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Chemical Industry in Crisis

Natural Gas Prices Are Up, Factories Are Closing, And Jobs Are Vanishing

By Greg Schneider

Washington Post Staff Writer

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NITRO, W.Va. -- Soon after the Flexsys chemical plant celebrates its 75th anniversary this month, demolition crews will tear it down.

"Nothing over three inches high is going to be left here," plant manager Jon McKinney said.

The former explosives factory gave the town its name, and its demise will eliminate 205 jobs and yet another piece of the once-powerful U.S. chemical industry.

Chemicals are an unglamorous part of the manufacturing world, with products that have unpronounceable names and often hazardous qualities. But they are essential to a host of industries, from automaking to textiles to agriculture. Hardeners make tires more durable. Polymers put the spring in athletic shoes, and nitrogen fertilizers increase crop yields.

As the nation's manufacturing base seems to shrink daily from factories closing or relocating overseas, the health of the chemical sector is a crucial measure of how deep the problem goes. And chemicals are in crisis, squeezed not only by cheap foreign competition but also by soaring energy costs.

Across the country, 1 in every 10 chemical-related jobs has vanished in the past five years -- nearly 100,000 workers -- and that number would be worse if not for a surge in one segment, pharmaceuticals.

The chemical industry's eight-decade run as a major exporter has ended, with a \$19 billion trade surplus in 1997 becoming a \$9.6 billion deficit last year, according to the American Chemistry Council.

Governors and chemical executives have appealed to the White House and Congress for help. They argue that the chemical problem is making the nation's broader manufacturing meltdown even worse, pushing factories to relocate offshore not only for cheap labor but to be near chemical suppliers.

"It's a very trying time in the nation's manufacturing base," said Mark Zandi, chief economist for Economy.com Inc. Ultimately, little can be done to stop the drain of jobs as companies cut costs and use technology to improve productivity, he said.

"Workers in the chemical industry are really getting hit hard, much harder than the companies

themselves," Zandi said.

The Flexsys plant in Nitro is closing because a sister plant in Belgium costs less to operate. In nearby South Charleston, Union Carbide Corp. has cut its workforce in half, to about 1,200 people, in the past three years. Bayer AG is shutting one of its two Charleston-area plants.

It's the same story in other chemical-heavy regions of the country, such as the Gulf Coast.

"Right now we've got big operations just shutting down because they cannot compete on the world market," Louisiana Gov. Kathleen Babineaux Blanco (D) said in a telephone interview. "We've had shutdowns before but they've always been temporary. We've not seen anything like this before."

Troubles began over a decade ago with the fall of communism, when countries of the former Soviet Union -- as well as China -- discovered they could compete in the world market for chemical products. Cheap labor and a freewheeling attitude toward safety and the environment helped them keep prices low.

As the global economy slowed, industries that consume chemical products came to depend on those lower prices to offset declining sales and profits. U.S. chemical makers struggled to cut costs and keep up. Then, around 2000, an unexpected problem hit: Natural gas prices went up.

Chemical plants are especially sensitive to natural gas prices because they use it both as a fuel and as a "feedstock" or ingredient in making plastics, resins, fertilizers and more. In the past five years, U.S. natural gas prices have roughly doubled as more and more electrical plants consume the clean-burning fuel but supplies stay stagnant. Other parts of the world -- including Western Europe -- pay far less.

"We have the highest natural gas prices in the industrialized world," said R. William Jewell, vice president for energy for Dow Chemical Co. in Houston. In the past two years, Dow has closed four major chemical factories in North America -- one in Louisiana, two in Texas and one in Alberta, Canada -- and replaced them with production from Germany, the Netherlands, Kuwait, Malaysia and Argentina, he said.

"These jobs didn't leave the U.S. because of labor costs, they left the U.S. because of uncompetitive energy costs," Jewell said. "It's very hard to have vitality in manufacturing and it's very hard to have strong growth in jobs if you don't have a competitive infrastructure anymore. . . . You can't just wish these jobs back."

Chemical jobs tend to be so well-paying -- in the \$50,000 to \$70,000 range -- that they're virtually impossible to replace in the communities that lose them, said David E. Dismukes of the Center for Energy Studies at Louisiana State University. Every time a factory cuts back or shuts down, the impact ripples out through the suppliers, restaurants and car dealerships that surround it.

"For a small state like Louisiana that is so dependent on those facilities, this really is a tough one for us,"

Dismukes said. "When they go away it has a devastating impact on small rural communities up and down the river where many of these are located."

The problem is similar to the death of steel mill towns in the Midwest and Pennsylvania in the 1970s and '80s, said Michael Hicks of the Center for Business and Economic Research at Marshall University in Huntington, W.Va. In 24 months, from January 2001 to December 2002, West Virginia's chemical workforce declined nearly 17 percent, to 12,000 people, Hicks said.

"It's a story that West Virginia has continued to feel for well over two decades now, with the decline in coal mining and steel production now followed by these challenges to the chemical industry," he said.

Even plants that stay in operation are providing fewer jobs.

For example, Bayer Polymers LLC operates a plant on an island in the Kanawha River in South Charleston. Barges bring long cylindrical tanks of liquid propylene oxide to a pumping station on the north shore. The material flows under the river to a maze of pipes, valves and vats on the island -- nearly a mile long -- where it goes through chemical reactions to become a polymer used in foam cushions for car seats, mattresses or athletic shoes.

The entire facility is operated by two people sitting in a control room watching computer monitors, aided by a team of eight technicians that handles repairs and maintenance.

In less than four years Bayer has increased the plant's output by 20 percent without adding any employees. The plant also has cut energy consumption by 9 percent since last year. Nonetheless, its costs are up 25 percent over the past five years, said site manager Glenn Kraynie.

It's a dangerous cycle. Rising costs cut into profit and make it harder to continue investing in improvements, which in turn makes it harder to compete with ever more efficient overseas rivals, said Attila Molnar, president and chief executive of Bayer Corp., the German company's U.S. arm.

"It is a very, very serious issue," Molnar said. "You shift manufacturing or production [to] where you produce the cheapest. . . . Production in the U.S. is in danger today."

There are at least two basic solutions, Molnar said. Do something about energy prices, such as burning more coal or drilling for more natural gas, and use technology to continue to make chemical factories more efficient. That means producing more with fewer employees.

"There's nothing there that says the jobs you have today will be the same jobs we have 10 years from now. That cannot be," he said. "Be prepared for change. That's the only way we can survive, the only way I can see we will be successful in the future."

That's a hard prescription for towns like Nitro, population 6,824, which stands to lose a chemical plant

that once employed 900 people. The 202-acre riverfront facility started as a World War I explosives plant for making nitrocellulose, and the town was built to support it. Monsanto Co. bought the site in 1929 and has been making rubber additives ever since, today in a joint venture with Akzo Nobel NV called Flexsys. But with worldwide prices for its products down 42 percent, the company decided last fall to shut Nitro's factory down at the end of this month.

"I'm 45 years old and I've lived in this Kanawha Valley my whole life," said Dave Hardy, a lawyer and Kanawha County commissioner representing both Nitro and Charleston. "This valley was built on the chemical industry, and now in my adult lifetime . . . the chemical industry is contracting literally year by year. There is nothing that is filling the void."

Instead, the state is promoting tourism and gambling, he said. But West Virginia hasn't given up on the industry. Its statewide Chemical Industry Committee, a trade association, has been working to attract companies by touting the state's long embrace of an industry scorned in some places as environmentally undesirable.

It doesn't help the cause, though, that the committee's chairman is McKinney, the Flexsys manager, whose own company couldn't afford to stay in business there.

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