ENTRY LEVEL POWER ELECTRONICS ENGINEER
Support the development of high-performance, power electronic-based variable-frequency drives and related motor control products for the water delivery industry. In this role, the successful candidate will participate in the design of products using the same technology found in electric vehicles, wind turbines, and solar power conversion.

ESSENTIAL DUTIES AND RESPONSIBILITIES
• Support all product development activities associated with VFD and motor control electronic circuits including PFC, inverter, and SMPS sub-circuits.
• Participate in the acquisition of customer requirements, concept feasibility, modeling & simulation, development, design reviews, testing, and production phase-in.
• Support control and sensing circuit design for an embedded microcontroller-based product
• PCB layout supervision
• Design validation (planning, test standards, and test results evaluation)
• Design to agency requirements for UL, CSA, and IEC
• Actively participate in the development of control solution algorithms
• Help oversee third party testing/certification of products.
• Assist in analyzing returned materials.
• Provides technical support on a as-needed basis.

SKILLS AND ABILITIES
• Familiarity with basic power conversion inverter/converter topologies
• Knowledge of IGBT, MOSFET, & power diode components, application, and design principles
• Knowledge of filter design and components (capacitors & magnetics)
• Understanding of thermodynamics
• Familiarity with the principles of RF propagation
• Experienced with analog and digital signal conditioning circuit design
• Demonstrated experience in hardware testing and debugging
• Working knowledge of PCB design tools such as Altium and circuit analysis tools such as PSpice, Mathcad, MATLAB, and Simulink.
• Knowledge of control algorithm development, test, and validation
• Capable of communicating concepts and requirements to software development engineers

EDUCATION AND EXPERIENCE
• Entry level with 0 to 2 years’ experience (as may be obtained through an internship or support of a class project, etc.).
• Bachelor’s degree in electrical engineering, electrical engineering technology, physics, or related field from an accredited college or university is required.
• A candidate with an educational background that includes a senior project or master’s thesis in power conversion (i.e. alternative energy, high performance motors, etc.) is highly preferred.