



# Standby power

## > Case History

HeJian Technology, China



**Power  
Generation**

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### **Where:**

HeJian Technology in Suzhou,  
Jiangsu Province, China

### **What:**

A 9.6 MW diesel standby power system with transfer switches, switchgear and PowerCommand® control from Cummins Power Generation

### **Purpose:**

Standby electrical power for maintaining critical semiconductor manufacturing operations in the event of utility power interruption

### **Primary choice factors:**

Cummins Power Generation was the only global power supplier that manufactured all the components of its power systems — generators, control system, transfer switches and switchgear

## **Leading Chinese semiconductor foundry relies on standby power from Cummins Power Generation**

SUZHOU, CHINA — HeJian Technology, located in the modern Suzhou Industrial Park, has been in the forefront of integrated circuit (IC) technology development and manufacturing in China. The company's semiconductor foundry produces the 60,000 silicon wafers a month that are used to make IC devices found in more than 300 world-class products, including Smart Cards, LCDs, DVD players, MP3 players, cell phones and wireless networks. As the first Chinese semiconductor foundry to turn a profit for 12 consecutive months, one of HeJian's efforts has been to make sure its facility has reliable electric power. To prevent power interruptions that can disrupt silicon wafer and IC manufacturing processes, HeJian relies on a 9.6 MW standby power system from Cummins Power Generation Inc.

HeJian's experienced team of professionals offer effective support for new product development, process design and yield enhancement. As a company devoted to the development of the Chinese semiconductor industry, HeJian has also allied itself with many famous universities to offer advanced employee training.



The PowerCommand digital master control from Cummins Power Generation features a touch-screen user interface to access information about the generator sets and numerous automatic transfer switches.

### Ensuring reliable power

Although the local utility power is very reliable, the risk of an outage has significant financial implications for silicon wafer manufacturing. When semiconductor manufacturing processes are interrupted — even for a few minutes — there can be considerable product and material losses. So, when it came time to choose a standby power system, HeJian contacted Solomon Technology Corporation, the local distributor for Cummins Power Generation.

*HeJian was impressed that Cummins Power Generation was the only global power system supplier that manufactured all the components of its power systems — engines, alternators, control system, transfer switches and switchgear.*

Working closely with Cummins Power Generation and Solomon Technology, HeJian installed a standby power system that included four 1500 kW generator sets and two 1800 kW generator sets for a total generating capacity of 9.6 MW. When operating in parallel, the generators provide enough electrical energy to supply all of the plant's needs.

Cummins Power Generation also manufactured and supplied the main power system switchgear as well as the medium-voltage, 6.6 kV automatic transfer switches that disconnect the utility and connect the generators to the loads. The power system is monitored and controlled by a PowerCommand DMC300 digital master control that provides a graphic display of the entire standby power system with a touch-screen interface.



Four 1500 kW and two 1800 kW generator sets from Cummins Power Generation provide a total standby generating capacity of 9.6 MW to maintain foundry operations.

### Multiple generators are more reliable

“Having six separate generator sets, the system is inherently more reliable and flexible than a system with just two or three larger generator sets,” says Michael Pan, a Cummins Power Generation representative in China. “In the unlikely event that one of the generator sets would not start, the other five would be able to supply most or all of the critical loads in an emergency. In addition, multiple-generator systems make maintenance more convenient; one generator can be taken out of service for maintenance while the five remaining generator sets are available in case the utility power fails.”

### Solomon success from system design to record profits

Solomon Technology Corporation was instrumental in designing, installing and commissioning the power system. To keep the standby power system in proper working order, the distributor is also responsible for regular inspections and maintenance.

HeJian's efficient and reliable foundry has generated record profits, and the company has used some of these funds to carry out philanthropic activities with local agencies that educate and care for disadvantaged minorities. With reliable standby power from Cummins Power Generation, HeJian is making IC components for cutting-edge products while helping to improve the lives of China's poor.

For more information about integrated standby power systems, contact your local Cummins Power Generation distributor or visit [www.cumminspower.com](http://www.cumminspower.com).

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