

ECONOMY

# Companies are reshaping operations to cope with a changing climate

Changes are slow; some see profits to be made.

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Major utilities are relocating substations to escape rising waters and wildfires. Manufacturers are establishing redundant production lines to guard against storms that could idle their plants. And a top investment bank is stress-testing portfolios to see if they would survive a warming climate's wrath.

The moves illustrate how companies are changing the way they do business to cope with increasingly frequent episodes of extreme weather, such as [the heat wave that broiled much of the United States](#) this month. The global average temperature on Monday made it the [hottest day on record](#), breaking a planetary mark established just one day earlier, according to Copernicus Climate Change Service, the European Union's climate monitor.

Executives are grappling with a range of climate-related threats to the [bottom line](#), including droughts in Mexico and the Panama Canal, forecasts of an unusually active hurricane season, and record-setting heat from Sacramento to D.C.

In Houston, a company called UPG, which makes precisely formed plastic parts, lost almost two weeks of production after powerful storms knocked out power three times in the last four months. For the company's owners, the serial outages were the latest evidence that business as usual was no longer an option.

"It's getting to the point where the impacts are making us miss our forecasts. It's hurting us financially and it's affecting our customers," said Scott Bekemeyer, co-chairman of the Partner Companies (TPC), a consortium that owns UPG and nine other manufacturers.

Globally, last month was the warmest June since records began in 1850, [according to Berkeley Earth](#), a data analysis nonprofit. The global steam bath explains why investors, regulators and credit-rating agencies are scrutinizing corporate plans for unrecognized climate risks.

To increase its odds of all-weather operations, TPC has increased its product inventories and made sure that it can perform critical production tasks in more than one location.

A medical-device component maker that TPC owns now carries larger stockpiles of surgical blades and biologic mesh while its aerospace manufacturer holds a greater “safety stock” of aircraft and missile components, according to Dan Brumlik, TPC co-chairman.

TPC’s network of companies, which occasionally share resources, can etch metal in five locations. Two sites are equipped to perform plastic-injection-molding operations.

With factories in several states, China and Wales, TPC’s financial performance is exposed to a variety of weather risks. Last winter, a heavy snow collapsed the roof of one of its buildings in Bozeman, Mont.

“People would talk about the 100-year storm,” Brumlik said. “Now, the 100-year storm is happening twice a year. It needs to be part of our normal operational plan.”

The changing climate also is affecting the nation’s airlines. Hot air is less dense, making it harder for aircraft to gain the lift they need to leave the ground. At often sweltering Phoenix Sky Harbor airport, the Embraer 175 model aircraft used by American Airlines’ regional affiliates could not fly last summer when temperatures exceeded 120 degrees.

United Airlines has warned that the warming climate could cause greater turbulence for flights, especially in the Mid-Atlantic, and pose risks to flight attendants. United operations also could be affected by flooding at airports in Newark and Houston.

These concerns appeared in voluntary filings that the airlines, like many corporations, submitted to the nonprofit Carbon Disclosure Project.

Climate risks also are figuring in investment calculations. Charles Schwab warned retail investors last week that the municipal bond market is overlooking the potential impact of extreme weather events.

Municipal bonds issued by airport authorities in Miami, Chicago and Denver each pay investors around the same 4.75 percent return. Yet the danger of a costly weather event, such as a hurricane and related flooding, is far greater in Miami, the firm said in a monthly newsletter.

“Investors in Miami munis aren’t being compensated for the region’s greater weather-related risk,” Schwab said, advising clients to diversify their bond holdings geographically and to invest only in higher-rated issuers and short-term bonds.

On Wall Street, JPMorgan said last year that it was stress testing its portfolios “with the worst outcomes” to guard against unforeseen climate impacts. Analysts evaluate the likely effects of severe weather on real estate holdings and commodity prices to determine how the firm’s clients and portfolios would fare, Michelle Scales, JPMorgan’s top climate risk executive, said last year.

The epic heat wave that blanketed much of the United States with triple-digit temperatures and Hurricane Beryl's lashing of Houston cap a recent flurry of extreme weather episodes.

Since May, Colorado took a pounding from hail; tornadoes swept six central states; and several days of storms ravaged Iowa and other states, causing nearly \$5 billion in damages, according to the [National Oceanic and Atmospheric Administration](#).

"The effect of extreme weather events and rapid climate change on businesses' operations is slowly coming onto radar screens around the country. But it's a slow evolution. I think the extreme weather events we're seeing this summer are speeding up the intellectual uptake," said Susan Crawford, a Harvard Law School professor.

Along with safeguarding their own facilities, companies must monitor their suppliers' climate resilience, according to Crawford, the author of a 2023 book about Charleston, S.C., and its struggle with rising seas.

Resilinc, a supply chain management firm, has sent its clients 130 percent more weather-related alerts of potential disruptions this year compared with the first half of 2023, CEO Bindiya Vakil said. The company uses artificial intelligence to scour news reports and social media sites in more than 100 languages, searching for developments that could upend global trade flows such as the drought that limited traffic through the Panama Canal for much of the past year.

"The frequency has gone up. And because of that, companies are making business continuity investments," she said, noting purchases of on-site power generation and alternative water supplies.

Indeed, an ongoing drought in Mexico's Tamaulipas state affected the region's petrochemical industry, leading some Mexican producers to declare force majeure, an unforeseeable development that prevents contracts from being fulfilled. The widespread nature of the months-long drought may prompt some buyers to switch to suppliers in China, according to S&P Global Market Intelligence.

The availability of adequate water supplies in Mexico's industrial sector is also a worry for General Motors, which has four plants in the northern and central parts of the country producing engines and transmissions for vehicles such as the Chevy Silverado and Chevy Cruze.

A future water shortage that interrupts production at one of those sites for one month could cost GM \$50 million in profits, the company said in its annual filing with the climate organization.

GM, which declined to make an executive available for an interview, said in its filing that it aims to cut its water consumption 35 percent by 2035. The automaker is spending \$49 million over three years on a new wastewater treatment and water recycling system at its Ramos Arizpe facility, which produces the Chevrolet Blazer EV.

Meanwhile, U.S. utilities are under pressure to ensure a reliable electric grid despite more frequent storms, flooding and fires.

Duke Energy, in Charlotte, last year spent \$4 billion to harden infrastructure, “strengthen the grid against storms and shorten restoration time when outages occur,” the company said in its annual report.

The utility built flood walls around several substations and relocated others beyond the reach of once-in-a-century floods. Duke also replaced traditional wooden transmission poles with ones made of concrete and steel. The utility declined an interview request.

In November, six New York utilities submitted to state regulators plans to spend a total of \$8.7 billion to make the power system more resilient to climate change.

Consolidated Edison, which serves 10 million customers in New York City and Westchester County, plans to devote \$2.4 billion to “prevent, mitigate and respond” to climate risks over the next decade, according to the 228-page plan it filed with the state Public Service Commission.

But the climate may be changing faster than the power grid.

Con Ed now expects 17 days annually with temperatures above 95 degrees by the year 2030, a decade sooner than originally forecast, while rising sea levels threaten more frequent flooding. Top wind speeds in Manhattan by mid-century are expected to reach 110 mph, up from 80 mph today.

To prevent power outages, Con Ed plans to make its systems more resilient, including by elevating substations and burying some “high-risk overhead electrical lines.”

“Every time you turn the corner, there’s another event when you have this utility and extreme weather combination and people pointing fingers. It absolutely is getting attention up to the board level at utilities across the country because it’s an existential threat to these companies,” said Judsen Bruzgul, senior director for climate adaptation and resilience at ICF, a consultancy.

In March, after the largest wildfire in Texas history burned more than 1 million acres, credit rating agency S&P Global Ratings downgraded Xcel Energy and its subsidiaries, citing their increased vulnerability to wildfire risks. The change will make it more expensive for the utility to raise money from investors.

Some companies see profits in the need to adapt to the changing climate.

In D.C., Xylem is helping industrial customers and utilities address their need for affordable water supplies. In Florida, rising sea levels mean salt water is contaminating aquifers that drugmakers rely on. In Texas, the industrial users face periodic shortages.

Xylem can filter salt water to make it pure enough for a computer chip maker, pump out a flooded factory or provide temporary water trailers during a drought. The company’s technology allows facilities to recycle and reuse around 75 percent of the water they use, according to Snehal Desai, Xylem’s chief growth and innovation officer.

Xylem told investors in May it expects to book around \$8.5 billion in revenue this year, up from \$7.4 billion in 2023, noting “a significant opportunity for profitable above-market growth.”

This year, the company’s shares have gained more than 24 percent, outpacing the 19 percent increase of the S&P 500 index.

“We’ve seen a change in behavior. We’ve seen a change in investment,” Desai said. “We think there’s an opportunity here.”