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The Very High Costs of Climate Risk

The bankruptcy of California's biggest electric and gas utility is a case in point.

- **By Bob Litterman,** Jan. 29, 2019

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A firefighter checked out burned vehicles and a fallen power line after the Camp Fire in California in November. *Credit Josh Edelson/Agence France-Presse — Getty Images*

Before the catastrophic Camp Fire destroyed Paradise, Calif., the Pacific Gas and Electric Company was worth more than $25 billion. Now its C.E.O. has stepped down and the company, which provides natural gas and electricity to 16 million people in California, has filed for bankruptcy as it confronts billions of dollars in potential liability claims following recent wildfires. It is perhaps not the first bankruptcy in which the changing climate played a role, but it is almost certainly the largest. And no doubt, it won't be the last.

Of course, it's not easy to attribute any particular event to climate change, and it will take time to sort out all of the causes of the Camp Fire last November, add up the damages and assess liability. Last week, in a small bit of good news for the company, the state concluded that PG&E was not responsible for the 2017 Tubbs Fire in Sonoma County that burned nearly 37,000 acres, destroyed more than 5,600 buildings and left 22 dead. But the company says it still faces "extensive litigation, significant potential liabilities and a deteriorating financial situation" following the "devastating and unprecedented wildfires of 2017 and 2018."

Many fires in recent years have been caused by downed power lines. And even though the company took wildfires seriously and had a broad plan to protect equipment and trim branches — pruning or removing as many as 1.4 million trees a year — it wasn't enough. The fires pushed the company over the edge.

One message of the bankruptcy is that climate change is already creating calamitous conditions. As PG&E put it recently, "California faces an ever-increasing threat from catastrophic wildfires, extreme weather and higher temperatures." In a statement, the company noted that the state's most recent climate assessment "found the average area burned statewide would increase 77 percent if greenhouse gas emissions continue to rise" and that "prolonged drought and higher temperatures will triple the frequency of wildfires."

This means that electric utilities, in particular, and other businesses more generally have to rethink how they prepare for dangerous fire conditions and other impacts of climate change. These impacts are only growing. The thousand-year flood is now a regular event. The future will also bring further sea level rise, stronger hurricanes, storm surges, droughts, heat waves and wildfires beyond historical precedent. PG&E has noted that more than half of the company's vast service area of 70,000 square miles is now considered to be in "extreme or high fire-risk areas." No doubt much of the considerable cost of girding against these conditions will fall on rate payers.

So what should electric utilities threatened by the potential for wildfires do? It may require better protecting grid infrastructure and being more prepared to shut off power when wildfire risk is especially high. Homeowners and businesses must be prepared when the grid is turned off and will require backup sources of electricity for critical needs.

But utilities aren't alone in facing climate threats. For transportation companies, for example, it may require hardening infrastructure like port facilities or rail lines to protect them from floods or fires. Fossil fuel companies may be forced to deal with stranded assets like oil fields and coal seams that have been bought but won't be developed as society moves away from coal and oil. For others, like insurance companies, it may provide business opportunities. And for many entrepreneurs it may lead to completely new products and services.

Risk managers at these companies will need to consider scenarios that have never happened before. Investors will need to assess the climate risks embedded in their portfolios and must demand greater transparency from the managers of the companies that they own.

However, for society at large, and the government in particular, the most important and urgent action required is to minimize future warming by creating appropriate global incentives to reduce carbon dioxide emissions from burning fossil fuels. Economists generally agree that rather than regulate behavior, it is more effective to allow individuals to choose their actions, as long as the prices appropriately reflect the costs, including the risks posed by climate change.

To date prices of energy have not reflected the risk of future climate damages. This is a stupid mistake and has resulted in too much climate risk. Not pricing climate risk is a bug in the tax code. It can be easily and quickly fixed.

Taxes are not popular in general, and with the president and most Republicans opposed to climate action, many political observers are pessimistic that a federal carbon tax can be passed anytime soon. But some ideas, such as the Baker-Shultz carbon dividend plan, which would return all carbon tax revenue to taxpayers, does have some bipartisan support.

But time is not on our side. Even if we take immediate action now to appropriately price emissions, it will take decades to reach a net carbon neutral world, and in the meantime the planet will continue warming. So we'll also need to harden infrastructure, change building codes, protect fragile ecosystems and make farming and lifestyle choices that are compatible with the climate changes that will be occurring around us. We will also need to confront the very unequal impacts on people in this country and around the planet.

And while sadly these actions are all costs that will grow over time, the unfortunate reality is that the longer we wait to act, the greater the bill will be.

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