

Nuclear Power Products and Services



About

Curtiss-Wright Nuclear Canada (CWNC) provides project management, equipment qualification, and commercial grade dedication services to the Canadian Nuclear Market and the international fleet of CANDU utilities.

Our services include seismic testing and analysis; radiation testing; thermal aging; and safety-related repair, refurbishment, and reverse engineering to extend the life of electrical and mechanical components. This includes design, procurement, fabrication, assembly, testing and qualification and/or dedication.

Products and Services

Using its experienced staff and advanced equipment, Curtiss-Wright Nuclear Canada (formerly Nuclear Power Services) develops environmentally qualified nuclear systems and hardware solutions that support the supply of safe, reliable, and economical electricity production. Our quality assurance program has been NUPIC-audited, meeting both the CSA N299.1-2016 and 10CFR50 Appendix B requirements for Canada and the United States. From our Curtiss-Wright Nuclear Canada (CWNC) facility located in Newmarket, Ontario, we provide a range of products and services including:

- **EQUIPMENT QUALIFICATION**

CWNC's qualification center is fully equipped for in-house testing for a broad range of components and assemblies, including a comprehensive set of equipment qualification capabilities for harsh and mild environments, seismic testing and analysis, thermal and mechanical aging, radiation, and EMI/EMC testing.

Seismic Qualification

We offer seismic testing services that cover everything from procedure preparation through specialized test specimen fixturing and monitoring, and customized reporting. As one of the testing facilities for the EPRI SQRSTS program, we offer industry-recognized seismic qualification free for EPRI members. We also provide the option to combine seismic testing and seismic analysis, consistent with the requirements of the CSA N289 series; the IEEE 344 and IEEE 323 standards.

Environmental Qualification

Our in-house Environmental Qualification (EQ) Testing and EQ Functional Analysis services are capable of testing for harsh and mild environments, this also includes simulating a loss of coolant accident (LOCA). The result of our EQ analysis is a recommendation for a full range of inspections to assure safety-related equipment and support systems are capable of maximizing utility performance during harsh environmental conditions.

Curtiss-Wright Nuclear Canada (CWNC)

Environmentally Qualified Systems and Hardware Solutions

Software Qualification

We qualify pre-developed software intended for Category II and III safety-related instrumentation and control applications in nuclear power plants per CSA N290.14. This service is also extended to software that can be configured by the interconnection of predefined function blocks.

• **COMMERCIAL GRADE DEDICATION**

CWNC uses our historical data, knowledge, and experience to assist with the qualification of commercial grade items for use in nuclear safety-related applications. Our methodology begins with a dedication procedure that includes technical evaluation, definition of critical characteristics for acceptance (based on safety function), and acceptance criteria; this is aided by our in-house test facilities that contain the fundamental equipment to support an accredited commercial grade dedication program.

• **REVERSE ENGINEERING AND REFURBISHMENT**

Utilizing resources from across Curtiss-Wright, CWNC can reverse engineer, refurbish, and provide obsolescence solutions for a wide variety of mechanical, electrical, and electronic components in both safety-related and commercial applications. Our goal is to design and manufacture an exact replica for your OEM needs or return devices to early life performance via refurbishment. These low cost solutions paired with our extensive resources ensure that all replacement components strictly adhere to the fit, form, and function of the original.

• **PRESSURE BOUNDARY ENGINEERED COMPONENTS**

We design, certify, register, and perform qualification tests for pressure boundary pumps and fittings. We also offer a portfolio of conductivity cells and cell holders manufactured at our Newmarket facility. We are certified by TSSA to N285 and CSA B51 for fabrication of welded and non-welded components.

• **PROJECT MANAGEMENT**

Curtiss-Wright maintains relationships with qualified teaming partners to upgrade commercial products for safety-related applications. Our experienced project managers are able to execute complex projects by providing qualified turnkey solutions such as:

- EMF Pre-Fabricated Electrical Powerhouse
- Custom Electrical Equipment Panels
- HVAC, Safety-Related Chillers
- HVAC Systems
- Motor-Control Centers (MCC)



MCC (2.5m x 0.5m x 2.2m) Being Seismically Qualified In-House

CONTACT INFORMATION:

165 Pony Drive, Newmarket, Ontario L3Y 7B5 Canada
cwnc@curtisswright.com | +1.905.954.0841 | www.cwnuclear.com