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## **Nvidia Partner Bets \$3.9 Billion on the Midwest's Chip-Making Potential**

SK Hynix plans facility in West Lafayette, Ind., amid uptick in Midwestern semiconductor projects

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South Korea's SK Hynix said it plans to invest \$3.9 billion in an advanced chip-packaging facility in West Lafayette, Ind., the latest win for Midwestern states seeking a bigger piece of America's burgeoning semiconductor industry.

The planned plant is set to mass-produce high-bandwidth memory, or HBM, a critical component to artificial-intelligence computing, SK Hynix said Wednesday. The facility, which will also host research and development activities, is expected to start mass production in the second half of 2028 and bring more than 1,000 new jobs to the region, the firm said.

Indiana Gov. Eric Holcomb's office said the state offered SK Hynix up to \$554 million in tax rebates and millions more in grants and performance payments. The Purdue Research Foundation and Purdue University offered additional incentives and services valued at about \$60 million.

SK Hynix currently dominates as the exclusive HBM partner to Nvidia's most advanced graphic-processor units. The two types of chips get bundled together to enable the faster data-processing speeds needed for generative AI tools such as ChatGPT.

The Wall Street Journal last week reported the company's planned investment.

The Biden administration's efforts to revive America's standing as a chip-making powerhouse are leading producers to expand beyond the industry's traditional hubs in Texas, California and Oregon. In 1990, the U.S. represented 37% of global chip manufacturing, though it had slumped to 12% within three decades.

Now, spurred by incentives linked to 2022's \$53 billion Chips Act, semiconductor giants have envisioned new American production frontiers in the Midwest. Though the region lacks existing infrastructure, officials in Indiana, Ohio, Kansas and elsewhere pitch their lower overall costs, untapped labor forces and proximity to key resources.

John Neuffer, chief executive of the Semiconductor Industry Association, a Washington, D.C.-based trade group, said while the industry has long had offshoots away from its traditional clusters, chip makers want more geographic diversity as weather and transportation-related problems affect entire regions of the country.



*The facility will also host research and development activities and is expected to bring more than 1,000 new jobs to the region. Photo: Jean Chung for The Wall Street Journal*

“Our industry spreading out more broadly throughout the U.S. demonstrates this greater emphasis on ‘just in case’ solutions,” he said.

Universities with top engineering programs can boost states’ efforts to land semiconductor projects, said John Boyd, principal at site-selection consulting firm the Boyd Company. David Rosenberg, Indiana’s Secretary of Commerce, said his state has an advantage in its thriving education ecosystem that includes Purdue, the University of Notre Dame, Rose-Hulman Institute of Technology and Ivy Tech Community College.

Brian Edelman, president of the Purdue Research Foundation, said resource considerations also helped to close the SK Hynix deal. Those included a 120-acre site ready for development, a massive aquifer that will supply water to the factory, ample power generation and sufficient wastewater treatment facilities.

The West Lafayette investment will bring a key part of the supply chain for Nvidia's prized AI chips to the U.S. Advanced chip-packaging, the final steps of semiconductor production, has been a major facet of the 2022 Chips Act legislation that directs federal funding to help increase domestic chip manufacturing.

Intel is investing more than \$28 billion in two new factories in Ohio; construction is expected to be completed in late 2026. Economic development officials have said the company, which had no prior presence in the state, was attracted by Ohio's higher education system, a \$2 billion incentive package and the nearly 1,000-acre site east of Columbus—far enough from railroad tracks to protect the exacting manufacturing process from vibrations.

In 2023, Belgium's Interuniversity Microelectronics Centre, a semiconductor research organization, opened with Purdue a new hub for joint research and development between academics, students and the tech industry.

Kansas has promoted its rural nature to companies concerned about employee poaching, said Paul Hughes, who runs the headquarters and megaprojects division for the state's commerce department. It fended off challengers from other states to keep two large projects from homegrown companies within its borders, he said.

The state announced last year that EMP Shield, which makes products that protect electronic devices from magnetic pulses, plans to invest \$1.9 billion in a chip manufacturing plant in Burlington, Kan., while Wichita-based Integra Technologies aims to build a \$1.8 billion facility for semiconductor assembly and testing.

Boyd, the site selection consultant, said areas that are already popular for semiconductor factories are seeing increased competition for construction workers with specialized skills and the technicians and engineers needed to build and operate the facilities. That includes states such as Arizona, where Taiwan Semiconductor Manufacturing Co., or TSMC, is investing around \$40 billion to build up a chip-making base and driving up the competition for labor.