



NEWS RELEASE
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The Globalfoundries plant, above, in Dresden, Germany, is highly sophisticated. However, the company's new plant being built in New York will feature cutting-edge technology.
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ATIC's Big New York Investment

SARATOGA SPRINGS, NEW YORK

It may be no coincidence that two of the technology world's most dynamic sectors are connected to this sleepy suburb, a leisurely 45-minute drive outside Albany, the capital of New York state.

More than 60 years ago, a top-secret US government team led by Wernher von Braun took over a red-pine forest in the area and began experimenting with rocket fuels that would later be instrumental in NASA's first moon landing.

Right around the corner from the now-rusting steel rocket harnesses lies a factory making some of the most sophisticated processing devices on the planet.

Globalfoundries, the world's third-largest chip maker, is building its newest facility here to make chips for the next generation of computers and may even help man set foot on Mars.

"Our chips are already in the space shuttle," said Doug Grose, the chief executive of Globalfoundries, which is controlled by the Advanced Technology Investment Company (ATIC) of Abu Dhabi. "Up there, it's a very different atmosphere than it is down here. It's a different kind of semiconductor, but we can do it. We can do a lot of different microchips, too, including medical devices that can go into the body to help people live longer."

About 1,200 construction workers are building the 300,000 square foot foundry in time for the company to begin producing microchips by the second half of 2012. Globalfoundries will put the experience to use when it breaks ground on a similar facility in Abu Dhabi that year.

The New York project is an enormous feat of engineering with its own concrete pumping building, wastewater treatment plant and two microchip production modules. At a cost of US\$4.6 billion (Dh16.89bn), the factory is one of the largest single economic development projects in the history of New York state.

To say that the foundry is state-of-the-art is almost an understatement. Each section of the plant is geared to produce the perfect conditions required to prevent contamination of the sensitive silicon wafers from which microchips are made.

The factory will include a water treatment plant that will pump in ultra-pure water and process wastewater.

Electricity is transmitted through futuristic-looking power lines to the company's transformer, providing enough energy to light 75,000 homes. The concrete pipes used to circulate air around the building are so large a person can walk through them.

By the time the New York plant is finished, Globalfoundries will be producing more than 200,000 silicon wafers each month from its facilities in the US, Dresden and Singapore and will have just broken ground on its Abu Dhabi foundry. In fact, what is being built in New York will be a "cookie-cutter version" of what Abu Dhabi will be witnessing over the next few years.

The fabrication plants "are all the same", said Werner Greyling, the project manager with the M+W Group, the engineering company contracted to build the Globalfoundries plant.

"The basic construction of them is exactly the same. All the big players, Intel, [Taiwan Semiconductor Manufacturing Company], all the fabs look the same. It's the product inside that the clients want to make that is different."

Globalfoundries will produce a glossy 300mm silicon wafer from which microchips will be manufactured for more than 150 clients including Qualcomm, BroadCom, AMD and IBM.

In an industry that pushes the laws of physics to compress transistors into minuscule spaces - currently about 28-nanometres, or 3,000 times smaller than a human hair - the financing required is massive.

According to Gartner, a technology research company, global semiconductor revenue will be about \$300.3bn this year and will grow by about 4.6 per cent to \$314.25bn next year.

"Twenty-eight nanometre is pretty leading-edge technology," Mr Greyling said. "That's what makes this fab more different than anything else in the world. It's more advanced than anything else."

New York politicians of all stripes spent almost 30 years lobbying various industries to attract a big investment to the region, hoping the move would provide a boost to a somewhat sagging economy.

Their efforts finally paid off in 2006 when AMD, the US chip maker that later sold a controlling stake in its Globalfoundries business to ATIC, announced it would build its latest microchip plant in New York.

It certainly helped that there were 23 universities and colleges within a two-hour drive of the proposed site. Many of those were educating students in engineering and computer science, knowledge needed by the semiconductor industry.

"You're talking about an awful lot of folks that will be paid well in an area where the manufacturing base has left over the years," said Dennis Brobston, the president of the Saratoga Economic Development Corporation.

To entice Globalfoundries to commit to the region, New York provided \$1.2bn of tax subsidies that would be paid out over the course of the plant's development as long as certain employment and construction targets were reached.

A small but vocal group opposed the subsidies, however, after the state last year issued a \$1.47bn bond payable over 30 years to help fund the Globalfoundries agreement.

Adolfo Gutierrez, the president of uBricks, a local engineering consulting company, questioned the taxpayer-funded subsidies.

As a private company, Globalfoundries does not have to disclose its financial statements, but Mr Grose has said the company has yet to become profitable. The company expects to post \$3.5bn of revenue for this year.

"The idea that politicians have [is] that if you plant any seed, even if it is a money-losing seed, it will spur growth and better things will happen," Mr Gutierrez said.

"I'm not too convinced that is the case. It's a capitalistic truth: you need to have profits. If you have profits, you can create wealth."

But many people in Saratoga County already believe the Globalfoundries plant is worthwhile. Workers and Globalfoundries executives involved in the plant's construction are already providing steady business to the region's property market, landscaping outfits and car dealerships.

"There was this hiatus, if you will, where government, education and health care took over as the major industry sectors [in the region]," said Michael Tucker, the president and chief executive of the Centre for Economic Growth in Albany.

"But now, the evolution of the innovative high-tech economy with a global focus has given us a new life. It's the industrial revolution of the 21st century and it's happening right here."