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**Power
Generation**



Standby Power

Case History

Minneapolis, Minnesota

Where:

Target Field, Minneapolis, Minnesota.

What:

- One DQFAD standby diesel generator set rated at 1000 kW
- One DQFAB diesel generator set rated at 800 kW
- Six PowerCommand® OTPC automatic transfer switches

Purpose:

Provide standby power for a new Major League Baseball facility.

Primary choice factors:

- Proven product
- Ability to meet customer specifications
- Quality of maintenance

Distributor:

Cummins NPower

Backing up the play: Cummins Power Generation at Target Field

The Minnesota Twins broke their all-time attendance record in 2010, selling out almost every home game in the inaugural season at Target Field. At this state-of-the-art ballpark in downtown Minneapolis, the Twins enjoyed a 53-28 record and won the American League Central Division Championship. At the same time, the ballpark won praise for attractiveness, fan-friendliness and smart design.

Part of that smart design was the LEED Silver Certification that Target Field received, based on the multiple ways that materials are reused and recycled, the ballpark's reduced energy consumption, and other sustainable features. In fact, Target Field is the greenest major sports facility in the country.

Another part of the smart design is the fact that the ballpark is built like a mushroom on



The 1000 kW DQFAD generator set, located near the Target Field loading dock.



The 800 kW DQFAB generator set and one of the PowerCommand OTPC automatic transfer switches.

a challenging 8-acre urban site. (Most Major League Baseball parks require an average of 13 acres.) It rises up and out over surrounding roads and rail lines that allow easy access by train, bus, car and bike. The ballpark has become such a popular destination via all these transportation methods that it has helped to revitalize that area of the city, which was a major planning goal.

The smart design also includes the cabling for data and voice communications, which employs a self-healing ring architecture. If a break occurs in one location, data and voice signals can be rerouted in the other direction.

The use of smart design extends to standby power as well. A DQFAD generator set and four PowerCommand® automatic transfer switches are located by the loading dock. At the opposite end of the ballpark are a DQFAB generator set and two more PowerCommand automatic transfer switches. Each system backs up approximately half the facility's critical electrical loads in case of a power outage. Cummins NPower, the distributor for the Upper Midwest, managed the installation and takes care of service requirements.

These standby power systems have to be ready at any time, game day or not. This is because multiple events take place at the facility each day the Twins are not playing: everything from small-group meetings to weddings to catered events for 3,500 people.

Special piping for fresh air and exhaust

Sited in a space enclosed on five sides, the 1000 kW DQFAD generator set near the loading dock required special piping to bring in fresh air and to vent the

exhaust. The air vent draws fresh air from a pedestrian concourse; the vent opening on the concourse is fireproof to comply with the local building code. The exhaust ductwork carries the exhaust through part of the lower level of the facility and out toward a nearby freeway.

The DQFAB generator set, rated at 800 kW, is located at the opposite side of the ballpark, directly under the street where the light-rail trains run and near the Northstar commuter rail line.

Transfer switches with advanced features

Each generator set is matched with a series of PowerCommand OTPC automatic transfer switches. The gensets and transfer switches are networked to remote annunciators in the Command Center and interface with Target Field's building management system. The control panel on each switch provides critical information, including which power source — the utility or a generator set — is connected at any time.

Ready for next year and beyond

The Twins' first season at Target Field ended in the playoffs. But thanks in part to a lot of smart design, the ballpark is ready for many more winning seasons.



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