

Effects of Japan's power crisis could ripple around world

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WASHINGTON — In the wake of a triple disaster, central Japan now faces several months of electricity shortages. That could have a ripple effect on the world economy ranging from higher [unemployment](#) in China to higher interest rates in the U.S.

[Tokyo](#) Electric Power Co., which owns the stricken Fukushima Daiichi nuclear plant, lost more than one-third of its power supply in the March 11 earthquake and tsunami. Ten nuclear power generators and eight coal-fired plants remain out of action.

Jone-Lin Wang, a global power specialist with [IHS](#) Cambridge Energy Research Associates, said [Tokyo Electric](#) is planning to build gas-fired plants as replacements. That will also require increased imports of liquefied natural gas.

Meanwhile, the utility's customers are facing an extended period of rolling blackouts and low power availability.

“The situation is pretty dicey based on today's estimate,” she said.

“They don't have enough for the summer.”

Two of the three Japanese factories owned by Dallas-based semiconductor manufacturer [Texas Instruments](#) were hit by the earthquake. Company spokeswoman Kim Morgan said that Japanese officials have asked that the damaged plant at Aizu-wakamatsu reduce power consumption by 30 percent and that the company has complied. Both affected facilities have backup power generators, she said. If power shortages continue into the summer, “there could be cause for concern” as the company works to restore production at its Miho plant, she said.

Robert J. Shapiro, a Washington consultant who heads Sonocon LLC, said long-term power disruptions and the threat of nuclear contamination mean Japan’s crisis may have a deeper economic impact than [Hurricane Katrina](#) and the 9/11 terrorist attacks.

In the aftermath of those events, the U.S. economy rebounded quickly. The biggest impacts were in the affected regions, particularly the U.S. Gulf Coast.

Japan’s disaster has devastated much of the northeastern end of Honshu Island, and it’s left the wider Tokyo region with a major power shortage. Peak demand on Tokyo Electric’s system is 64,000 megawatts. The utility reported Monday that it had 34,000 megawatts of usable capacity.

The longer this lasts, the more difficult it will be for factories abroad to get crucial parts from Japan.

Dearth of spare parts

Shapiro said some Chinese factories have already shut because of a lack of spare parts. [General Motors](#) has said it will stop production at a [Shreveport](#), La., plant, one of several U.S. factories disrupted by the disaster.

Hikaru Yamada, president of energy trader and consultant Sprint Capital Japan, said Tokyo Electric Power's Fukushima plant has been permanently disabled.

"Supply will come back. Manufacturers will probably shift production to Saturday and Sunday when power demand is lower," Yamada said. "For nuclear, however, it will be a decade to recover. And that means shortage."

Tokyo Electric, Japan's largest utility, is not well positioned to borrow power from neighboring generators.

Unlike the deregulated Texas market, Japan has few independent power producers.

And Tokyo Electric's neighbors in western Japan supply power at a different frequency than is used in the eastern part of the country. To share electricity, the power has to go through conversion plants at the east-west boundary. Those plants aren't large enough to cover very much of Tokyo Electric's needs, Yamada said.

Consequences

Wang said companies around the world relying on Japan's place in global supply chains will feel the consequences.

"This has a pretty profound, cascading impact," she said. "The automobile plants, the electronics industry, they are not going to be able to continue their production. That's going to spread through their exports, and it's going to last awhile."

Shapiro said the need for foreign lenders to finance U.S. budget deficits points to the biggest U.S. vulnerability to long-running power shortages in Japan.

"Because of the decline in income and the growing need for reconstruction in Japan, that will reduce their national savings," he said.

"There will be fewer Japanese savings available for U.S. deficits and business investment. And that means, if this goes on for a significant period, if the Japanese economy doesn't recover quickly, there will be more pressure on U.S. interest rates."