



Standby power

> Case History

Minneapolis-St. Paul International Airport, USA



Our energy working for you.™

Where:

Minneapolis-St. Paul International Airport,
Minnesota, USA

What:

Four 1.5 MW Cummins Power Generation PowerCommand® generator sets, PowerCommand network and PowerCommand digital paralleling equipment

Purpose:

Standby power for the airport's Lindbergh Terminal, seven concourses, roadways and parking ramps

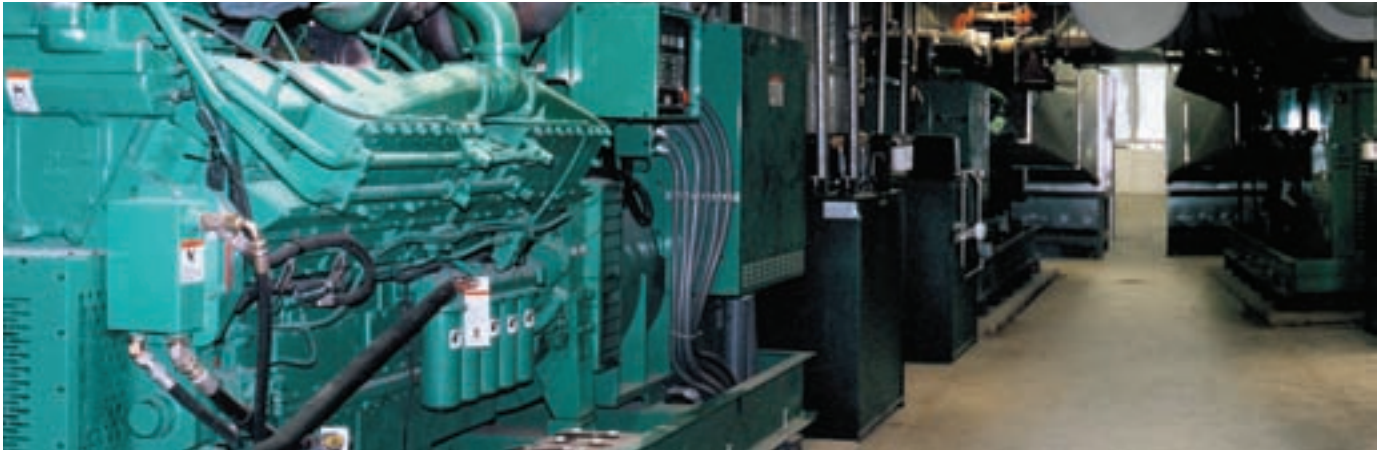
Primary choice factors:

The integrated digital controls capability of the PowerCommand network, product reliability and ease of installation

New standby generator system ensures uninterrupted operations at Minneapolis-St. Paul International Airport

MINNEAPOLIS, MN, USA — According to a recent survey by the International Air Transport Association, the Minneapolis-St. Paul International Airport ranks fifth worldwide for passenger convenience among airports with more than 25 million passengers. Here, airport inconveniences such as long check-in lines or slow baggage claim carousels are the exception, not the norm, and that is good news for the traveling public.

To maintain its high level of service, the airport completed a major expansion project that can accommodate up to 40 million travelers. Runways, roads, parking lots, terminals and concourses have already been upgraded or expanded. As the airport grows, so does demand for the myriad electrical services that keep an airport functioning smoothly. Boilers, chillers, heating, cooling and ventilating systems, security cameras, monitors and computers, elevators, lights, public address, commercial operations and more — they all rely on uninterrupted electrical service. To ensure continuous service, even during an interruption of electric power, the airport has installed a new standby power system for the airport's Lindbergh Terminal, seven concourses, roadways and parking ramps.



The 6 MW standby power system from Cummins Power Generation includes four 1.5 MW generator sets, plus PowerCommand control and digital paralleling equipment.

Engineers designed an efficient standby power system that relies on the PowerCommand pre-integrated standby power system from Cummins Power Generation Inc. This on-site power system, rated at 6 MW on a standby basis, includes four 1.5 MW PowerCommand generator sets, PowerCommand network and PowerCommand digital paralleling equipment.

“While the primary function of an airport standby generator system is to provide power for life-safety systems, these units give us the dependability and performance to provide essential operations,” said Bob Tschida, project engineer, Dunham & Associates, Minneapolis. “In the unlikely event of a power failure, the standby generator will power the exit lights and fire alarms needed to direct people safely out of the buildings.”

“... More than that, the system provides standby power so the airport can maintain a basic level of operation during a power interruption.”

System design handles concourse distances

Combining the airport’s fiber-optic hub with the “smart” technology of PowerCommand’s integrated digital control allowed designers to install an efficient system despite the obstacles posed by the length of the 2,000-foot concourses.

The PowerCommand system provides an integrated system of generator sets, transfer switches, paralleling equipment and controls to coordinate all the demands placed on an electrical system. These components

are designed and manufactured to work together. PowerCommand power systems feature “smart” components that can communicate with each other and facilitate remote monitoring and control along with the PC network. This feature improves functionality, enables easier installation, and reduces operating and maintenance costs.

“Our challenge was to provide an efficient, integrated system over the length of the concourses,” said Chris Hoglund, electrical engineer, Cummins NPower. “By tapping into the airport’s fiber-optic communications system, we were able to eliminate the cost of running thousands of feet of wire. Plus, the networking ability of the PowerCommand system allows us to communicate a lot of information over long distances.”

Control system facilitates monitoring and power distribution

In the airport’s main generator control room, a PC-based control console monitors the status of 30 automatic transfer switches, allowing engineers to control and segment the load to distribution panels located throughout the airport. Gateway modules convert data on twisted pair cables into fiber optic signals to allow monitoring and diagnostics of locations thousands of feet away. Eleven routers located throughout the airport and monitored from the main control room provide overall control of the transfer switches.

For more information about integrated standby power systems, contact your local Cummins Power Generation distributor or visit www.cumminspower.com.

Our energy working for you.™

www.cumminspower.com

© 2008 Cummins Power Generation Inc. All rights reserved. Cummins Power Generation and Cummins are registered trademarks of Cummins Inc. PowerCommand is a registered trademark of Cummins Power Generation Inc. “Our energy working for you.” is a trademark of Cummins Power Generation. F-1421 Rev. 2/08 (2002)

