Toyota invests \$1.3 billion more into Kentucky plant for EVs TOYOTA MOTOR MANUFACTURING

Toyota Motor North America said Tuesday it will invest \$1.3 billion more into its massive assembly plant in Georgetown, Ky., to construct a line to build battery pack assemblies. The investment will also cover what the automaker would only describe as "future electrification efforts" at the plant beyond the planned — and previously announced — three-row electric crossover, tentatively known as the bZ5X. The battery cells for the EVs to be built at Georgetown will be sourced from the automaker's \$13.9 billion battery plant under construction in Liberty, N.C. In October, Toyota announced an \$8 billion investment in the North Carolina plant to increase the number of battery production lines from two to 10. Toyota's Kentucky assembly complex is the automaker's largest global factory, with 9,400 employees and 9.1 million square feet. The plant also builds the Camry, Camry Hybrid, RAV4 Hybrid and Lexus ES as well as four- and six-cylinder engines. Production of the ES will be phased out from Georgetown in 2025, but the car will continue to be built in Japan.

AUTOMOTIVE NEWS AN



nue rises 4% automotive news

Ford earned a \$14.7 billion profit from its internal combustion and commercial businesses before interest and taxes, while its EV unit lost \$4.7 billion. Ford Motor Co. reported a fourth-quarter net loss of \$526 million that was mostly attributable to a noncash \$1.7 billion pretax accounting loss related to retiree benefits. Revenue improved 4 percent to \$46 billion in the fourth quarter. For the full year, Ford posted net income of \$4.3 billion on \$10.4 billion in adjusted earnings before interest and taxes. That is in line with its guidance of \$10 billion to \$10.5 billion, a range it lowered because of the 41-day UAW strike. The full-year EBIT figure includes a

\$14.7 billion profit from its internal combus-

tion and commercial businesses, while its electric vehicle business lost \$4.7 billion, slightly more than the \$4.5 billion loss it expected. Its net income compares with a \$2 billion loss in 2022. "We're the only company that gives customers such a wide range of choices — gas, hybrid and electric vehicles — made possible by our Ford+ plan and the talented team that's carrying it out," CEO Jim Farley said in a statement. "Ford is creating a product, software and services powerhouse with huge potential for this year and the long haul." Farley said Ford could potentially delay some of its upcoming EVs as it delays \$12 billion in investments but declined to provide specifics. He said the company also was reassessing the vertical integration of its battery supply chain. Despite the losses, executives still expect EV volume to grow this year. The company has said it doesn't expect to make money on EVs until its second-generation products launch in 2026.

General Motors makes a U-turn on hybrids AUTOMOTIVE NEWS

Years after GM discontinued the Chevy Volt and left hybrids in the rearview mirror to go all-out on EVs, the automaker is putting it in reverse. It'll again start offering Americans plug-in hybrids that can run on gas and in all-electric mode, CEO Mary Barra said. The company still plans to phase out gas-guzzling cars in the US by 2035, but hybrids will now serve as a steppingstone. The EV rush didn't pan out. The about-face comes after key dealers pushed GM to send them hybrids since demand for EVs hasn't been as electric as expected, per the WSJ. Despite

government incentives and automakers betting big on battery-powered cars, many drivers are put off by EVs' priciness and worried about the lack of charging stations. Though EV sales grew 52% last quarter from Q4 2022, per Cox Automotive, many carmakers slashed prices and cut EV production goals as unsold cars began collecting dust in dealer lots. Meanwhile, hybrids have been selling like hotcakes, helping GM's competitor and the world's biggest carmaker, Toyota, rake in record profits. GM is still doing fine, profit jumped 12% in 2023, despite the autoworkers strike costing it over \$1 billion last fall. And it hopes to post record earnings next year.

Manufacturing Slowed in December, Capping Off a 'Lousy Year INSTITUTE FOR SUPPLY MANAGEMENT

KEY TAKEAWAYS

- Manufacturing activity decreased for a 14th month in a row in December, according to a monthly survey of professionals.
- The sector has shrunk from its pandemic-era highs, when locked-down customers bought lots of consumer goods.
- The outlook is grim for 2024 according to economists, although the Federal Reserve's recent pivot away from interest rate hikes could breathe some life into business.
- While the overall economy stayed resilient in 2023, the same can't be said of companies in the business of making stuff.

Manufacturing activity declined for a 14th straight month in December, according to the Institute for Supply Management's monthly survey of supply managers in the sector. An index measuring employment, new orders, production, inventories, and delivery speeds rose to 47.4% in December from 46.7% in November but remained below the 50% line that separates "growing" from "shrinking" business, the ISM said Wednesday. The country's manufacturers have had a tough year in contrast to other parts of the economy that have shrugged off the Federal Reserve's campaign of anti-inflation interest rate hikes. Factories for all sorts of things have faced declining

orders in the post-pandemic economy. People cut back on stocking their living spaces with stuff to survive lockdowns and resumed doing things they couldn't at the height of COVID-19, economists said. What's more, trends in business and a struggling global economy don't point to a bounce back in manufacturing for 2024, Oren Klachkin, chief economist at Nationwide, wrote in a commentary: "We expect manufacturing will struggle in 2024 given the downbeat prevailing domestic and global economic conditions," he wrote. "At home, softening consumer demand, lackluster capex, cautious inventory management and careful expense control among companies will leave factory activity in a malaise."

America's High-Tech Manufacturing Rising Stars FORBES

For decades, the U.S. economy has been caught in a whirlwind of global competition and rapid technological change. Some regions have soared, while others have seen their manufacturing economies crushed by competition from lower-wage countries. Leaders in struggling regions have often looked to America's high-tech superstars—such as Silicon Valley and Boston—for models to revitalize their economies. Yet, new centers of innovation and high-tech manufacturing are emerg ing and thriving in perhaps unexpected corners and regions across the United States, like Tennessee, South Carolina, and Indiana.

Tennessee

Tennessee's universities and institutions are collaborating in a whole-state approach, snowballing into a hub for advanced mobility and next-generation automotive manufacturing. Volkswagen, Eastman and other companies have located operations at the University of Tennessee's Research Park, where industry, university faculty, graduate students and post-doctoral students collaborate. Ford picked Tennessee for its new electric truck factory—a \$5.6 billion investment called Blue Oval City—in 2021. That site was prepared for economic development years ago in cooperation with the Tennessee Valley Authority and ready to go when Ford searched for a new site. LG Chemical announced a \$3 billion battery plant nearby the following year.

South Carolina

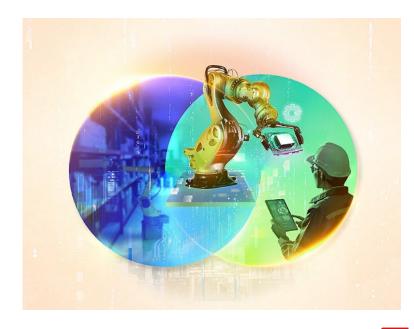
South Carolina has been building a new economy anchored in partnerships with automotive manufacturing, aerospace, and next-generation energy industries. Electric vehicle and battery-related companies have announced billions of dollars of investments in the state. Both Clemson and the University of South Carolina came together with other partners from



the state's academic and industry community, including the Savannah River National Laboratory, to form the SC Nexus advanced energy consortium. SC Nexus recently won federal designation as a high-tech hub in clean energy supply chain, making it eligible to compete for a federal grant worth \$50 to

When you think about microchips, Indiana probably does not come to mind. Yet, Purdue University is catalyzing a semiconductor ecosystem in Indiana. The university created a semiconductor degrees program, where corporate leaders serve on a Semiconductor Degrees Leadership Board to ensure education programming is relevant to industry. Purdue welcomed Skywater to build a \$3 billion "baby fab" on campus, and Imec, Europe's premiere center for semiconductor innovation, opened an R&D center on campus. Recently, Indiana was awarded \$32 million to develop a hub for the Department of Defense Microelectronics Commons to support microelectronics development and production.

Institute for Supply Management: U.S. manufacturers started 2024 off strong, with activity in the sector skirting expansion in January and both demand and output trending up, according to the latest survey of purchasing executives conducted by the Institute for Supply Management. The ISM's latest report finds manufacturing activity grew 2% in January, hitting a level of 49.1—the highest reading since October of 2022. While technically this means the U.S. manufacturing sector is still in contraction (any reading below 50 indicates contraction) the sector appears to be nearing growth mode after fifteen straight months of contraction. Demand in the sector is on the rise, as the ISM's New Orders index broke its 16-month losing streak and advanced 5.5% in January to hit an expansionary reading of 52.2%. Meanwhile, production in the sector also climbed, with that index up 0.5% to an expansionary reading of 50.4%. Manufacturers have struggled over the past few years with production as labor shortages and supply chain disruptions put a damper on output. The report suggests that the manufacturing sector is stabilizing after a prolonged period of contraction, but still faces significant challenges from the ongoing pandemic and supply chain disruptions.



Smart thinking for **INNOVATIVE** solutions

