

Hello, my name is Jolon and I am student locally. I'm here to advise you all to hold an informational session for yourselves about the climate risk associated with investing in fossil fuels and to urge you all to divest the pension fund from coal, oil and gas holdings. The carbon bubble threatens the ability of the pension to do its job. However, MCERA could avoid the worst of its effects by taking action now.

A bubble, in the financial world, is the run-up of the price of an asset that is not justified by the fundamental supply and the demand factors of the asset. The dot com bubble of the beginning of the century and the housing bubble of 2006 are examples. Another example is the growing carbon bubble, which is the result of a dramatic overpricing of the intrinsic value of coal, oil and gas held by fossil fuel companies.

The stock price of a fossil fuel company like Chevron or Shell is based on predicted earnings from the future burning of hydrocarbons. When an investor buys an index mutual fund or an exchange traded fund that contains fossil fuel stocks, they are betting on the potentiality of those companies to burn a portion of their reserves and make money as a result.

The value of the MCERA pension fund is partly based on the expectation that fossil fuel reserves will be tapped and hydrocarbons will be burned. Because MCERA has previously made money off the burning of fossil fuels, it continues to invest in fossil fuel companies and leaves unquestioned the belief that recent history of company performance is an infallible forecast of the future. Such an approach ignores the scientific reality of climate change and puts the income of past Marin employees at great risk.

It is impossible to predict when a bubble will burst and how it will influence other sectors of the economy, so I urge you to take the safe way out and divest now.

What evidence is there that the carbon bubble is growing? Output from conventional oilfields peaked in 2005. In response, investors have made, in the words of one financial expert, a "cumulative blitz on exploration and production" and offered huge venture capital (about \$5.4 trillion over the last six years) to search for more hydrocarbons.

According to the International Energy Agency, global investment in current fossil fuel supply doubled in real terms to \$900 billion from 200 to 2008 as the boom gathered pace and the bubble enlarged. What is shocking, says Mark Lewis from Kepler Cheuvreux (shuh-VRUH), "is that upstream costs in the oil industry have risen threefold since 2000 but output is up just 14%." In other words, as reserves dwindle, fossil fuel companies are going after the very last drops in the arctic and deep sea, putting their poorly-paid workers and the fragile ecosystems located there

at even greater risk. All of this in the name of diminishing profits.

The financial damage of the cumulative blitz to the stock prices of fossil fuel companies has been veiled as they draw on their “cheap legacy reserves.” When we consider the future of supply costs and demand factors of these companies, we see that the veil may fall in the next two decades and coal, oil and gas companies will have to become energy companies or sink.

Because of the greater cost to explore for oil in the arctic and in the deep ocean, “not a single large project has come on stream at a break-even cost below \$80 a barrel for almost three years,” says Ambrose Evans-Pritchard from the Telegraph. A recent report by the Carbon Tracker says that fossil fuel companies have earmarked an estimated \$1.1 trillion to projects that require oil prices above \$95 to break-even. Martijn Rats from Morgan Stanley says that “oil development is so expensive that many projects do not make sense.” Increasingly more money is pumped into exploration and production as fossil fuel companies ignore the potential for transforming themselves into energy companies and investing heavily in renewable energies.

As fossil fuels reserves cost more and more to exploit, we must ask ourselves whether our sustained expectations of their burning is rational. Demand for fossil fuels in the coming few decades is very likely to be majorly impacted by supply costs, tougher air quality standards, technological advances and international carbon regulation. The Obama administration recently cracked down on coal emissions, partly to reduce risk to public health. Wind and solar technologies are becoming cheaper year by year. In 2009, the most conservative governments of the world agree to limit global warming to two degrees Celsius. We’ve already warmed the Earth by 0.8 degrees Celsius and scientists say that we can only burn 20% of all know fossil fuel reserves if we are to stay below the 2 degrees warming limit.

All of the above adds up to a future decrease in demand of fossil fuels. The report from the Carbon Tracker Initiative goes on to say that “a low demand scenario challenges the whole business model of fossil fuel companies.” Furthermore, the possibility for assets to never become monetized has been recognized by the International Energy Agency, insurance companies and big banks. Therefore, a comprehensive approach to fiduciary responsibility must consider the increasing risks of fossil fuel investments.

But are investments in renewable energy really a good idea? At some point in the last few years, renewable energy investments went from “ok” to “good.” Once the international community acts on its promise of limiting warming and the market corrects the over-valuation of fossil fuel companies, investments in renewables will far outperform those in fossil fuels and go from “good” to “great.” Therefore, I urge you to stop betting on the future profitability of burning fossil fuel reserves and start betting on the sun (which, as it turns out, has been around for a while and is

expected to remain viable for some years to come).