



Ready Engineering Corporation offers a complete array of electrical engineering services, from standard greenfield and brownfield power distribution to state of the art protection and control systems.

Ready designs new power distribution systems from the ground up and retrofits new equipment into existing facilities. We can perform online equipment retrofits that allow the client to maintain production, ensuring smooth integration and minimal interruptions to our customer's operations.

ELECTRICAL ENGINEERING EXPERTISE

- Conceptual Design and Cost Estimating
- Electrical Power Distribution up to 500kV
- Constructability Reviews
- Hazardous Area Classification Analysis
- Electrical Equipment Specification and Procurement
- Protection and Control Systems Design and Specification
- Commissioning and Testing Services
- VFD and Motor Starter Specification and Configuration
- Cable Termination and Equipment Installation Details
- System Grounding and Equipment Bonding
- Custom Panel Layouts and Fabrication
- Generator Protection and Voltage Regulation
- Equipment Failure Investigation and Return to Service
- Mechanical Analysis of Driven Equipment
- Systems: Cable Management; UPS; Emergency Power; Automatic Transfer Schemes; Fire and Gas Detection; Interior and Exterior Lighting; Communication; Electrical Heat Tracing; Generator Excitation; DC; Instrumentation

POWER SYSTEM STUDIES

- Load Flow
- Short-Circuit / Fault Levels
- Protective Device Evaluation and Coordination
- Arc Flash
- Motor Acceleration, with full mechanical analysis.
- Voltage Drop
- Harmonic Load Flow – Mitigation and Compliance
- Voltage Droop
- Power Management and Load Shedding
- Transient Disturbances
- Single Stage Power Factor Correction
- Multistage Power Factor Correction

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WHY READY?

- Ready delivers complete, constructible design packages, which minimizes construction costs and eliminates undesirable contractor “extras”.
- Ready works in a cooperative and proactive manner to ensure that each party’s work scope meshes seamlessly with one another.
- Ready has extensive, multi-faceted electrical construction, operation and maintenance experience, leading to innovative designs and drawings adapted to suit the varying needs of all stakeholders.

INDUSTRIES

Biofuels
Chemicals/Fibres
Food and Beverage
Mining
Oil and Gas
Power Generation
Pulp and Paper
Waste Treatment

TYPICAL ELECTRICAL ENGINEERING PROJECTS

ATCO Power, Sheerness Generating Station, multiple projects.

Engineering design and project management for various capital and maintenance projects, including: WECC generator compliancy testing; installation of core vibration and shaft voltage monitoring systems for both 19kV turbo-generators; specification and installation of a new 4160V, 600HP air compressor; excitation transformer reliability study; 400MVA, 19/245kV GSU transformer failure analysis and return to service.

Bruce Power, Bruce B Standby Generator Controls Upgrade.

Engineering review, corrective action recommendations, technical specifications (including instruments, protective relays, VFDs, AVR, auto-synchronizer, rectifier, inverter and opLAN interface), testing and support documentation, relay settings migration and review of the complete control system upgrade for the four Standby Generators (SGs) to meet the requirements for Class III electrical distribution at the Bruce B station.

Luscar Ltd., Coal Valley 1200 tph Expansion.

Engineering services to specify, design, install, and commission the control system and electrical infrastructure for a multi-million dollar upgrade and expansion of Luscar Ltd.’s Coal Valley Coal Preparation Plant, which included the Wash Plant, ROM/Breaker area, Thermal Dryer, and Train Load Out Facilities. Electrical engineering scope involved replacement of the power distribution system, including the substation, switchgear, and MCCs. 4160V was introduced to the site for motors 250HP and above, whereas all other loads powered from new 600V distribution.

Petrovera Resources, Coleville Facility Consolidation Project.

Design and specification of the 4160V and 480V electrical distribution system consisting of switchgear, VFDs, motors, capacitors, and transformers. Design included power factor correction, harmonic filtering, motor protection, and grounding.

TransAlta Corporation, Centralia, Keephills, Sundance and Wabamun Thermal Generating Plants, multiple projects.

Specification, installation, and commissioning of low voltage and medium voltage power distribution equipment. Equipment included AVR and DC field breakers, UPS, inverters, rectifiers, automatic transfer switches, 480V MCCs, starters and circuit breakers, unfailling and essential service panels, and 4160V switchgear.

Zellstoff Celgar Ltd., Pulp and Paper Mill, multiple projects.

Project management and design reviews for various capital and maintenance projects, including: overall facility power system studies (load flow, short-circuit, coordination, Arc Flash, motor starting); New O2 Plant Addition; WECC Generator Testing; Woodroom Upgrade; various MCC Replacements (2400V and 600V).

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