

# Unburnable carbon, material risks, tipping points and endgames: Time to suit up

by Julie Fox Gorte, Ph.D., senior vice president for Sustainable Investing

The idea that burning the majority of the world's known fossil fuel reserves would change our climate to a degree that scientific consensus regards as dangerous is fairly new. In the few years it has been with us, it has gone viral. Three years ago the idea that fossil fuel reserves could ever be considered "unburnable" was, if not unknown, deep in the backwater of economic discourse. That changed amazingly fast, and the speed with which that idea has permeated our thinking is indicative of the fact that climate change is full of tipping points.

Factually, unburnable carbon doesn't exist. In order for any known reserves of fossil fuel to be considered stranded (unburnable) assets rather than sources of future cash flows, we will need regulations we do not currently have anywhere in the world. I know of no nation that has or is considering legislation to make it either illegal or uneconomic to extract remaining coal, oil or natural gas reserves and burn them in the engine of commerce, mostly to produce energy.

Will there ever be a regulatory regime that keeps fossil fuel reserves in the ground? Before your inner narrator says "no" and moves to the next question, it's worth taking a quick trip down policy memory lane. Remember that in 1999 there was no chance that we would ever pass a comprehensive financial reform law (or two). In 2007, it was unthinkable that the U.S. government would ever spend \$800 billion to bail out ailing businesses. All this is reminiscent of the famous Sidney Harris cartoon in which two scientists stand before a formula-covered blackboard pointing at one phrase in the middle that says, "then a miracle occurs." The miracle,

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## KEY TAKEAWAYS

- » The idea that burning the majority of the world's known fossil fuel reserves could change our climate to a degree that scientific consensus regards as dangerous is fairly new and has gone viral.
- » The longer we wait to solve this, the harder it will be.
- » We are capable of solving this climate crisis before nature does it for us in ways that won't have a shred of compassion for human life or livelihoods.
- » Pax World approached 42 energy sector companies asking if they had made any changes to their plans in light of the likely impacts of burning all remaining fossil fuel reserves.
- » Their responsiveness surprised us.
- » It is encouraging to think that the fossil fuel industry is at least beginning to suit up.



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on the policy landscape, is a crisis. Policy agendas in Washington and other capitals are notoriously crisis-driven.

So what kind of a crisis is climate change? Unfortunately, it's unlike many of the policy crises we actually solve, like Y2K. Climate change isn't a wolf at the door, it's more like termites in the woodwork; it unfolds in episodes named Katrina or Sandy or the long-term drought in the Sahel, it is the foundation for nine western cities' impending water crises. It is also a crisis in which the perpetrators and the victims are not necessarily the same people, nor even in the same generation. It's not something that accommodates quick, cheap fixes; to solve it will take millions of people, thousands of government entities, and tens of thousands of companies acting toward more or less the same end for a considerable period of time.

But we have solved some daunting problems before. In 1987, leaders of many countries met in Montreal to address the potentially catastrophic implications of an increasingly tattered ozone layer, passing the Montreal Protocol on Substances That Deplete the Ozone Layer ratified by 190 countries. We have been phasing out the use of ozone depleting substances ever since, despite early warnings that there were no cost-effective substitutes and predictions of significant losses on the part of chemical manufacturers. As the climate crisis builds, pressure for action will intensify as once-rare weather catastrophes become more common and sea levels rise to threaten the livelihoods and neighborhoods of approximately 100 million people living three feet or less above sea level. We've already seen calls to action after Katrina and Sandy.

So does that mean that all we have to do is wait for enough catastrophes to move governments to act on sensible climate-change mitigation policies that keep fossil fuel reserves where they are and out of boilers and engines? Not really. The longer we wait to solve this, the harder it will be; greenhouse gases (GHGs) persist in the atmosphere for decades, and some for centuries. Moreover, crisis is usually a terrible incubator for thoughtful decision making.

Pax World is not waiting for a more pleasant policy landscape, though we continue to advocate for one. Recently, we sent letters to 42 companies in the energy sector that are holdings in one or more of Pax's actively managed funds. Pax does not own many of the largest fossil fuel companies, and we don't own any coal companies or those whose primary business is extracting oil from the tar sands, but we own energy service companies and gas companies. In those letters, we asked companies if they had made any changes to their plans in light of the likely impacts of burning all remaining fossil fuel reserves, and how they might adapt their own operations to a world where the global mean temperature is 4°C warmer.

History has demonstrated that the overwhelming majority of companies don't write back, so the response to this letter surprised us. Thus far, nine companies have written back or called to set up meetings with executives. Although the responses varied widely, with two companies more or less dismissing the concern as something that would not have a material effect on them—the

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most common response from the American companies—others wrote back describing how they were diversifying into renewable energy sources or working hard on carbon sequestration in recognition of the fact that emissions must drop to avoid a climate catastrophe. One—an American gas company—even arranged a time for us to talk with the CEO, who described the pains the company takes to assure that well casings are sound in order to avoid fugitive emissions of methane, a GHG with over 20 times the global-warming potential of carbon dioxide.

Even the most proactive companies aren't doing everything that we think needs to be done to avoid exceeding the 2°C threshold, but what this exercise did teach us is that companies are taking this new issue more seriously than we thought. The tipping point for really serious action to combat climate change may not be as distant as it sometimes looks. Perhaps that is an optimistic way to read these particular tea leaves, but it is an indicator that we are capable of solving this climate crisis before nature does it for us in ways that won't have a shred of compassion for human life or livelihoods. Action is necessary from consumers, governments, businesses, nonprofits—pretty much everyone. It is encouraging to think that one of the groups least likely to play ball—the fossil fuel industry—is at least beginning to suit up.

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