RFAB facility

TI expands its manufacturing capacity and creates new jobs

Texas Instruments' latest U.S.-based manufacturing facility (RFAB), located in Richardson, Texas, was completed in 2006. Since that time, the company has weathered the economic downturn and focused its business on analog and embedded processing, while watching market demand to determine when to equip and open the facility. This production strategy has enabled the company to ramp up production quickly when conditions call for increased production.

When TI was able recently to invest $172.5 million to purchase semiconductor manufacturing equipment at an opportune price, the company began to quickly outfit RFAB. The facility will be set to open in late 2009. This move will bring new job opportunities to the area, infuse dollars into the local economy and serve as a competitive advantage. RFAB will:

- Operate as the industry's first 300mm analog wafer fab;
- Increase TI's manufacturing capacity to meet customer needs;
- Ensure a competitive advantage in 300mm analog manufacturing innovation;
- Employ an estimated 250 people by the end of 2010;
- Employ as many as 1,000 people when fully operational; and
- Be the first new fab to go into operation in the U.S. since 1996.

RFAB is 1.1 million square feet of building space that includes administration, mechanical, support and fabrication buildings seated on 92 acres of land. Since TI's investment was announced in June 2003, RFAB has spurred funds for engineering education and research and development in North Texas and local economic development. TI's investment in sustainable design and environmental stewardship has also been recognized throughout the U.S. and the world.

Education support

As part of TI's agreement to build the company's latest manufacturing facility in Texas, the University of Texas at Dallas (UT Dallas) was to receive $300 million in order to expand and bolster engineering research and education. Funds came from the Texas Enterprise Fund ($50 million in 2003), matched by the UT System ($50 million), $15 million from UT Dallas; subsequent state funding to support an $85 million research lab; and a commitment by UT Dallas to raise private funding. TI was able to structure this agreement to benefit the university in tangible ways with a shared goal to build a top 50 engineering program.

Since that agreement was put in place, UT Dallas has:

- Opened the 192,000-square-foot Natural Science and Engineering Research Laboratory;
- Increased Jonsson Engineering School enrollment by approximately 3,000 and UT Dallas' by 1,700;
- More than doubled research expenditures;
- Added more than 50 faculty, recruiting them from universities such as Rutgers, Columbia, Illinois and Princeton;
- Increased the national ranking of the UT Dallas engineering graduate program to the top 100 nationally overall, 51st among public universities, and #4 in Texas; and
- Added two new academic programs to its engineering curriculum, including Mechanical Engineering and Materials Science and Engineering—and laid groundwork for two more: Bioengineering and Systems Engineering.

Community support

The construction of RFAB created many jobs in the community. Of the total construction costs, 25 percent was spent with minority owned businesses and more than 10 percent with women-owned businesses. In addition, 80 percent of these contracts were awarded to companies based in North Texas totaling close to $96 million in spending.

Environmental leadership

TI designed RFAB to be one of the most efficient wafer factories in the industry and one of the most environmentally responsible manufacturing plants in the world. As a result, RFAB was the first semiconductor wafer fab to receive a LEED Gold certification by the U.S. Green Building Council.

The RFAB project began with ambitious goals regarding cost, energy and the environment, and required rethinking every aspect of the design. TI engineers spent time with experts from the Rocky Mountain Institute to create an extremely efficient complex unlike any other semiconductor facility.

Its energy-saving features will enable 35 percent more efficiency than code requirements, which will help reduce related emissions by 50 percent. Water conversation efforts, including re-use and recycling, will reduce water consumption by 40 percent.

In total, TI spent about $1.5 million of its $320 million construction costs on sustainable design. In return, the company expects to see a million dollars of savings in the first year of production, ramping up to more than $4 million a year once the factory is fully operational.

Over time TI expects to achieve millions of dollars in capital costs savings annual operating costs through energy- and water-efficient measures. The lessons TI learned in energy and resource savings at RFAB are being applied to new and existing sites all over the world to reduce environmental impact and operating costs.

Most recently, TI's new facility in the Philippines recently achieved LEED certification, incorporating lessons learned at RFAB. Some of RFAB's notable green design features include:

- An on-site retention pond to collect rain that decreases storm run off and can be used for irrigation;
- Native prairie grassland and vegetation that require little or no water and maintenance to thrive;
- Reflective roofing and concrete to reduce urban heat island effect;
- Waterless urinals, saving about 40,000 gallons per year per unit;
- Faucets with sensors that are recharged by a small water turbine;
- Light shelves to utilize natural daylight instead of fluorescents inside office areas;
- Windmill powered pond aerator;
- Light and motion sensors;
- Demand controlled ventilation; and
- A solar water heater for administrative areas.

For more information, please see **www.ti.com/rfab**.