

Electrical Solutions for Renewable Energy

Power Up! with Unit Electrical Engineering Ltd.



UEE

Unit Electrical Engineering Ltd.

POWER UP!

UEE Renewable Energy



Spillway, Upper Stave, Canada – Hydropower



Mission Statement

To be recognized as the leading solution provider in the manufacture and design of electrical power, distribution and control equipment.

Corporate Statement

Unit Electrical Engineering Ltd. (UEE) is a respected electrical manufacturing and solutions company with a proven track record of meeting and exceeding the equipment demands of its customers. Combined with the organization's excellent manufacturing abilities is a significant level of engineering depth and expertise, which allows UEE to provide engineering services that complement and continuously improve its products, while supporting its commitment to its customers.

Field Service



Protection Control Buildings



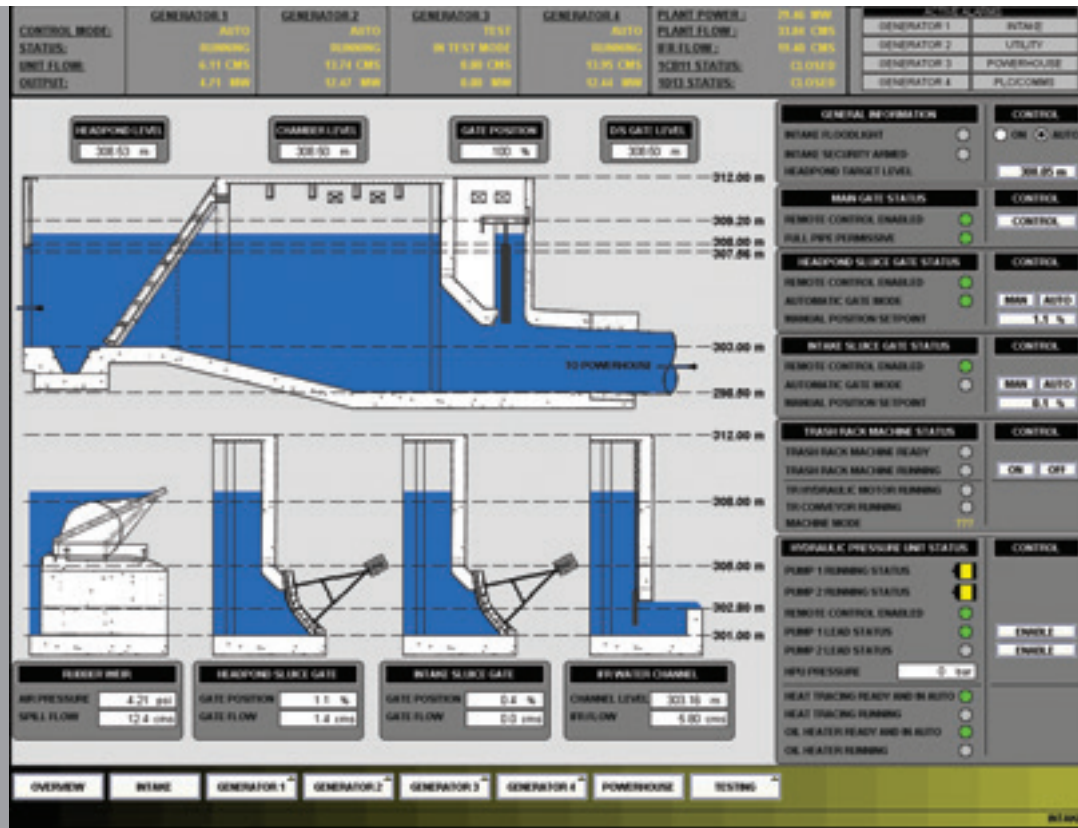
Intake Equipment



An Electrical Solutions Company

Why UEE?

Professional engineering, custom designs, extensive project and regulatory experience, and comprehensive technical support make UEE your single provider of efficient and environmentally responsible Renewable Energy solutions.



Renewable Energy Expertise

Efficiency + Environment

Technical Support

Design + Experience

Utility Interconnection

Flexible Solutions

UEE Renewable Energy

What can UEE do for your company?

Design + Experience

UEE has applied its technical design methodology to a large number of complex and entirely unique hydroelectric projects and developed for each project an effective operating philosophy that balances efficiency, environmental sensitivity, and business practicality. We leverage strong design skills, extensive practical experience, and a flexible project management model to support your Renewable Energy project starting at the preliminary design phase with advice on intake, powerhouse, and substation design from an electrical, mechanical, protection, and control perspective.



Utility Interconnection

UEE has the technical expertise and management experience to handle the complex and often daunting interconnection process. UEE provides the required engineering, validates project specifications and protection schemes, and works with the local utility to bring new generation projects on line smoothly and on time.



Efficiency + Environment

Renewable Energy is green, but it must also be practical, with exceptional up-time and reliability. UEE has the technical resources to design Renewable Energy projects that dynamically maximize electrical efficiency while operating within regulatory restrictions. Our advanced flow ramping algorithms and leading-edge control systems ensure your hydroelectric plant produces maximum revenue and satisfies all environmental and fisheries requirements with minimum downtime.



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UEE Renewable Energy

UEE supplies completely engineered, customizable electrical and control systems to Renewable Energy customers all over the globe. From substations, generator terminal cabinets, intake systems, and PLCs, to utility interconnections, protection studies, and technical support, UEE offers complete Renewable Energy solutions.



Flexible Solutions

Finding all the right expertise for the complexities of Renewable Energy projects can be a challenge. UEE offers flexible solutions that complement your existing project structure and promise complete interdisciplinary coordination. We can lead the project and deliver a turn-key solution, or simply supply missing links such as design and engineering services or electrical subsystems.

For an existing or previously specified mechanical system, UEE can design, manufacture, and deliver an electrical/control system that effortlessly mates with any configuration of turbine and generator, as an upgrade or to complete a Renewable Energy project.



Technical Support

UEE's Renewable Energy technical support does not end when projects go on line, nor does it exclude systems built by others. From troubleshooting emergencies, exploring efficiency improvements or routine testing and preventative maintenance, UEE personnel are always available to provide support for all system problems including generating and operating equipment supplied by others.



UEE Renewable Energy



Hydropower: Design and Manufacturing Solutions

UEE has long been innovating and engineering environmentally sound solutions that increase productivity, reliability, and efficiency for the Hydropower industry. We handle everything electrical, from system design and manufacturing to project management, utility interconnection, and regulatory coordination. We will design and build custom intake power and control systems, PLC-based turbine/generator control systems, speed governing systems, switchgear and substations, and design professional, easy-to-use HMI screens.

Complete turn-key systems, perfectly matched modular components, or professional technical services, UEE is there for your Hydropower project.

Wind and Biomass: Design and Manufacturing Solutions

UEE has the technical expertise and design capabilities to engineer a complete electrical grid to connect individual turbines of a wind farm, as well as the step-up energy conversion system to interconnect any Renewable Energy system to the transmission network. Working with the turbine supplier, UEE can model the behaviour of a wind farm and design power factor correction and fault protection systems to ensure generated power meets transmission system requirements.

As with other Renewable Energy projects, UEE can supply modular switchgear and e-house products for protection and isolation, as well as custom PLC and SCADA systems for efficient remote monitoring and operation.

Battery Backup



Turbine Control



Switchgear



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Team

Power Up! with our dedicated, internationally experienced team of engineering professionals.

UEE maintains a design and manufacturing team of over 100 skilled engineers, technologists, technicians and trades personnel to meet the exacting demands of our Renewable Energy clients. UEE engineers support your project through the custom design of complete electrical packages, including system programming, site testing, utility interconnection, and commissioning of equipment and process systems.

To help you Power Up! your overseas Renewable Energy project, our international sales representatives simplify your power procurement process, and get your project up and running.

Renewable Energy Project Experience

UEE has extensive Renewable Energy experience around the globe including several dramatic hydropower projects for Cloudworks Energy Inc., a Canadian producer of renewable energy in British Columbia. UEE designed, manufactured, and commissioned all the electrical and control systems for several run-of-river power generation systems, one of which included a 138 kV interconnection substation, 8.25 kV switchgear, turbine/generator PLC, isolated network and parallel speed governing systems, and station services subsystems.

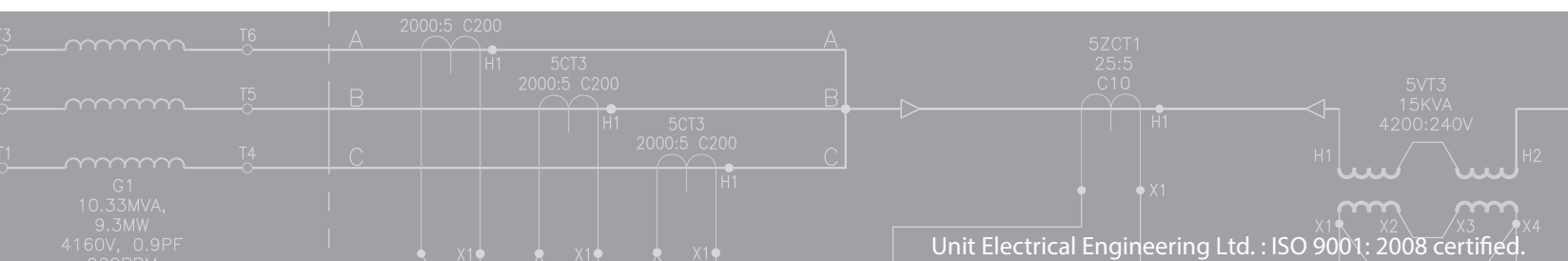
Some other clients and locations that have trusted UEE with similarly scoped Renewable Energy projects are:

Greenland Power (Nukissiorfit), Tasiilaq • JJ Puello, Dominican Republic • Furry Creek, B.C. • McNair Creek, B.C. • Brandywine Creek, B.C. • Young Life of Canada • Tyson Creek, B.C. • Fitzsimmons Creek, B.C.



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Latitude = 49.3387, Longitude = -119.5683 Lat = 49 degrees, 20.3 minutes North Long = 119 degrees, 34.1 minutes West

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