



A Feasibility Analysis of Fossil Fuel Divestment in Lancaster County

J. Albus, D. Benton, L. Cai, N. Chasnow, S. Colodny, L. Ludgate

Social and Ethical Consequences

An aerial photograph of a large-scale open-pit mine. The central feature is a massive, light-colored pile of tailings or waste material, which has been deposited in a large, excavated area. The surrounding landscape is rugged and shows signs of significant earthmoving and excavation. In the foreground, there are several large pieces of heavy machinery, including trucks and excavators, positioned near a dark, possibly water-filled area. The background shows more of the mine's infrastructure and the surrounding terrain, which appears to be a mix of natural and man-made features.

- Environmental degradation
 - Destruction and removal of critical habitats
 - Pollution of natural resources
 - Biodiversity loss
 - Climate change
- Social and ethical consequences
 - Human health consequences
 - Displacement of indigenous communities
 - Disproportionate burden of pollution carried by low-income ethnic minorities

History of Divestment & SRI Impact

A large crowd of people at a climate protest, many holding signs and raising their hands. The background is filled with people and various signs, including one that says "STOP Fossil Fuels" and another that says "CLIMATE". The overall atmosphere is one of active participation and advocacy.

- Divestment vs. Disinvestment
- Eighteenth century → South African apartheid → Fossil Fuel Divestment
- Biggest impact through the *stigmatization process*
- 23% *faith-based organizations*
- 23% *philanthropic foundations*

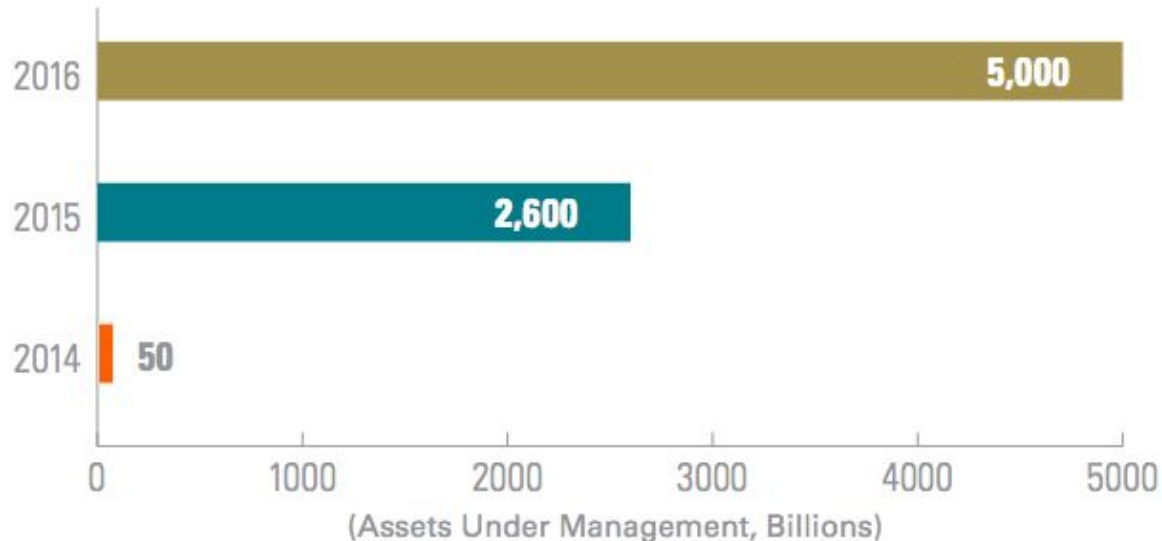
No Lancaster organizations publically divested from fossil fuels

Why are People Divesting?

- Ethical concerns
- Economical concerns

INVESTORS COMMIT TO DIVEST MORE OF THEIR HOLDINGS FROM FOSSIL FUELS

SOURCE: Arabella Advisors



Climate Change and the Economy

- Damage to property and infrastructure
- Loss of productivity



Cost-Benefit Analysis-Divestment Alternatives

- Rising Fossil Fuel Costs
 - Rising Search to Delivery Costs: \$50 more per barrel
 - Peak oil estimated to only last between 6-43 years
- Increasing Benefits in Solar Energy
 - Demand: Lancaster County first in state for solar energy
 - Solar panel costs have fallen by 80%
 - Annual returns often comparable to conventional investments after a short time (MSCI)



Effects of Divestment on Portfolio Risk

- Fear of increased idiosyncratic portfolio risk with divestment.
- Found that there was no difference in Sharpe Ratio.
- Additional personal utility.

Sample	#stocks			
	Coal	Oil and gas	All fossil	All stocks
SIC broad definition	58	829	883	-
SIC narrow definition	44	584	628	-
CU200	23	47	68	-
CRSP market portfolio				12,141

Divestment Opportunities

- Many major wealth managers offer SRI options with increasing popularity.
 - 181 Mutual Funds and 38 ETFS
- Not all are divested from fossil fuels.
 - 55th largest holding in Vanguard's SRI fund is ConocoPhillips.
- Community Based Impact Investing
 - ASSETS
 - \$5 million in Capital
 - 2% return to investors
 - 300 local jobs