FOSSIL FUEL DIVESTMENT: CONSIDERATIONS FOR INSTITUTIONAL PORTFOLIOS

NEPC Impact Investing Committee

Introduction

An increasing number of institutional investors are contemplating scaling back or exiting their fossil fuel-concentrated holdings as governments around the world fortify plans to reduce greenhouse gas emissions amid heightened awareness around climate change and the negative effects of carbon discharges on global warming.

As these investors consider divesting from fossil fuels, they must evaluate the potential impact of such a move on their portfolio as eliminating or significantly reducing an industry may alter risk and returns. At the same time, investors must also take into account the logistics related to a potential divestment, including their current investment product types, investment manager strategies, transaction costs and the ability of their staff to implement such an undertaking. For some, this process may be daunting, complex and time consuming. As a result, some investors may choose to only partially divest or opt to not divest at all. At NEPC our mission, as an independent advisor to investors, is to build customized investment programs that are aligned to the policies, objectives and values of our clients. Our main focus is to work with clients to achieve their stated goal, which may or may not include fossil fuel divestment.

Fossil fuels are non-renewable sources of energy, for instance, oil, coal and natural gas. These fuels, when burned, produce a significant amount of carbon emissions that have detrimental effects on the environment. As a result, institutional investors have considered reducing and/or selling their holdings of carbon-intensive investments – a movement broadly referred to as ***fossil fuel divestment.*** The goal of this paper is to lay out the key themes of fossil fuel divestment from an asset owner's perspective.

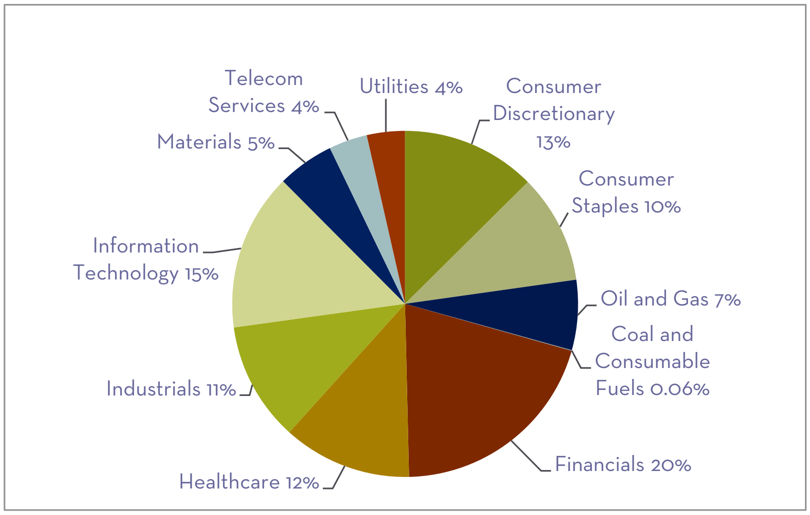
What is Fossil Fuel Divestment?

The definition and implementation of fossil fuel divestment vary widely based on the objectives, fiduciary duty and values of the institution considering an active investment strategy. This concept was spearheaded in 2008 by Bill McKibben, an American environmentalist, author and journalist who has written extensively on the impact of global warming, and 350.org—an organization he founded—that supports the Fossil Free project. Fossil Free runs an international network of campaigns urging fossil fuel divestment. Through engagement with boards of directors, it asks institutional investors to:

- Immediately freeze any new investment in fossil fuel companies
- Divest from direct ownership and any commingled funds that include fossil fuel public equities and corporate bonds within five years

Specifically, Fossil Free references a list of 200 companies that are ranked by their potential for carbon emissions based on their reported reserves. This list—the so-called *Carbon Underground 200* (*CU200*)—is compiled and maintained by Fossil Free Indexes and includes companies in the coal, oil and gas industries. Some divestment proposals have focused on coal companies, a subset of the CU200, comprising 100 of the 200 companies on the CU200. Another list, known as the *Filthy 15,* consists of 15 of the most carbon-intensive companies tied to coal usage. Fossil fuel divestment can also be implemented by reducing the carbon footprint of portfolios by divesting from the largest known carbon emitters regardless of industry, for instance, companies with revenues tied to the dirtiest forms of oil production, such as tar sands, or globally diversified companies which may derive a relatively small portion of their revenue from, for example, coal or oil specifically, but in aggregate are high-carbon emitters like those found in the utilities or materials sectors. Divestment can also be based on security classification schemes, for instance, the Global Industry Classifications Standards (GICS). Under this approach, divestment is defined as selling and permanently excluding certain sectors, industries and/or sub-industries such as all companies found

Exhibit 1: Composition of the MSCI ACWI Investable Market Index



Source: NEPC, Bloomberg (Data as of June 30, 2016)

in the energy and materials sectors or the coal and consumable fuels sub-industry.

Fossil Fuel Divestment: By the Numbers

All told, on a global scale, asset owners own approximately $228 trillion in diversified mixes of investments, according to money manager BlackRock, in a report published in May 2014. Of this, pension funds and endowments and foundations account for roughly $35 trillion in diversified assets, stated the BlackRock report. Within this pool, NEPC estimates that approximately 2% to 5% of total assets are directly invested in fossil fuel equities and fixed-income securities, equaling around $700 billion to $1.7 trillion in assets.

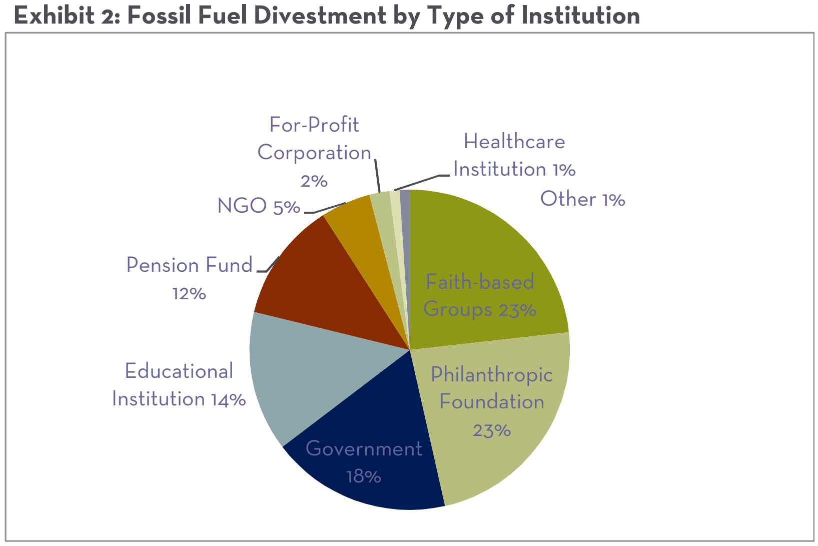
Nearly 7% of the MSCI ACWI Investable Market Index, which covers 99% of the global equity market, consists of stocks related to oil, gas and coal, according to data as of June 30, 2016 (Exhibit 1).

The total market capitalization of the oil, gas, coal and consumable fuels sector (as of June 30, 2016) in the MSCI ACWI IMI is approximately $2.9 trillion. This makes the scale of the fossil fuel divestment campaign much larger than other divestment initiatives such as tobacco, South Africa, gambling and weapons.

At the time this paper was published, 701 global institutions valued at approximately $5.46 trillion, have committed to divestment in varying degrees, according to GoFossilFree.org. The biggest contributors to the divestment movement, based on assets, are large international public pension plans, which represent half of this asset base. Meanwhile, faith-based groups and philanthropic foundations make up the largest number of organizations committed to divestment (Exhibit 2).

Importantly, divestment has not gained traction within US pension plans, both public and corporate. US pension plans follow a fiduciary standard that requires investment decisions to be based solely on the interest of plan participants. Any organizational goals, including divestment, must pass this significant requirement.

Exhibit 2: Fossil Fuel Divestment by Type of Institution



Source: NEPC, Go Fossil Free (Data as of December 30, 2016)

Exhibit 3: To Divest or not to Divest

	Cases for Divestment	Cases Against Divestment
Financial	May reduce a companies' supply of capital and impact their bottom lines Fossil fuel companies are overvaluing assets on their balance sheets leading to potential overstated financials Substitution effect - fossil fuel prices will be driven down as technological advances provide more efficient energy	Divestment provides investment opportunity for other investors who are not concerned with the cause Not owning shares of companies limits engagement opportunities (i.e., not eligible to vote proxies)
Environmental	Research shows the majority of fossil fuel reserves are unburnable due to the global carbon budget Provides a better future for the next generation by reducing carbon footprint and mitigating global warming	Reducing fossil fuel demand and usage may have a larger impact than divestment Fossil fuel companies are best suited for researching and investing in renewable resources
Other	Significant divestment by organizations may impact policymakers and the general public (power in numbers) Divestment draws attention to the issue Aligns portfolio investments with organizational values and mission	The question arises if one should divest from other areas such as tobacco and weapons Are investment portfolios the way to impact change? Is divestment in the best interests of portfolio beneficiaries? May increase price of energy, hurting the developing world and middle class

Source: NEPC

To Divest...or not to Divest

Even as 701 organizations have committed to divestment, many more have researched and decided to not pursue divestment at this time. There are critics against and proponents for divestment (Exhibit 3).

Institutional investors and their trustees, fiduciaries and stakeholders should assess proposals on fossil fuel divestment against their organization's investment policy, duty to their mission, and risk-return expectations. They should also consider the merits of a trade-off between their current portfolio against investment values and results from a potential fossil fuel divestment. Asset owners should note that choosing to pursue fossil fuel divestment is an active investment management decision and trustees, boards of directors, and fiduciaries are responsible for staying within the confines of the standards of practice by which they are governed, including UPMIFA, ERISA and state law.

When considering divestment, it is difficult to overlook the fact that demand for fossils fuels may not be completely eliminated in our lifetime. It is expected that energy consumption will continue to grow with projections out to 2040, according to the US Energy Information Administration's (EIA) 2015 Annual Energy Outlook. While the use of cleaner forms of energy (natural gas and renewable energy) is expected to grow from 35% to 39% from 2013 to 2040, the consumption of coal and petroleum is expected to remain the primary fuel source for energy usage albeit reducing from 54% to 51%, according to the EIA report.

NEPC's Approach to Divestment

At NEPC, we have a broad base of clients who may be contemplating divestment. An important first step when beginning the dialogue around divestment is to first measure the investment portfolio's exposure to fossil fuels. Assessing the current exposure will determine if further analysis is needed. After the above has been completed and before a decision is reached, we feel it is essential to consider these main areas discussed below.

1) Governance and Goals

NEPC has identified the following governance issues fiduciaries should assess:

i. Analysis of how the organization's values align with the underlying environmental concerns of divestment. For example, a college that specializes in environmental studies or a foundation that focuses on supporting clean energy technology may have a clearer response as the institution's primary objectives may align with divestment.

ii. An understanding of the resource and staffing requirements is vital as an organization contemplates divestment. Dedicating a governance group to explore divestment ensures that all views of the organization are considered. It is vital to take stock of the resources—internal staff and committees, and outside advisor (s)—at hand.

iii. It is important to consider the merits of an additional divestment for clients who have already divested from areas such as tobacco.

iv. The formulation and/or the updating of an investment policy statement are necessary if the decision to incorporate divestment is approved. This should contain the goal of divestment and specifics on which asset classes and sectors to include, for instance, energy, CU 200 or coal only. Language supporting specific roles and responsibilities of the staff, board, investment committee, sub-committees or outside advisors should also be reviewed and updated.

Exhibit 4: MSCI ACWI Energy Performance

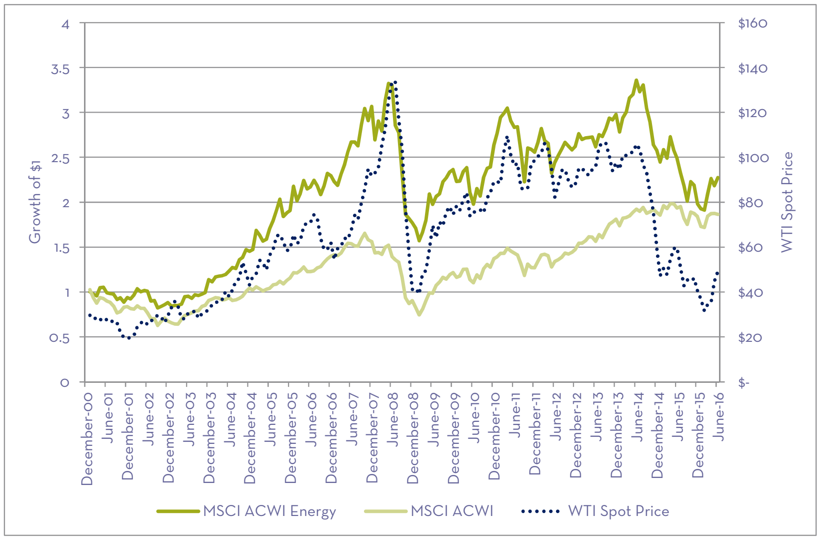
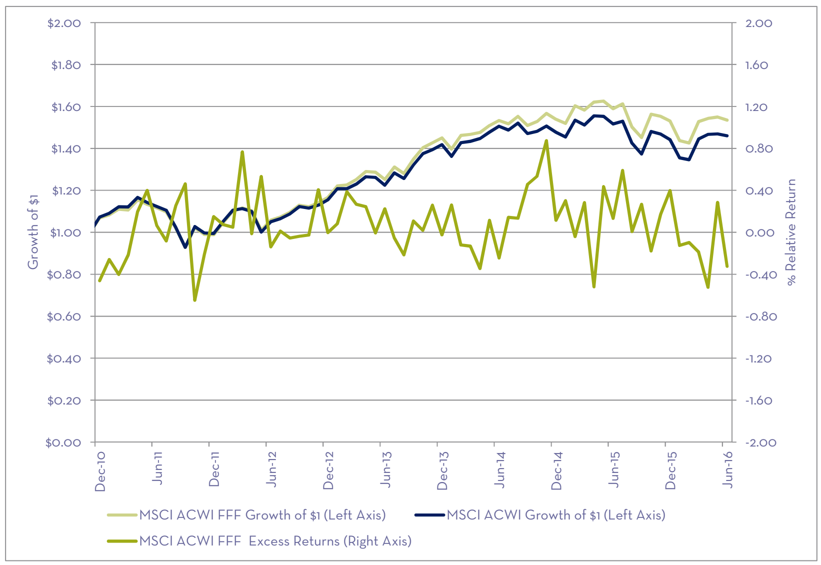


Exhibit 5: Relative Performance – MSCI ACWI Fossil Fuel Free



Source: NEPC, Bloomberg (Data as of June 30, 2016)

2) Performance

One of the biggest topics with regards to divestment is investment performance. Will divestment impact future returns? One way to evaluate performance is to consider performance of the energy sector versus the broad market which will indicate the impact of energy on historical returns. That said, a limitation to this approach is that the energy sector includes all oil, gas and coal companies, and not just those with the highest levels of fossil fuel reserves as tracked by the CU200. Another shortcoming is the limited track record of some of the indexes. In addition, a comparison of performance between the two indexes is largely dependent on changes in oil prices (Exhibit 4). For example, the sharp decline in oil prices that began in June 2014 has resulted in better performance for the ex-fossil fuel index as compared to a broad market index through June 30, 2016 (Exhibit 5). Evaluating historical performance between the MSCI ACWI index and MSCI ACWI Fossil Fuel Free (FFF) index has ranged between positive and negative 50 basis points over the past five years through June 30, 2016. While the historical tracking error appears relatively low in basis points, it is important to note that future performance may be different than the last five years and the time period analyzed is relatively short.

3) Portfolio Construction

It is important to consider risk management and portfolio construction when evaluating divestment. Historically, exposure to the energy sector has been a valuable source of return, diversification and inflation protection. Research suggests that in inflationary periods, non-energy related equities have poor sensitivity to inflation with the spread in performance being significant. During high inflation in the 1970s, the S&P 500 index gained 4.7%, whereas equities in the energy sector returned 11.6%. However, more recently, the returns' differential between the broad market (MSCI ACWI) and the energy sector (MSCI ACWI Energy) has been significant due to declining oil prices. For instance, in 2015, the energy index lost 22.2%, whereas the broad market lost 2.4%. When oil prices and commodities rebounded in 2016 (through June 30, 2016), the energy sector returned 16.3% as the broader market was muted at 1.2% It is important to consider the volatility (standard deviation) of the energy sector when analyzing divestment. The standard deviation for the energy sector was 25.0%, as of June 30, 2016, compared to 17.6% for the broad market on a 10-year historical basis.

When evaluating divestment, it is important to reassess total portfolio construction to examine if the remaining assets after divestment can provide similar return, risk and correlation characteristics in market environments such as inflation. Lastly, if divesting from fossil fuels in global equities, it may make sense to re-examine portfolio exposure to global currencies, countries and regions as excluding certain energy companies may impact these areas.

MSCI, an independent vendor, has provided institutional programs and asset managers with analytics for over 40 years. It is a leader in index creation for global equity benchmarks along with ESG and carbon-focused benchmarks. Over $10 trillion in US dollar-denominated assets were benchmarked to MSCI indexes, as of December 31, 2015. Given the growing discussion regarding divestment and concerns surrounding carbon footprint in some institutional programs, MSCI has created a carbon portfolio analytics report. This may be helpful for institutional programs looking for ways to measure and benchmark carbon exposure, track the progress of their divestment journey, and to use as a tool for discussions with asset managers.

4) Active versus Passive Management

Starting in 2014, many large index providers launched fossil fuel-free and low-carbon index strategies. Investment portfolios using active management may analyze the value of this approach and examine the impact on returns of reallocating investments to index funds. If maintaining active management in the investment portfolio, it is important to discuss the impact of restricting investments in a certain sector. For those organizations that have the scale to access separate account managers and strategies, it may be feasible to divest from a list of securities. That said, restricting a certain sector or industry limits the manager's opportunity set and may impact performance positively or negatively. If fossil fuel companies are viewed as potentially underperforming in the future, it may be appropriate to discuss if excluding fossil fuel securities should be an active management decision by the organization or delegated to an investment manager.

5) Investment-related Fees

Fiduciaries should also contemplate investment management fees and potential transactions costs. These will differ based on each investment portfolio and structure. For example, for a portfolio moving from an active equity strategy to a fossil fuel-free index strategy, the investment management fees may decline. On the other hand, changing from a traditional active management strategy to an active management low-carbon strategy may result in higher fees and the same may be true for traditional index products versus the fossil fuel-free version. Lastly, a portfolio transitioning from commingled funds to a separate account may incur transaction costs.

6) Defining and Measuring Success

NEPC suggests that organizations considering or implementing divestment have a clear metric to define and measure success. There are various ways to evaluate success with one option being to assess or analyze the new portfolio's rate of return compared to the pre-divested portfolios. Alternatively, investigating the environmental impact and searching for a way to measure the reduced carbon footprint could also help gauge success.

Another metric to measure success is determining the impact of divesting on other areas of the organization. For example, colleges and universities could determine if divesting affects fundraising or enrollment efforts. Similarly, public pension plans could examine the impact on labor unions, jobs or state budgets.

Divesting has the potential to change many aspects of an organization even though the main issue typically discussed is the potential impact to portfolio returns. Therefore, it is important to clearly articulate, prior to divesting, the goals of divestment and the measurement criteria that will be used to assess that achievement.

7) Choosing an Execution Strategy

While 350.org has a specific ask, we believe that institutional investors choosing to divest from fossil fuels should do so only after carefully considering various available options since divestment decisions may have broader ramifications on the overall investment portfolio's composition and its risk-return profile. Investors should responsibly assess the impact of different approaches, which range from a full divestment to partial divestment or sector-based strategies (Exhibit 6).

Exhibit 6: Different Divestment Approaches

Potential Option	Description	Example	Comments
Full divestment	Divest from a specified list of fossil fuel companies across the entire portfolio (i.e., the Carbon Underground 200)	Sterling College: Divestment in the endowment was achieved by utilizing a manager specializing in fossil fuel free investments	Small and liquid programs allow for easier implementation
Partial divestment (by asset class)	Divest from fossil fuel companies (i.e., the Carbon Underground 200) but only within certain asset classes	Pitzer College: It committed to divesting the endowment's investments in fossil fuel stocks	Potential to prioritize certain asset classes where greater breadth of options exist (public equities)
Partial divestment (by industry)	Commit to divesting from companies in select high-carbon emitting industries (e.g., coal)	Stanford University: Divested direct holdings from coal companies	Easier option to implement for investment programs with separate accounts

Source: Stanford University, Sterling College and Pitzer College

Throughout the decision-making process, fiduciaries will likely discuss suitable implementation strategies if they decide to pursue divestment. The universe of investment products excluding fossil fuels is limited and should be assessed while examining divestment. This is especially true for mutual funds or commingled funds; it does not apply to investment products that can be accessed in a separate account structure as they have the potential to screen out a specific list of securities depending on the investment manager's capability and willingness.

This universe of investment managers and strategies may also have low asset levels, shorter track records and higher management fees compared to peers within the same asset class. While strategies free of fossil fuels are currently limited, NEPC expects the universe to continue to increase. Reducing or eliminating fossil fuel exposure may be simpler for organizations or investment portfolios with the size or scale to access separate accounts. Separate account minimums may be quite large, specifically for certain asset classes, for instance, international or emerging market equity mandates. However, NEPC maintains an extensive focus placement list of strategies which include low—under $5 million—separate account investment minimums.

It may also be helpful to put a schedule in place emphasizing specific focus areas. For example, given the greater number of fossil fuel-free strategies in domestic and global equity, it may make sense to initially evaluate those asset classes, and then move on to others such as corporate bonds and alternative strategies. Currently, divestment options are limited for portfolios with hedge funds, real assets and/ or global asset allocation.

Another point of consideration is to select the pool of assets from which divestment will occur, for instance, some organizations may have a number of different investment portfolios such as operating funds, pension plans, endowments and defined contribution plans.

Alternatives to Divestment

The following investment strategies can be used in conjunction with divestment or as an alternative to divestment:

i. Environment, social and governance (ESG) investment strategies: This is a broader investment approach and focuses on companies that promote ESG best practices. ESG strategies may reduce an organization's exposure to fossil fuels or encourage investment in fossil fuel companies that are best in class. For more information about ESG integration, please see NEPC's paper entitled, "Completing the Analysis: ESG Integration."

ii. Sustainable investments: These include green bonds or private equity funds that focus on clean energy. While clean energy strategies are mostly available in a private equity vehicle structure, there are a limited a number of liquid strategies.

iii. Activism: Organizations can engage with fossil fuel companies but this requires holding shares in fossil fuel companies.

iv. Green initiatives: This involves allocating or spending a portion of investment proceeds on green projects such as solar power for buildings and providing grants for environmental research.

Regardless of the decision to divest or not to divest, there are alternatives that may have a positive impact on the environment and reduce carbon footprint.

Conclusion

At NEPC, we recognize the complexities of fossil fuel divestment. Investors should weigh all factors prior to making any decisions regarding divestment. Depending on each organization's resources and mission, each investor will likely take a different path aligned with its goals. Some may opt for full divestment, others may choose to partially divest, while still others may decide against divesting at all. We anticipate the dialog around divestment to continue in the years to come and, as a result, expect the number of investment products focusing on divestment to increase. The topic of divestment may lead organizations to broaden their research and scope to include alternative strategies such as ESG, sustainable investing and impact investing.

NEPC's Impact Investing Committee

NEPC is a member of Principles of Responsible Investing (PRI), a United Nations-supported initiative. It is an international network of investors working together to put the six Principles for Responsible Investment into practice. Its goal is to understand the implications of sustainability for investors and support signatories to incorporate these issues into their investment decision-making and ownership practices (www.unpri.org)

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