On January 15th, the World Economic Forum issued its annual Global Risks Report, which presents the results of a survey of what policymakers and experts perceive to be the world’s greatest challenges and threats. The report categorizes concerns by color: blue for economic risks, orange for geopolitical risks, purple for technological risks, red for societal risks. This year, green, which denotes environmental hazards, was dominant: the top three risks, listed by the “likelihood” that they would occur, were extreme weather events, failure of climate-change mitigation and adaptation, and natural disasters. (Threats such as data fraud and cyber-attacks appeared lower down on the list). “Is the world sleepwalking into a crisis?” the report’s authors wrote. “Global risks are intensifying but the collective will to tackle them appears to be lacking.”

The same week, as if to illustrate the point, the California-based utility company Pacific Gas and Electric (P.G. & E.) announced that it would be filing for bankruptcy protection as a result of costs related to recent wildfires in the state. Between June, 2014, and December, 2017, P.G. & E.’s equipment helped start some fifteen hundred fires, according to an analysis by the Wall Street Journal.
Many were caused by falling trees that toppled power lines, which then threw sparks onto the surrounding grass and forest. Once the fires started, they spread rapidly due to the dry condition of the brush, which was partly the result of droughts that have plagued the state in recent years. The company had reportedly been working to improve the safety of its infrastructure for the last few years, including trimming trees that posed a danger to its power lines, but this effort wasn’t enough to avert disaster. In 2017, seventeen major wildfires in California were connected to P.G. & E.; the fires destroyed 193,743 acres in eight counties and led to the deaths of twenty-two people. The fire season of 2018 was worse; the California Department of Forestry and Fire Protection reported it as the deadliest and most destructive season on record. P.G. & E. said that it was facing approximately thirty billion dollars in liabilities as a result of its role in the 2017 and 2018 fires.

The case of P.G. & E. illustrates the complexity of assigning responsibility in cases where preëxisting problems are exacerbated by a changing climate. The origin of the Camp Fire, in November, which was one of the worst fires in the state’s history and led to the deaths of eighty-five people, is still being investigated, but P.G. & E. reported finding equipment problems—including power lines downed by falling trees, equipment with bullet holes, and also damage to a transmission tower—close to the area where the fire is believed to have started. The company is already facing multiple lawsuits over the damage caused by the fire. William Alsup, a federal judge overseeing a case involving a P.G. & E. gas pipeline explosion that killed eight people, in 2010, has asserted that the recent fires were caused by P.G. & E.’s negligence. “In two years, three per cent of California burned up,” Alsup said, during a hearing in January. “P.G. & E. is not the only source of these fires, but it is a source, and to most of us it’s unthinkable that a public utility is causing that type of damage.” Alsup also noted that the company had given out four and a half billion dollars in dividends to shareholders over the last five years while failing to take adequate safety
precautions. Still, the intensity of the wildfires was not entirely the company’s fault. P.G. & E. is legally required to provide power to residents in rural parts of the state; as conditions have become drier, the damage wrought by individual mistakes has increased. It may now be impossible for utility companies to operate in California under the current conditions, given the risks.

P.G. & E. may be the most high-profile company to date to face collapse for reasons linked to climate change, but it won’t be the last. Coastal real estate is likely to be one of the first sectors of the economy to see values plummet due to rising seas and damage from storms. This hasn’t happened yet, because insurance companies are still willing to insure coastal properties, which means that property owners won’t have to bear the cost of the damage. But this is likely to change in the not-too-distant future. The National Centers for Environmental Information, which tracks U.S. weather and climate events, cited 2017 as “a historic year of weather and climate disasters,” which together cost more than three hundred billion dollars and included three tropical cyclones, eight severe storms, two inland floods, a crop freeze, drought, and wildfires. At some point, insurance and reinsurance companies will decide that writing policies in high-risk areas no longer makes financial sense, which could trigger a sharp decline in real-estate prices.

Dozens of other industries will follow suit. Bruce Usher, a professor at Columbia Business School who studies climate change and investing, told me that he foresees three kinds of climate-related risks that may cause companies to fail in the future: physical risks, policy-related risks, and technological risks. The changing environment may cause damage to property or facilities owned by companies, or it could fuel lawsuits and liability payments related to damage caused by companies to others’ property, as was the case with P.G. & E. As governments finally take action to address climate change, they will likely pass new regulations limiting fossil fuels and restraining pollution and consumer behavior; companies, such as those that manufacture cars and gas-burning
stoves, will be forced to adapt. (Usher noted that the U.S. government has “not been terribly active” in addressing global warming so far, but he believes that this will change.) Finally, climate change itself will make certain products—most obviously cars using internal combustion engines, which are likely to be replaced by electric vehicles—obsolete. The insurance industry has been aware of these risks for some time and has been conducting studies to try to quantify them. The rest of the business world is increasingly focussing on them as well.

If the coming climate-related business crises will have one positive side effect, it’s that acute financial losses are likely to force policy changes in a way that environmental damage on its own has not. As one commenter on a recent Wall Street Journal article about P.G. & E. put it: “When capitalists decide the scientists are right, then the free market will adjust accordingly.” Usher told me that, just ten years ago, few in the business world understood the scale of the problem and how it could be addressed. “The science was much less certain about what was happening and what was forecast to happen. But a decade ago, the policy arena was much more supportive,” Usher said. “Today, a decade on, the science is much clearer and, frankly, much more sophisticated. The business and investment community is much more engaged. There is much more capital flowing, there is much greater technology available: solar, wind, the rapid expansion of electric vehicles.” What is lacking now, he said, is focus by policymakers in Washington on making changes that could actually turn things around. “People in this field say, ‘We know what the problem is, and we know how to solve the problem,’ ” Usher said. Our politicians, however, “don’t have the willingness to do something. That’s where we are.”
Fireproofing the Future in California
With more and more homes being built in fire-prone ecosystems, architects and homeowners are coming up with thoughtful design elements to help protect homes from wildfires.