long-term decrease in the endowment’s performance, an increase in the endowment’s risk profile, and thus a loss in annual operating income for the college. Such a reduction in resources would affect critical college priorities, including financial aid, faculty and staff salaries, and support for academic programs. In short, divestment would potentially threaten core aspects of the college’s mission.”



Which colleges have rejected divestment and why?

- Cornell University, Professor Earth and Atmospheric Sciences professor Larry Brown (2015): “[The resolution to divest] undermines the most precious asset a university has in addressing any controversial issue: its reputation as an unbiased source of scientific knowledge. It only serves to reduce the incentive of the fossil fuel industry to engage with Cornell faculty in any meaningful way...We all owe our current standard of living and likely our very existence to the inexpensive energy that the fossil fuel industry has provided over the past century.”
- MIT (2015): “In our judgment, the deliberate public act of divestment would entangle MIT in a movement whose core tactic is large-scale public shaming. This would retard rather than encourage the open collaboration and ability to hear new ideas that are central to our research relationships, central to our ability to help government and business think creatively together, and central to our ability to convene and inform the thinking of those with opposing views.”



How has fossil-fuel divestment fared in Colorado?

- The only Colorado university to announce its intention to divest from fossil fuels is Naropa University in Boulder (2013)
- At the University of Colorado, a bipartisan majority of the Board of Regents (7-2) rejected fossil-fuel divestment (2015)
- Colorado College has also rejected fossil-fuel divestment (2013)
- **Fort Lewis College (2014):** “To use the endowment as leverage to try and force political or social change, regardless of how worthy the cause, could put the Foundation at odds with the fiduciary duty given to them by donors. In addition, energy companies are strong supporters of the community, some of them and their stakeholders are, or may be in the future, donors to the College and we would be at risk of losing this support.”



What are the costs of fossil-fuel divestment?

- Starting in 2015, the Independent Petroleum Association of America commissioned a series of studies on the costs of fossil-fuel divestment. These studies help explain why so many universities have rejected divestment and seek to inform future decisions at institutions where fossil-fuel divestment is still being debated.
- Three studies have been completed to date by the following authors:
 - Prof. Daniel R. Fischel, Lee and Brena Freeman Professor of Law and Business Emeritus at The University of Chicago Law School
 - Prof Bradford Cornell, Visiting Professor of Financial Economics at the California Institute of Technology, former Professor of Finance at the UCLA Granderson School of Management
 - Prof. Hendrik Bessembinder, Francis J. and Mary B. Labriola Endowed Chair at the W.P. Carey School of Business of Arizona State University



What are the costs of fossil-fuel divestment?

“Fossil Fuel Divestment: A Costly and Ineffective Investment Strategy,” by Prof. Daniel R. Fischel

- Using an economic model that tracked the performance of investment portfolios that included energy-related stocks over a 50-year period compared to those that didn't, the Fischel study finds that portfolios divested of energy equities produced returns 0.7 percentage points lower than ones that invested in energy on an absolute basis.
- A decrease in portfolio performance of 0.7 percentage points on the roughly \$456 billion that comprises total university endowment assets would decrease annual growth by nearly \$3.2 billion each year.
- Management fees for complying with divestment policies are much higher than those charged by traditional funds, decreasing returns by a further \$220 million per year.



Reduced returns in divested portfolio of 70 basis points – each year, over 50-year period



EXPECTED COMBINED ANNUAL HIT TO ENDOWMENTS

\$ 3.2 BILLION EACH YEAR



What are the costs of fossil-fuel divestment?

“The Divestment Penalty: Estimating The Costs of Fossil Fuel Divestment to Select University Endowments,” by Prof. Bradford Cornell

- Five U.S. universities targeted by divestment activists – Harvard, Yale, Columbia, MIT and NYU – were examined in this paper. A model was created to predict the future returns with and without fossil-fuel divestment.
- Under fossil-fuel divestment, average annual losses for each university ranged from \$4.16 million to \$107.8 million. As a group, all five universities would face combined losses of \$195 million per year.
- In no instance did the report find divestment had a positive impact on endowment performance.

AMONG THE STUDY'S KEY FINDINGS:

If these Universities were to divest, how would their endowments have performed?

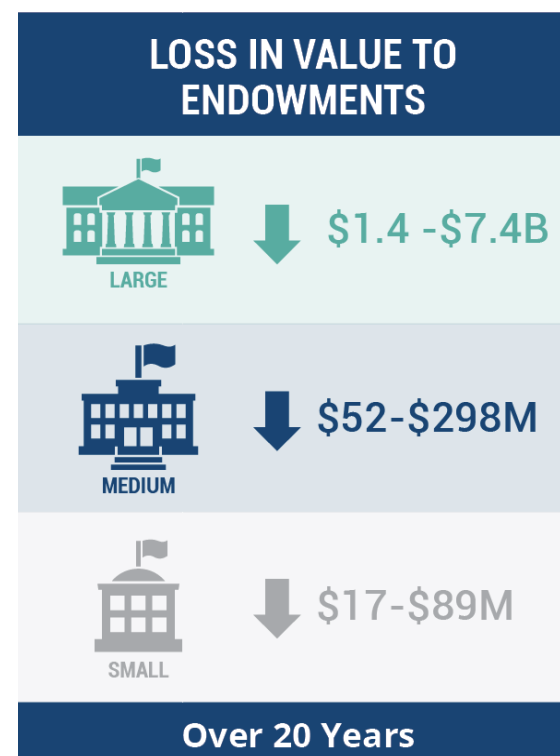
	Annual returns reduced by...	Translated into annual loss of...	% loss over 50 years
HARVARD UNIVERSITY	- 0.30%	(\$107.81m)	15.94%
YALE UNIVERSITY	- 0.21%	(\$51.09m)	11.27%
COLUMBIA UNIVERSITY	- 0.16%	(\$14.43m)	8.30%
MASSACHUSETT INSTITUTE OF TECHNOLOGY	- 0.14%	(\$17.75m)	7.40%
NEW YORK UNIVERSITY	- 0.12%	(\$4.16m)	6.12%



What are the costs of fossil-fuel divestment?

“Frictional Costs Of Fossil Fuel Divestment,” by Prof. Hendrik Bessembinder

- This study examines the hidden costs of fossil-fuel divestment, specifically the cost of the complex transactions and active management required to keep an endowment “fossil free.” This includes onetime costs and ongoing annual fees.
- These “frictional costs” have the potential to rob endowment funds of as much as 12 percent of their total value over a 20-year timeframe. For a typical large endowment, this would translate into a loss in value between \$1.4 and \$7.4 billion over 20 years.
- Defining the kind of investments that will please fossil-fuel divestment activists is a major challenge. For example, the third-largest holding in the MSCI ACWI Low Carbon Leaders Index is ExxonMobil, which is routinely targeted by 350.org and other climate activists.



Fossil-fuel divestment: Part of a bigger campaign

- According to 350.org, fossil-fuel divestment aims to stigmatize the oil, natural gas and coal industries so political leaders will have an easier time shutting down these industries with “restrictive legislation.”
- But the campaign for “restrictive legislation” is much bigger than divestment alone and 350.org is the ring leader of several other related efforts, including:
 - Anti-fracking ballot measures aimed at shutting down Colorado’s oil and natural gas industry
 - The “keep it in the ground” movement that opposes all projects tied to oil, natural gas or coal production



Fossil-fuel divestment: Part of a bigger campaign

- **Gov. John Hickenlooper (D) on anti-fracking measures:**
 - “These are radical ideas that have no place in our state Constitution ... We will always look for ways to improve safety but we do not need extreme measures that would drive oil and gas out of Colorado.” (2014)
 - “This isn’t China, this isn’t Russia, we don’t take people’s private property without compensating them.” (2016)
- **Former U.S. Senator and Obama Interior Secretary Ken Salazar (D) on anti-fracking measures:**
 - “Once again, the alarms are sounding as misguided groups are gathering signatures to place ill-conceived, vague proposals on the ballot. While their advocates say the measures are designed to protect Colorado, their poorly defined attempts will instead undermine businesses across the state, damage our economy and kill jobs.” (2016)



Fossil-fuel divestment: Part of a bigger campaign

- U.S. Sen. Michael Bennet (D) on “keep it in the ground”:
 - “Colorado truly is a state that can embrace all energy sources.” (2016)
- Obama Interior Secretary Sally Jewell (D) on “keep it in the ground”:
 - “It’s going to take a very long time before we can wean ourselves from fossil fuels, so I think that to keep it in the ground is naïve, to say we could shift to 100 percent renewables is naïve.” (2016)
- Laborers International Union of North America on “keep it in the ground”:
 - “Tom Steyer and his allies oppose an all-of-the-above energy policy that not only creates good union jobs, but offers to keep the lights on and meet our nation’s energy needs even as we transition to a cleaner, more sustainable future. His vision of leaving oil, natural gas, and other fossil fuels in the ground kills jobs, drives up energy costs, and threatens to strangle our economy.” (2016)



Fossil-fuel divestment: Part of a bigger campaign

- University of Colorado environmental studies professor Roger Pielke Jr. on 350.org:



Roger Pielke Jr.
@RogerPielkeJr



Following

McKibben goes full Godwin
Anyone opposed to his views on climate is like a Nazi
Um, OK, that is a winning approach



We Need to Literally Declare War on Climate Change

We're under attack by a powerful enemy—and our only hope is to mobilize like we did in WWII.

newrepublic.com



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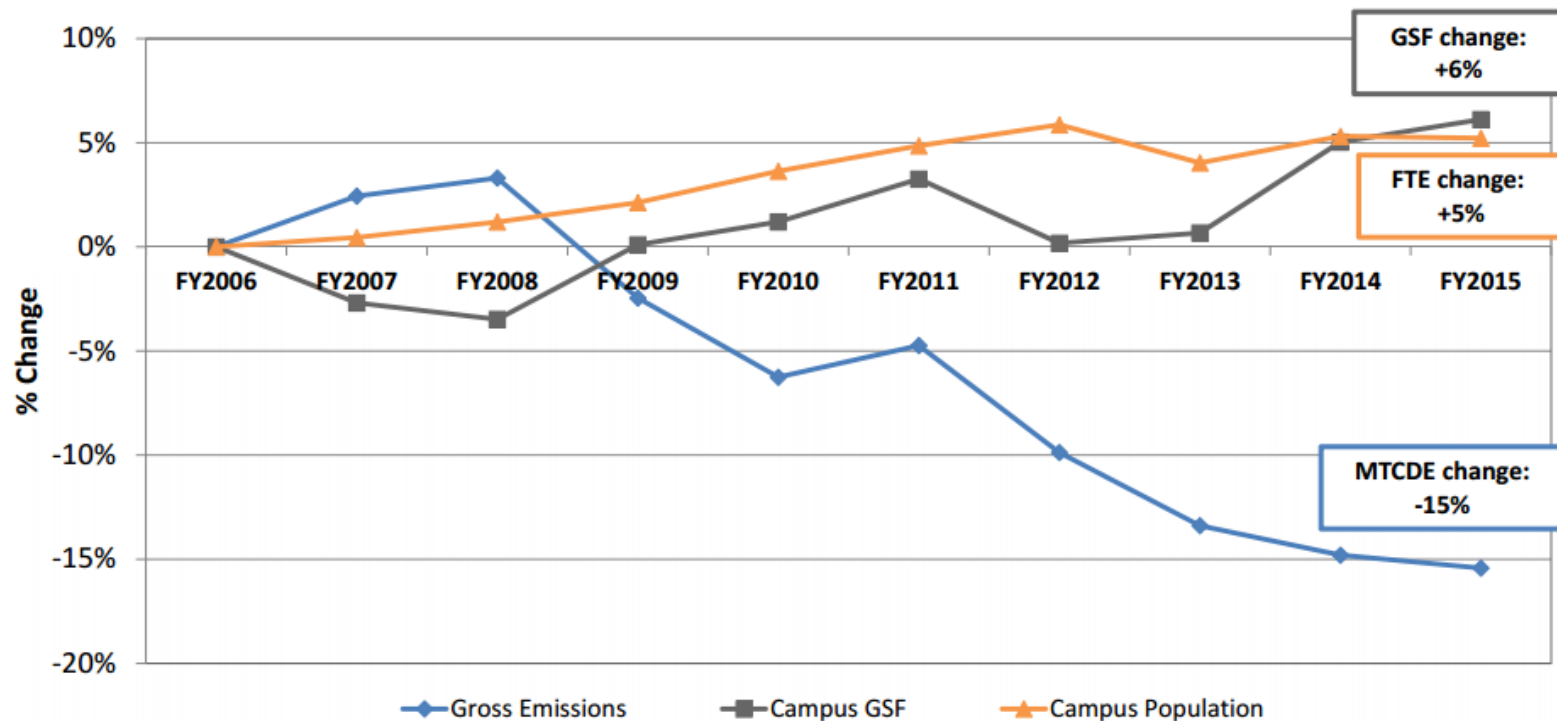
A university's track record: Does it matter?

Improvements Despite Growing Campus Population

Emissions dropped by 15% in over 9 years

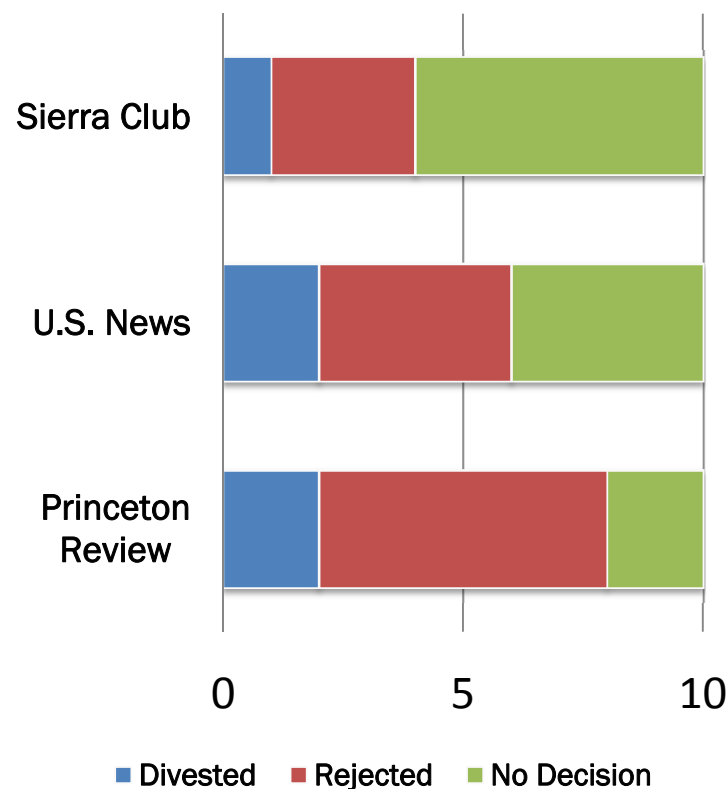


Change in Emissions (MTCDE) vs. Campus Size and Population (FTE)
Indexed to FY2006



A university's track record: Does it matter?

- Even some of the “greenest” schools in the country have been targeted by fossil-fuel divestment activists – further proof that 350.org is seeking political outcomes rather than environmental ones
- However, more schools on these “Top 10” lists have actually rejected, rather than pledged divestment
- According to the Sierra Club’s list of America’s Greenest Colleges, the top three greenest colleges have all rejected divestment while only one school has pledged divestment
- Out of U.S. News’ Top 10 Eco-Friendly Colleges, four of the schools have rejected divestment while only two have pledged divestment
- According to the Princeton Review, six of their Top 10 Green Colleges have rejected divestment while only two have pledged divestment



What about DU's ties to the energy sector?

Colorado is one of the top energy-producing states in the country. It's no surprise, then, to find the University of Denver has strong relationships with the energy sector. For example:

- The Burns School of Real Estate and Construction Management at the Daniels College of Business runs a widely respected Energy Land Management Certificate Program:
 - “The courses cover areas of knowledge for landmen, land techs, lease title analysts, division order analysts, attorneys, accountants, financial advisors and investors as well as mineral, royalty and surface owners. Those wishing to start a career in the industry benefit greatly by taking these courses.”
- The Burns School and Daniels College will host the 2nd Annual Pipeline Leadership Conference in November, which brings together leaders from across the energy sector to discuss the safe and efficient operation of the nation's 2.4 million mile pipeline network.



Fossil-fuel divestment: The moral dimension

- During the CU divestment debate, energy professional and CU Denver instructor Lisa Hamil asked about the moral dimension to 350.org's campaign against the state's energy sector:

“Banning investment in fossil fuel companies makes no more sense than banning entire fields of study like geology and petroleum engineering... But that's where the divestment argument leads: If it's bad to invest in energy companies that produce fossil fuels, then it must be even worse to educate the professionals who would run those companies.

As an educator, I believe problems are solved by building on existing pools of knowledge and using the power of human ingenuity and innovation to create meaningful solutions. I am proud to be part of a CU Denver program that equips students with the knowledge they need to improve the way we produce energy, whether it's nuclear, renewables or the fossil fuels that currently supply more than 80 percent of the nation's energy.

The national groups behind the college divestment campaign want to stop us from doing that. They cloak themselves in moral and ethical superiority, but is it moral or ethical to sacrifice the quality of a student's education just to make a political statement?”



Conclusion

- The divestment campaign orchestrated by 350.org fundamentally misrepresents the relationship between fossil fuels, renewables and the broader economy. The U.S. has dramatically lowered its carbon emissions and the renewable industry has experienced explosive growth while the nation also ramped up production of oil and natural gas.
- Advocates for aggressive climate policies have criticized the fossil-fuel divestment campaign as misguided and devoid of substance.
- Major universities have rejected fossil-fuel divestment as a costly political gesture that could cause real financial harm to faculty and students.
- Supporting divestment would boost a much bigger campaign against Colorado's energy sector by 350.org and other groups. This campaign has been strongly criticized by leading environmentalists, including senior officials in the Obama administration, as "naïve" at best and "extreme" at worst.
- 350.org's divestment campaign seeks to demonize the men and women of Colorado's energy industry to advance the group's political agenda. Should DU support this effort? Does it make financial sense? Does it make moral sense? Respectfully, the answer to these questions is "no."





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