

CONSIDERATIONS WHEN EXCLUDING FOSSIL FUELS

18 **It may be stating the obvious, but the investor considering fossil fuel free investing needs clearly defined terms.**

Carefully define your terms

It is true that a material is either a fossil fuel or not – defined as a naturally occurring carbon or hydrocarbon fuel formed from the remains of prehistoric organisms – but this gives little indication of the extent of the carbon footprint the investor may wish to consider.

For example, does the investor wish to exclude those corporates which simply own carbon reserves or also omit those which transport it (e.g. pipeline and transmission companies)? Purists would go further and may reject the suppliers to these companies (e.g. oil & gas equipment and services) or major users of fossil fuel products (e.g. chemicals, non-renewable power generators, autos, airlines).

When considering fossil fuels, it is worth remembering that they are not all equal. Data in Table 1 shows pounds of CO₂ emitted per million British thermal units of energy. Not only is there a meaningful difference between fuel types – natural gas emits nearly half the CO₂ of anthracite coal – but there are also differences in the grades of fuel, notably coal.

Table 1: Pounds of CO₂ emitted per million British thermal units (Btu) of energy for various fuels

Coal (anthracite)	228.6
Coal (bituminous)	205.7
Coal (lignite)	215.4
Coal (subbituminous)	214.3
Diesel fuel and heating oil	161.3
Gasoline (without ethanol)	157.2
Propane	139.0
Natural gas	117.0

Source: US Energy Information Administration
<https://www.eia.gov/tools/faqs/faq.php?id=73&t=11>

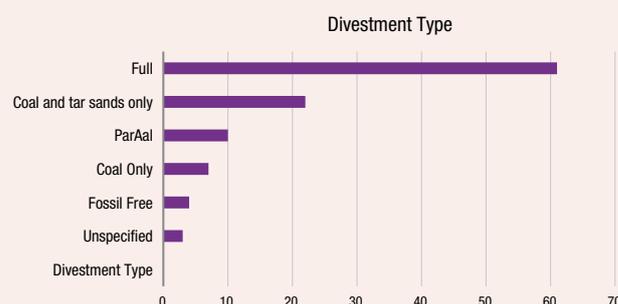
What do fossil fuel free investors agree upon?

Not very much is the blunt answer, apart from the use of the term fossil fuel. As with so many definitions in the sustainable world, asset owners decide to define investment universes which conform to their aims. If, for example, an investor wishes to target the worst carbon plays, excluding coal companies is a reasonable strategy. But the aim could be more encompassing and the target may be an investment portfolio with a lower carbon footprint. This gives rise to the possibility of still being able to own energy companies, albeit with a small exposure.

The purpose of a fossil free strategy may be based on risk mitigation. For example, will these fossil fuel assets become 'stranded' – i.e. are never extracted – and are therefore of no economic value? Is legal action against major carbon emitters inevitable, possibly making this the next Big Tobacco lawsuit? Deciding on the purpose of being fossil fuel free will help define the acceptable investment universe.

Proof of the variety of approaches taken can be found among a group of educational endowments across the globe. We studied over 100 of these establishments and found that a range of terms were used (see Chart 1). In some instances, fossil fuel divestment covered just coal while others opted for coal and tar sands. Some brand themselves as partially fossil free and others fully fossil free.

Chart 1: Global educational establishments and their fossil fuel investment policy



Source: Analysis by SICM



Investment strategies

When the asset owner has set their definition of fossil fuel free, there are a range of approaches the asset manager can adopt. We show these in Chart 2.

Chart 2: Fossil fuel investment strategies

- 1 Increase engagement
- 2 Selective divestment – e.g. coal & tar sands
- 3 Go low carbon (which still permits inclusion of energy)
- 4 Full divestment of energy (but this could include utilities)
- 5 Divest/invest – exit fossil fuels and invest in renewables

Source: SICM

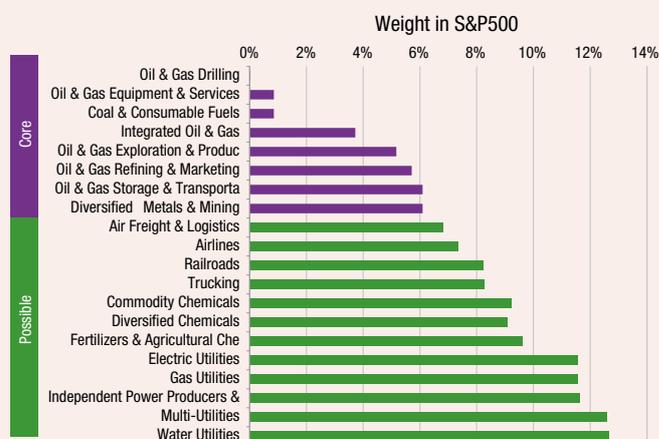
The investor could commence by simply increasing engagement with the main fossil fuel companies. Owning shares in the company gains access to management and lobbying may satisfy some asset owners' objectives. Although it often gets bad press for its simplicity, a negative screen may be most appropriate. This simply means that certain companies and industries are excluded from the investment universe. Sure, it may appear simple, but it also provides clarity. In the energy sector in particular, a derivative of this approach is 'divest-invest', whereby the cash raised from the divested fossil fuel companies are re-invested in sustainable energy solutions (e.g. renewables).

Other approaches include positive screens, that is investing in those companies which are either improving their fossil fuel profile, perhaps by adopting cleaner technologies, or investing in those corporates which provide fossil fuel free solutions. A derivative of this can be a tilt strategy. This could be adopted by focusing on the carbon footprint, whereby those companies with the lowest carbon footprint are given the highest weighting in the portfolio.

The impact of definition

Having defined the fossil fuel boundaries and the investment approach, the unintended effects of such a investment strategy should be considered. We can examine a simple example. If we take the S&P 500 index as at the end September 2017, we can see that the accumulated weighting of the GICS defined coal and consumable fuel sub-industry has a 3.7% weighting in the index. See Chart 3. If we include all the energy sector's sub industries – e.g. oil & gas exploration – the accumulated weighting in the index rises to 6.1%. For those wishing to omit more of the carbon chain by including air freight, airlines, railroads, trucking, electric and gas utilities, and independent power producers, the effect of this policy impacts a much greater percentage of the index.

Chart 3: Weighting of GICS sub-industries in the S&P 500 as of end September 2017



Source: S&P, SICM analysis

A full analysis of the effect of exclusions was published by Norges Bank Investment Management in their annual Return and Risk Report. The 2016 report shows that while all the imposed exclusions reduced the return on the equity index by 1.9%, between 2006 and 2016, the thermal coal mining and coal based power production omission cost them only 0.01% over the same period.

Now let us consider more complex unintended consequences. Using a MSCI Barra portfolio management analytics model we were able to determine whether excluding a sector, for example, causes factor bets to influence the portfolio's performance. We analyzed this in detail in our earlier paper 'The Risks and Returns of Fossil Fuel Free Investing' when we demonstrated that the exclusion of the energy sector resulted in the beta of the portfolio being lowered, costing the US portfolio nearly 500 bps of performance and eliminating half the benefit from the ex-energy exposure. However, an improved exposure to momentum added 122 bps of performance. These numbers are over a five-year period.

Wrapping it up

Have a well-defined investment aim. This will help define the ex-fossil fuel universe. In turn, this will help shape the investment approach. Do not shy away from a simple exclusionary approach; its simplicity can be attractive. Finally, beware the unintended consequences. A competent asset manager will be prepared for this eventuality.

A full analysis of the effect of exclusions was published by Norges Bank Investment Management in their annual Return and Risk Report



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