STANDBY POWER

COMMUTER RAIL LINE MAINTENANCE FACILITY

mtu onsite energy

- **Where:** Big Lake, Minnesota, USA
- **What:** 1,000 kW MTU Onsite Energy power system for vehicle maintenance facility
- **Why:** To ensure uninterrupted maintenance and reliable rail service

COMMUTER PASSENGERS DEPEND ON WELL-MAINTAINED TRAINS FOR A FAST, SAFE AND RELIABLE COMMUTE
POWER SYSTEM SERVES MAINTENANCE FACILITY WHERE TRAINS ARE SERVICED, REPAIRED AND WASHED

BIG LAKE, Minnesota, USA – Minnesota's first commuter rail line, which began operation in November 2009, is expected to carry up to 3,400 passengers a day during the first year of operation, helping to reduce traffic congestion as well as commuter travel time. At a cost of $320 million, Northstar Rail includes six new train stations and an 80,000-square-foot vehicle maintenance facility where diesel-electric engines and passenger cars are serviced and even washed. Because safe and reliable service is paramount to the new commuter rail line, engineers/consultants specified a 1,000 kW MTU Onsite Energy emergency standby generator set for the maintenance facility to ensure that, even if a utility outage occurs, trains will be ready and in service when needed.

"This MTU Onsite Energy power system is designed for robust applications that need dependable electrical power."

/ // / **Tim Stalpes, sales engineer, Interstate Power Systems**

Northstar Rail trains are powered by diesel-electric locomotives and therefore run independently of utility power. All five locomotives and the 18 passenger cars are serviced at the vehicle maintenance facility at the Big Lake Station, the northwest terminus of the line, and it is here that reliable electric power is needed to keep trains running on time. "The MTU Onsite Energy generator supports all of the vehicle maintenance facility's electrical loads, so regardless of utility power outages or weather-related power outages, the facility is operational and the trains still run," said Tim Stalpes, sales engineer for Interstate Power Systems, the local distributor for MTU Onsite Energy.

MTU Onsite Energy power system supplies building's 800 kW load

The vehicle maintenance facility is 38 feet high and more than 600 feet long and includes four

The MTU Onsite Energy power system serves the 80,000 square foot vehicle maintenance facility.

different types of rail track: a component removal track, designed for repairs on two cars at once; a larger repair-and-maintenance track; a storage-and-inspection track; and a train-wash track, located in a separate building. The building's electric loads include HVAC, lighting and electrical service to the administrative offices, but the majority of the load is for large-scale industrial equipment for the ongoing maintenance and repairs performed on the cars and engines. This includes truck hoists and a wayside power cabinet for the component removal track. Wayside power provides heating, lights and ventilation to trains when they are not powered by the diesel-electric locomotive. The train wash alone is 20 percent of the load.

The 1,000 kW MTU Onsite Energy power system includes an MTU 16V2000 engine with 1,495 brake horsepower, a 480-volt alternator and transfer switch. The Series 2000 engine features an advanced diesel engine controller, or ADEC, that optimizes combustion and allows the engine to meet current exhaust emissions requirements. "In the event of a utility power outage, the generator will assume the load within 10 seconds of power loss," said Clarence Cronin of Design Electric, St. Cloud, Minn., the project's electrical contractor.

"We call the Series 2000 a workhorse generator set because of its reliability," said Stalpes. "This MTU Onsite Energy power system is designed for robust applications that need dependable electrical power." The generator set is located outside of the facility and housed in an aluminum enclosure for added corrosion resistance. A 1,400-gallon fuel storage tank provides up to 24 hours of running time.

Interstate Power provides training

"Most customers look to us for generator system maintenance," said Stalpes, "but a small percentage of customers conduct their own maintenance when they are equipped and trained for it. Since Northstar trains are diesel-electric units, the maintenance facility has the equipment, personnel and training to maintain the generator set, including regular inspections and exercise. In this case, Interstate Power Systems provided training and operational protocol, and we are always available for assistance when needed."

The Northstar Rail Corridor is one of the fastest-growing transportation corridors in Minnesota and the nation, creating an alternative way for people to commute. Passengers will judge their new service mostly on its on-time arrival. The MTU Onsite Energy power system is "on track" to meet that need.

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MTU Onsite Energy Corp. (formerly Katolight Corporation) is a leading producer of diesel-powered generator sets from 30 kW to 3,250 kW and natural gas-powered generator sets from 30 kW to 400 kW for standby, prime power and cogeneration applications. The company also provides automatic transfer switches, paralleling switchgear, controls and accessories for complete power system solutions.

MTU Onsite Energy Corp., a Tognum Group company based in Mankato, Minnesota, combines the expertise of Katolight and MTU Detroit Diesel Power Generation to meet the ever-increasing distributed power needs of customers in North America and around the world. MTU Onsite Energy Corp. is part of the Tognum Group's Onsite Energy and Components business unit. For more information, visit www.mtu-online.com.