To start off, I should note as a disclosure that I work at the Ross School of Business and I teach about stocks and portfolios. I also contribute to Forbes. So, I feel that I know a bit about this subject, but the thoughts listed below do not reflect the thoughts from Forbes or from the Ross School of Business – they are my own.

I am also not against raising awareness on environmental matters. Folks at city hall know that I'm quite vocal on acid/oil spills, sewage spills, and 1,4 Dioxane. So, I care about the environment and I speak out on these issues even more so than some local non-profit environmental organizations.

I care about responsible investing. Quite often I write about insider trading and odd corporate trades on Forbes, so I look at responsible investing. Although I am in favor of responsible investing – where one avoids a particular stock, I believe it is irresponsible investing to avoid an entire sector. If a fund wants to avoid a stock (companies that suck at cleaning Dioxane?), then that's their decision. If a high net-worth investor wants to avoid a sector, then that's their decision. If a retirement fund wants to avoid an entire sector, then that's just irresponsible. They can feel free to tilt away or towards a sector, but to avoid one completely for a long period of time, is just wrong for an index-type fund.

In the US stock market (NYSE, AMEX, NASDAQ) there are 4,725 stocks. If we remove stocks below $2 and those that have a market-cap below $250 million (microcaps), then there are 3,248 stocks. So, in general, a fund can choose from 3,248 stocks. If the fund is not allowed to select smallcap stocks (those under $2 billion), then the stock market has 1,542 stocks.

The Energy sector as defined by the Global Industry Classification System (GICS) has approximately 165 energy companies. If we include smallcap stocks, then there are 296 energy stocks. Keep in mind that the resolution said this:

"WHEREAS, For the purposes of this resolution, a "fossil fuel company" shall be defined **as any of the two hundred publicly-traded companies"**

It states 200 companies. There are only 165 energy companies within the mid/large-cap energy sector that trade in the USA. With 200 companies, that would conceivably avoid the entire sector. I realize that the list of 200 companies from the Carbon Tracker report aren't all located in the USA, but many of the non-USA companies do trade in the USA. If we look at the S&P 500, then 11% (weighted by market-cap) of the market is composed of energy stocks, and many of those are listed in this report. For a comparison, the Information Technology sector takes up 18% of the S&P 500, Financials take up 16% and Health Care takes up 13%. Of the 10 GICS sectors, Energy is the 5th largest sector in the S&P 500. Energy stocks form a large component of the market.

If I combine the Carbon Tracker report with the S&P 500, then of the 43 energy stocks in the S&P 500, 24 are listed in the Carbon Tracker report. 56% of the energy sector is not allowed. But, let's look at it from a different angle. I also know that the energy sector takes up $1.5 trillion in the S&P 500 and if we exclude the 24 stocks, then by market-cap they take up about 74% of the entire energy sector. In other-words, you would be basically removing an entire sector as the report is against 74% of the S&P 500 energy sector.

So here are some other concerns:

- If one expands this idea further, it could be justified to sell other stocks. Folks could end up divesting from companies that they might not think are involved in the energy sector. For example, 47% of General Electric is involved in Heavy Electrical Equipment, but 8% of it is also involved in Oil Services. 8% of General Electric is a lot of money and it's bigger than some energy stocks. So exclude General Electric? There are transportation companies that rely on oil, and manufacturing companies that need energy as well. So if energy stocks are excluded, then some other stocks might need to be excluded as well, as their business revolves around the energy. Also, exclude local utility stocks like DTE as they need energy to create power. I realize that this stock is not included in the list, but it's still connected to energy.
- If one excludes energy due to social reasons, then what about other sectors as well?
    - Exclude local auto companies because of the bailouts.
    - Exclude financials as they were involved in the financial crisis.
    - Exclude health care as folks might have strong political opinions.
    - Exclude telecom as cell phone towers provide concerns with health.
    - Exclude any company where there was insider selling and the stock sucked (this would have included local companies like Borders and A123 Batteries)
    - Exclude biotech as they raise money and then they lose money, while CEOs get rich and investors sometimes suffer as biotech companies fail.
    - Exclude any company that has lousy stock returns, yet the CEO makes a huge bonus.
    - Exclude utilities as they might be involved in nuclear power, or the regulation causes political squabbles.
    - Exclude consumer discretionary as the products sometimes use sweatshops.
    - Exclude information technology as the products are made overseas.
    - Exclude consumer staples, as they have tobacco and drugs.
    - Exclude industrial stocks as they have products that use energy and mine.
    - Exclude any company linked to Ann Arbor as it would be a perceived conflict of interest.
    - Exclude material companies as they cut trees, mine for gold and create chemicals.
- Since 11% of the market is composed of energy stocks, then one would need to sell all index funds. I'm unaware of any 'index funds' that hold the market but exclude energy stocks. There might be some SMA accounts that have this sort of setup, but expect higher fees.
- Quite often energy stocks have a dividend and some people love to get that dividend. If you exclude the energy sector then you'll exclude the dividend. If you replace the energy dividend with a utility stock (as those have high dividends), then realize that the utility stocks need the energy stocks to provide power. You're still investing in energy if you're investing in the utility stocks.

I have a problem with this statement:

"WHEREAS, Financial analysis shows that divestment from major fossil fuel companies is possible with little or no risk to return on investments"

I’d really like to know how that is true.

If you’re using the AperioGroup paper to justify the ‘little or no risk’, then I feel that you’re being a bit misled. Why? In the paper they take the Russell 3000, which is composed of 3000 stocks, and they remove 13 stocks from that portfolio. The risk hardly changes. That’s true and I too know how to use the Barra software. I teach it and I see what they are doing. But they are taking a portfolio of 3000 stocks and they are only removing 13 stocks from it. 13 stocks from 3000 is only 0.4% of the portfolio. Of course the risk won’t change a whole lot. Remove any 13 stocks from 3000 and the overall risk probably won’t change a whole lot. Now, take the 13 stocks and remove 13 from the S&P 500 (500 stocks). The risk would be different. They are taking a big benchmark and removing a few stocks. Also keep in mind that you’re trying to avoid 200 stocks, whereas that paper was only avoiding 13. If that paper is the justification for ‘little or no risk’ to return, then it’s a poor example. To make it even more accurate, take the 24 stocks that are banned and remove those from the S&P 500. See the problem? The paper took 13 stocks from 3000 and spoke about the risk. For a much more accurate assessment, they should take 24 stocks out of 500 and talk about the risk. I know how to do calculate this risk, but I won’t (I’ll probably do this as an example in class)… but it’s going to be much higher than the risk level that they illustrated. There is risk in removing energy from the portfolio and it’s higher than what they say.

Although past returns don’t guarantee future returns, we can look at the past to see what happened. If the past is a representation of the future and energy is excluded, then expect to have poor returns. And if a sector is excluded, and the returns are poor, then it’s socially irresponsible to exclude it and provide poor returns – especially if this is retirement money. If we use the XLE (it tracks the energy sector) and compare it to the S&P 500, then the energy sector outperformed the market in 2000, 2002, 2004, 2005, 2006, 2007, 2010 and 2011 (see attached).

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
XLE	22.5	-19.5	-16.4	23.4	31.8	38.5	16.5	35.3	-39.8	19.3	19.7	1.3	3.3	16.1
SPY	-10.7	-12.9	-22.8	26.1	8.6	3.0	13.7	3.2	-38.3	23.5	12.8	-0.2	13.5	16.5
	33.2	-6.7	6.4	-2.7	23.2	35.5	2.8	32.1	-1.5	-4.2	6.9	1.5	-10.2	-0.5

In other-words, if one had an index fund and excluded energy in each of those years, the returns would have probably been worse for the fund as it missed out on the returns from the energy sector in each of those years. The worst year for energy came in 2012 as it trailed the S&P 500 by -10%, but for 4 of the years the energy sector beat the S&P 500 by 20% or more. Since 2000, on average the energy sector has beat the S&P 500 by 8% each year. Again, for a retirement fund, it would have been irresponsible to exclude this well-performing sector from the portfolio. Imagine if the decision was made in 2000 and the fund missed out on the benefit from energy – expect the hard-working staff and retirees to complain – and also expect that the press would notice. This is no guarantee that energy will do well in the future, but we should look into the past and see what happened.

Some might argue that socially responsible investing leads to better returns, but if one was to have avoided the energy sector, the returns would have most likely been lower. In a paper called “Socially Responsible Investments: Methodology, Risk Exposure and Performance”, by Horst at Tilburg

University/ CentER, Zhang at the University of Warwick and Renneboog at Tilburg/ECGI/TILEC, they find that the returns for socially responsible funds aren't better than that of normal funds:

"Furthermore, the risk-adjusted returns of SRI funds in the US and UK are not significantly different from those of conventional funds, whereas SRI funds in Continental Europe and Asia-Pacific strongly underperform benchmark portfolios."

There is some academic evidence that speaks against social responsible investing in pension funds and how it is detrimental. Before social responsible investing came about, it was referred to as 'faith based investing' as it was concentrated in churches. As a result, these social responsible funds would avoid 'sin' stocks. If they had included the 'sin stocks', the returns would have been better. In a paper called, "The Price of Sin: The Effects of Social Norms on Markets" by Marcin Kacperczyk at NYU/NBER and Harrison Hong at Princeton/NBER, they look at 'sin stocks' and find out that they performed well:

"Consistent with this hypothesis, sin stocks are less held by certain institutions, such as pension plans (but not by mutual funds who are natural arbitrageurs), and less followed by analysts than other stocks…

… they outperform the market even after accounting for well-known return predictors."

There are also problems with how the resolution recommended that Ann Arbor invest in local stocks. It stated:

"We particularly urge that policies be put in place that support local projects "

Although it's admirable, there is a problem with that statement. Why is that a problem?

- If one buys local stocks and the stock does well, then concerns could be raised about potential conflicts of interest and connections between people. Folks could be concerned that the stock was bought based on non-public material information and accusations of insider trading could arise. For example, if the fund bought company XYZ, and there was a person at city hall (or even Governor Snyder) directly linked to company XYZ… and that firm had a great earnings announcement – then folks would wonder if the trade was based on non-public material information. And that could raise complications. People could (and probably would) complain to federal agencies.
- News agencies would also be more interested in when and what companies were bought as they might assume that city hall is 'smart money' and knows more about the company than others. For example, the University of Texas is quite good at timing energy stocks, and they are located in Texas amongst the energy companies – so I pay attention to what they buy and sell.
- If one buys local stocks and the stock does not do well, then concerns could be raised about a potential behavioral bias – especially if the stock drops. If this was money for a pension fund, then stocks should be chosen based on what would provide a good risk/return trade-off and not based on who knows who. Folks would worry that the stock was chosen because of conflicts of interest and favoritism towards friends. This too would also look bad.
- If one invests and focuses on local stocks, then it can create a concentrated portfolio. If this is supposed to be a diversified pension fund, then that creates a bunch of risk for the portfolio.

> Being Ann Arbor, I could see the fund becoming focused on high risk bio-tech stocks, and although it's ok to have a bit of this for a diversified portfolio, it would be highly inappropriate to concentrate a pension fund on high risk biotech stocks.

I have another concern. The Chairman of the Carbon report is Jeremy Leggett, he is:

"Founder and chairman of SolarCentury – the UK's largest solar solutions company and Solar Aid"

There is an obvious conflict. He's linked to the solar industry and so the website will obviously speak against energy companies and in favor of solar power. I'd be cautious and read the website with a grain of salt, as it can be interpreted as marketing material.

I hope this helps outline some of the reasons why I'm against excluding an entire sector from the pension fund at City Hall. Although some might feel that they are being 'responsible investors' by excluding energy, I feel that it would actually be a form of 'irresponsible investing' by doing so. Exclude only a few stocks if you feel that they are not locally socially appropriate (Pall?), but do not exclude an entire sector.

-Kai Petainen, Ann Arbor, Michigan