

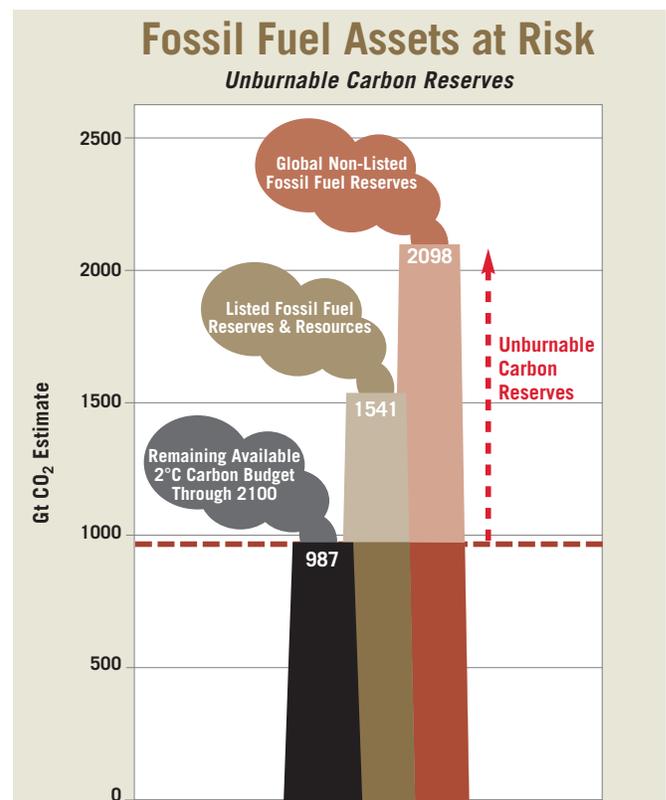
Carbon Asset Risk Initiative

In September 2013, an international group of 75 institutional investors representing more than \$3 trillion in assets launched the **Carbon Asset Risk Initiative**—a coordinated effort to spur 45 of the world’s largest fossil fuel companies to address the physical and financial risks posed by climate change. Coordinated by Ceres and Carbon Tracker with support from the Global Investor Coalition on Climate Change, the initiative aims to 1) prevent shareholder capital from being wasted on developing high-carbon, high-cost fossil fuel reserves that cannot be burned if the world is to avoid catastrophic climate change; and 2) drive fossil fuel companies to acknowledge and plan for the escalating physical impacts of climate change such as sea level rise, stronger storms and more severe droughts.

Could fuel reserves become stranded assets?

The world’s fossil fuel companies hold at least three times more proven reserves of oil, gas, and coal than can be burned if we are to achieve the international goal of limiting global warming to below 2°C unless Carbon Capture and Storage (CCS) technology becomes commercially viable. Yet, in 2012 alone, the 200 largest fossil fuel companies spent \$674 billion on finding and developing even more fossil fuel reserves, raising concern that shareholder capital is being wasted on reserves that are likely to become stranded assets in a world that uses less fossil fuels. In fact, financial analysts are already hedging their bets based on existing or reasonably foreseeable market forces.

A significant portion of the world’s fossil fuel reserves will need to remain in the ground in 2050 if we are to avoid catastrophic levels of climate change. Fossil fuel companies, however, continue to develop reserves that may never be used.





Understanding the market forces behind carbon asset risk

An international climate change treaty to achieve the 2°C goal would undoubtedly accelerate the risk of unburnable carbon, but the reality is that the risks are here now. There is growing uncertainty that future energy markets will look like the past, due to structural changes in energy systems and major shifts like the Chinese economy slowing down and movement toward cleaner energy sources. Here are some of the other market forces that pose a threat to fossil fuel reserves.

- ▶ **Coal demand is in decline in several markets, especially the U.S.**, due to a combination of pollution and efficiency standards, and competition with natural gas and renewables. This has caused a steep decline in a number of coal companies' market value.
- ▶ **Oil demand could peak globally as soon as 2020**, putting downward pressure on oil prices, due to a combination of vehicle fuel efficiency standards, and competition with natural gas and electric vehicles.
- ▶ **Oil production is getting more expensive** with most new oil projects requiring breakeven oil prices in the range of \$80-100 per barrel. Because oil companies are spending more to produce less, their profitability has been declining. Investors have been unhappy with this trend and are now asking companies to scale back their spending and return more capital to shareholders.
- ▶ **Renewable energy is reshaping the electric power sector**, accounting for the majority of new electricity capacity in recent years. About \$250 billion was invested in clean energy last year. Of the \$10 trillion projected investment in power generation through 2035, 71% is expected to be in clean energy. Alternative energy sources continue to get more cost competitive all the time.
- ▶ **Pollution, efficiency and climate change policies are adding up.** A global climate change treaty is necessary to avoid catastrophic levels of climate change and is still very much a possibility. Demand for fossil fuels, however, is already being affected by policies related to air quality, energy efficiency, renewable energy and subsidy reform—and more efficient homes, cars and factories are already using less fuel and electricity.

Investors' practical approach to assessing risks

Through the Carbon Asset Risk Initiative, investors have asked fossil fuel companies to assess the following under both a business-as-usual scenario, and a low-carbon scenario consistent with reducing GHG emissions by 80% by 2050 to achieve the 2°C goal:

- ▶ The physical risk that climate change poses to operations, especially if the company assumes that we will exceed the 2 degree goal
- ▶ The viability of capital expenditure plans for finding and developing new reserves
- ▶ The risk that some existing unproduced reserves will become stranded assets
- ▶ The impacts of these risks on the current and projected workforce

Requesting this assessment from fossil fuel companies is an important step for investors to understand the exposure of their portfolios to carbon asset risk. Investors have requested detailed responses to their inquiries from the companies by their next shareholder meetings in 2014. In the meantime, investors are engaging with the companies regarding their business plans and the assessment process.

Building the energy companies of the future

If fossil fuel companies are to remain successful as the world transitions to a low-carbon future, they will need to evolve. This shift will look different for each company, and will not happen overnight—yet it is clear that business models will need to be revised to reflect a future that is less dependent on carbon-intensive energy. Companies could evolve, and may already be taking action, in some of the following ways.

- ▶ Mining companies should invest capital to accelerate the commercial viability of CCS. Diversified mining companies may redirect capital to other commodities and freeze new coal activity. Pure coal companies may return funds to shareholders rather than invest in future production which has no certain market.
- ▶ Oil companies could focus on fewer projects at the low end of the cost curve which are less sensitive to price changes, or return capital to investors.
- ▶ Utilities need to respond to how the energy generation mix is changing and create the future infrastructure that will be required for low carbon economies.
- ▶ All companies can diversify their business strategies toward cleaner, lower-carbon energy sources.

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