

Japanese Manufacturing Could Take Years, Billions To Recover

Kelvin Chan and Tomoko A. Hosaka, Associated Press

TOKYO (AP) — It took only minutes for the earthquake and tsunami to devastate Japan's northeast. Rebuilding will take years — if it can be afforded.

The relentless wall of water that the quake unleashed killed thousands, swept away whole towns, inundated roads and knocked ports, oil refineries, steel plants and factories out of action.

Experts say the cost of the destruction likely exceeds that of the catastrophic 1995 Kobe earthquake — estimated by Standard & Poor's to have totaled \$159 billion.

The four most severely affected prefectures (states) — Iwate, Miyagi, Fukushima and Ibaraki — are home to industries from farming to auto parts to electronics and make up some 6 percent of Japan's economy.

Hundreds of thousands of people have spent five nights with little food, water or heating in near-freezing temperatures as they dealt with the loss of homes and loved ones.

The biggest port on the northeast coast, Sendai, has been destroyed. It handled mainly container shipments of exports including rubber and marine products, office machinery, paper goods and auto parts. Three others — Hachinohe, Ishinomaki and Onahama — were severely damaged and will likely be out of commission for months.

Six oil refineries that can turn 1.4 million barrels of oil a day into fuel — a third of Japan's refining capacity — are shut down, two due to fires. An out of control blaze at one refinery is raging for a sixth day.

Steel plants have also been hit.

Nippon Steel Corp.'s factory in Kamaishi, Iwate Prefecture was shut after the tsunami flooded part of the plant. The facility makes steel and wire rods for vehicle powertrains and chassis. Sumitomo Metal Industries Ltd. plant in Kashima, Ibaraki prefecture also went dark after the earthquake.

Elsewhere, widespread power shortages from damage to four nuclear plants — an unfolding crisis in itself — have forced many companies to halt production.

Sony Corp. has halted output at several factories, including one that makes Blu-Ray discs. Toshiba Corp. has done the same. All automakers including Toyota Motor Corp., the world's biggest, have stopped making cars nationwide.

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Companies are also facing problems shipping components, receiving raw materials and getting workers to facilities that are working, said Dale Ford, an analyst at technology market research firm IHS iSuppli.

The components made by Japan's hi-tech industry are destined for final assembly in China and other countries. Analysts said there's enough inventory in the global supply chain to tide over customers up to four weeks and companies such as Apple, Dell and Lenovo will have to switch to backup sources by then to avoid shortages of parts for iPads and computers.

Initial estimates of insurance losses from the disaster range as high as \$60 billion.

Reconstruction will be extremely challenging because the damage is so widespread and has likely destroyed power lines and water treatment facilities, said Jun Yang, president of the Hong Kong branch of the American Society of Civil Engineers.

"In my view it would take five to 10 years to rebuild or repair," said Yang, who as an associate professor at Hong Kong University carried out field research in Sichuan, China after the devastating earthquake there in 2008.

That timeframe doesn't include any radiation contamination from earthquake-crippled nuclear reactors, which could have a "potentially significant effect on the post-earthquake rebuilding," he said.

The nuclear crisis has taken a dramatic turn for the worse following an explosion and a fire at reactors at the Fukushima Dai-ichi power complex. Japanese authorities ordered emergency workers to withdraw from the stricken nuclear plant Wednesday amid a surge in radiation, temporarily suspending efforts to cool the overheating reactors.

"The destruction to ports, power plants and oil refineries in northeast Japan has been extensive," economists Matt Robinson and Ruth Stroppiana at Moody's Analytics wrote in a report. "The cleanup will take months, and the rebuilding of key infrastructure will take substantially longer."

The rebuilding effort is expected to require tens of billions of dollars of public spending that will benefit construction companies but add to the already swollen national debt.

After the 1995 Kobe quake, Japan's economy was able to rebound relatively quickly because the government hiked public spending by more than 15 percent in the following 12 months.

This time around, the government can't afford to spend so freely because it's already straining under a debt load that is double the size of the economy, said the Moody's analysts.

Any stimulus package will probably be paid for in later years by austerity measures,

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they said.

The mammoth recovery effort will likely mean rebuilding entire towns from scratch and it could be several years before significant construction work is even started, said Ken Collis, an Australian standby member with RedR, which coordinates engineering teams for disaster relief efforts.

Collis said that from his experience helping on reconstruction efforts in the Maldives after the 2004 tsunami, the initial planning phase could take up to a year as people who have lost their homes are given temporary shelter and officials decide what exactly is needed and where money is best spent.

Another year could be spent on designing the new roads, bridges, houses and other buildings that need to be rebuilt, while a third year is spent putting contracts out for bidding.

"It could easily take three years before significant reconstruction is done," Collis said.

He said housing, transport links and factories and other businesses would all have to be rebuilt at the same time.

"It's very difficult to provide a lot of housing if there are no jobs available or transport to and from," he said.

Reuben Chu, president of the Hong Kong Institution of Engineers, contrasted the disaster with the Sichuan quake, saying they each posed different problems.

Rebuilding after the Sichuan quake was technically challenging because much of the destruction was on steep hillsides.

That's not such a big problem in northeastern Japan. Instead, Chu said, the biggest challenge will be getting enough money, materials and workers.

One of the big problems that planners face at the outset of the rebuilding phase is whether it's a good idea to rebuild in the same place with the same type of buildings, said Collis.

Many survivors are suffering from psychological trauma, he said.

"People would be horrified if they were asked to go back live in same location."

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Chan reported from Hong Kong.

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