Which companies are worst? Analysis of GMPF fossil fuel company holdings.

1. A new report[1] from FFGM identifies the greater part of the Greater Manchester Pension Fund's direct fossil fuel holdings and presents a way of prioritising companies for divestment, based on both their relative climate impacts and the risk of these investments becoming stranded (i.e. losing much of their value in the medium term).
2. We identify nine companies, mostly involved in coal mining, as the most deserving of divestment. These are followed by another eleven companies that we rate as the next most damaging and/or at risk of asset stranding.
3. Fossil Free Greater Manchester continues to argue for a managed programme of full divestment from fossil fuel companies. However, the methodology in this report could be built upon as a means of prioritising holdings for early divestment.

Introduction

Greater Manchester Pension Fund (GMPF) holds more than £1Bn of direct investments in fossil fuel companies. This includes mining companies (diversified but with sizeable operations in coal), oil and gas companies, and more specialist companies involved in the exploitation of unconventional oil and gas (chiefly tar sands and shale oil/fracking).

Fossil Free Greater Manchester advocates divestment from all fossil fuel stocks, starting with coal and tar sands. But it may be helpful to have a more detailed analysis. Our report is a contribution to that work.

Methodology

We analysed GMPF holdings that appeared in the Fossil Free Indexes Carbon Underground 200, compiled July 2016[2]. Information on GMPF holdings is from the 27 page list of mainstream securities holdings at March, 2016[3]. Carbon Underground ranks coal, and oil and gas companies separately by Gtonnes emissions. We also ranked companies overall by the same Gt CO2 metric. The calculated carbon emissions data using reserves reported as of May 31, 2016 are included from the carbon underground 200 list[4]. Companies that are involved in fracking and tar sands exploitation are also included in our analysis. Most fracking firms fall outside the CU 200 list so projected emissions data are not available. Where available (i.e. for gas

1 The report was prepared at the request of a member of one of the Fund's panels. This is an edited version.

2 http://www.fossilfreeindexes.com Note that only information on the top 10 coal and top 10 gas and oil companies may be shared publicly.

3 http://www.gmpf.org.uk/documents/investments/holdings/2016/mainstream.pdf Unlike some Funds, GMPF only provides annual updates publicly, and these appear some 6 months after the list is compiled, after accounts are audited. More transparency would be valuable.

4 Only information for the top 10 coal and top 10 oil and gas companies may be shared publicly – however asset managers and others can subscribe to the list. Full details are therefore not presented here.

and oil companies) we have also reviewed information from Carbon Tracker's analysis of potentially stranded assets[5].

We made an overall rating of the priority for divestment. This reflects, and is split into, two factors, a sector-based rating, which broadly reflects the carbon intensity of the company's operations, and a rating of potential asset stranding.

5 http://www.carbontracker.org/report/2-degrees-of-separation-transition-risk-for-oil-and-gas-in-a-low-carbon-world/

Results: Companies are ranked in descending order of the composite rating.[6]

Company	GMPF Group total holding March 2016, £s	Business	Parent Company Gigatonnes CO2	Sector rating*	Stranding risk**	Composite rating***
Adani Enterprises	288,047	Coal	27.81	3	3	6
Glencore	113,157,384	Coal	8.69	3	3	6
Canadian Natural Res	8,625,651	Gas and Oil		3	3	6
BHP Billiton	216,017,391	Coal, Gas, Oil		3	3	6
Anglo American	254,431,454	Coal		3	3	6
Rio Tinto	359,076	Coal		3	3	6
Mitsubishi	2,448,991	Coal		3	3	6
Vale	1,609,610	Mining, Coal, hydroelectric		3	3	6
Teck Resources	3,628,280	Mining, Coal		3	3	6
ExxonMobil	5,996,763	Gas and Oil	7.96	3	2	5
Royal Dutch Shell	3,572,473	Gas and Oil	5.00	3	2	5
Suncor Energy Inc	11,410,275	Oil		3	2	5
CNOOC	6,804,899	Gas and Oil		3	2	5
Conoco Phillips	12,512,370	Gas and Oil		3	2	5
BP	7,043,300	Gas and Oil	6.39	3	1	4
Cenovus Energy Inc	99,651,091	Gas and Oil		3	1	4
Valero	29,205,086	Oil refining		3	1	4
EOG Resources	401,782	Gas and Oil		2	1	4
Marathon Oil	523,889	Gas and Oil		3	1	4
Occidental	11,806,343	Gas and Oil			4	4
Total SA	10,116,914	Gas and Oil			3	3
Repsol	261,297	Gas and Oil			3	3
Chevron	2,587,748	Gas and Oil	4.05		2	2
Statoil	125,558,789	Gas and Oil			2	2
Duke	187,226	Power distribution		2	2	2
Macquarie	31,391,216	Finance		2	2	2
Schlumberger	4,751,062	Oilfield services		2	2	2
Petrobras	278,300	Gas and Oil	4.35		1	1
Sinopec	5,450,313	Gas and Oil			1	1
Grand total	**970,077,020**					

* 3pts for coal or tar sands, 2 pts fracking
** coal=3; 0-20%=1, 20-30=2, >30%=3
*** sum of previous two columns

6 In compliance with the terms of the Carbo
However, the full data are available on request.

Notes on companies

Company	Comments
Adani Enterprises	
Glencore	
Canadian Natural Resources	tar sands
BHP Billiton	
Anglo American	
Rio Tinto	
Mitsubishi	Note, this is a diversified company. Gt figure is for coal. Group total includes other divisions, not necessarily involved with fossil fuel extraction.
Vale	Note, this is a diversified company. Gt figure is for coal. 2012 was voted corporation with the most "contempt for the environment and human rights" in the world https://www.theguardian.com/environment/2012/jan/27/public-eye-awards-vale-barclays
Teck Resources	note, this is a diversified company. Gt figure is for coal.
ExxonMobil	tar sands, rank 1st globally http://fossilfreeindexes.com/research/tar-sands/
Royal Dutch Shell	increasing involvement in tar sands https://www.no-tar-sands.org/campaigns/get-the-shell-out-of-the-tar-sands/
Suncor Energy Inc	tar sands, ranked 2nd globally http://fossilfreeindexes.com/research/tar-sands/
CNOOC	tar sands (wholly owned subsidiary Nexen-CNOOC
Conoco Phillips	tar sands, ranked global 5th place http://fossilfreeindexes.com/research/tar-sands/
BP	increasing involvement in tar sands https://www.no-tar-sands.org/campaigns/british-petroleum-bp/
Cenovus Energy Inc	tar sands
Valero	tar sands involvement https://www.no-tar-sands.org/campaigns/valero/
EOG Resources	Fracking https://www.fool.com/investing/2016/07/16/which-companies-are-the-biggest-shale-players-in-t.aspx
Marathon Oil	tar sands https://en.wikipedia.org/wiki/Marathon_Oil
Occidental	capex score 20-30% but extremely high % reserves outside carbon budget so 2 addnl pts added.
Total SA	
Repsol	
Chevron	Responsible for 2nd worst environmental disaster after Chernobyl, in the Ecuadorian Amazon: http://rainforests.mongabareparations http://rainforests.mongabay.com/0806.htmy.com/0806.htm Facing $12B
Statoil	

Company	Comments
Duke	Fracking. Not listed in Fossil Fuel Underground 200
Macquarie	Fracking. Not listed in Fossil Fuel Underground 200
Schlumberger	Fracking. Not listed in Fossil Fuel Underground 200
Petrobras	
Sinopec	

Limitations

There are a number of limitations to this study. We do not believe these are fatal flaws but rather suggest ways in which the analysis could be improved by those with greater access to information.

1) The GMPF only publishes information on its holdings annually and this information only appears some months after the financial year end. Our information, therefore is based on the holdings at March, 2016. However, investment managers at GMPF will be able to both analyse and supply current data. We have not identified all the GMPF fossil fuel holdings (a labour intensive task given the way the holdings report is presented), although our total (£0.97Bn) approaches previous estimates of the Fund's total direct fossil fuel holdings (£1.057Bn).

2) The information we used from Fossil Free Indexes (Carbon 200 Underground) and Carbon Tracker dates from May, 2016 and January, 2017, respectively.

3) Rating a company involves condensing complex information into a straightforward index. This is a legitimate process but inevitably involves the loss of information. Moreover, all ratings involve assumptions.

We assume that coal and tar sands are the most damaging fossil fuel sectors in terms of actual and potential carbon emissions. Similarly we rate fracking nearly as negatively, since it adds to the stock of available fossil fuels for exploitation, and to the flow of emissions, rather than offering a bridge to carbon neutrality. Moreover, we do not attempt to make any adjustment for other aspects of companies' behaviour (for example Chevron's culpability and refusal to pay awarded compensation for damage to ecosystems and communities in the Ecuadorian Amazon[7]). Others might make somewhat different assumptions.

Our ratings of stranding are based on quantitative analysis by Carbon Tracker of two figures: 1) The percentage of upstream Capital Expenditure outside the global 2 degree carbon budget, and 2) the potential CO_2 outside the 2 degree carbon budget accounted for by the company's declared reserves. Since Carbon Tracker only reported on oil and gas, we have made a judgement that coal represents a greater stranding risk. This is based on the current rate of moves globally away from coal. Again, other assumptions could be made: the reasoning should be made explicit should an alternative basis for judgement be used.

Conclusions

This report identifies the greater part of GMPF's direct fossil fuel holdings and presents a way of prioritising companies for divestment, based on both their relative climate impacts and the risk of these investments becoming stranded (i.e. losing much of their value in the medium term).

7 http://www.ccij.ca/cases/chevron-2/

- From our analysis, we identify the following companies, involved in coal mining, as the most deserving of divestment:
  Adani Enterprises; Glencore; Canadian Natural Resources; BHP Billiton; Anglo American; Rio Tinto; Mitsubishi; Vale; Teck Resources (all with composite score of 6).
- These are followed by the following companies with the next highest negative ratings: ExxonMobil (5), Royal Dutch Shell (5); Suncor Energy Inc (5); CNOOC (5); Conoco Phillips (5); BP (4); Cenovus Energy Inc (4); Valero (4); EOG Resources (4); Marathon Oil (4); Occidental (4).
- We recommend that the GMPF Trustees build on this methodology with the assistance of their investment managers and advisors, together with reputable specialists in climate and stranding risk analysis.
- We recommend a managed programme of divestment from all fossil fuel stocks, beginning with the companies that are most damaging to global climate and those that present the highest risk of asset stranding.

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