

INDUSTRIAL RESUME

Key Facts and Highlights:

- Designed diesel generator, interconnection substation, portal substation, and associated underground distribution line for Stillwater Mine.
- Performed detailed solution proposal reviews, as well as vendor reviews.

Project Description:

ECI worked closely with Stillwater Mining Corporation on the specification of approximately 3 MW of 480 V, primary, continuous diesel generation, as well as electrical design of the power distribution system.

ECI prepared detailed technical specifications for the generator and installation, and worked closely with multiple potential vendors to identify necessary features and revisions necessary to maintain accordance with the relevant emission requirements.

ECI provided detailed drawings in three major areas:

- The 50/100-34.5 kV dual-voltage Interconnection Substation near the existing NWE distribution line at a point approximately 6-1/2 miles east of the 5000 East Portal.
- The 34.5-13.8 kV Benbow Portal Substation on the pad for the Benbow Decline Portal.
- The 34.5 kV underground distribution line connecting these two new substations, with radial feeds to the Water Wells, Water Treatment Area, and Storage Pond.
- Tier 4 emissions performance was required in addition to a strict limit on brake horsepower. Consequently, much work went into coordinating with the vendors to verify compliance with these requirements, while meeting the primary power generation demands consistent with heavy industrial loads and widely varying loading profiles, a rugged environment, limited access and fuel availability.

ECI performed detailed reviews of vendor bids, providing feedback to the vendors and client. As part of the bid reviews, ECI considered a detailed technical comparison of the proposed solutions, ensuring that the final installation would properly meet the needs of the project.

The project also includes electrical design of the site power distribution. This includes 15 kV and 480 Volt systems involving technical specifications for 15 kV and 480 Volt distribution switchgear, transformers, cabling, protection and controls.

