



# SOFTWARE ENGINEERING

## Highlights

- More than 60 years' experience in the design and manufacture of sophisticated nuclear power station equipment, including complex mechanical fuel handling equipment, on-reactor/in-reactor tooling, and maintenance tooling and over 40 years' experience delivering large- and small-scale software systems.
- Staffed with some of the best minds in the Canadian nuclear industry, with expertise in both software engineering and control systems technology.
- Development of software for modern industrial control systems, legacy minicomputers and desktop computers.
- Created a set of software development processes that ensure the release of fully qualified software to the field. Our processes are suited to the development of Category II, III and uncategorized software, including software that performs nuclear and conventional safety functions.
- We have developed software to the following standards, and can quickly leverage our existing processes to respond to additional standards as required for a given project: IEC 62138 Category C, CSA Q396.1.1, ISO 9001 and 90003, CE-1002-STD and CE-1003-STD.
- We regularly audit our software development processes in accordance with CSA Q395-81, and have been externally audited by our customers and CANPAC.
- Offer a complete software engineering lifecycle, from requirements definition to independent testing. We use a sophisticated requirements management database to implement traceability from customer requirements to test results. We also use state-of-the-art configuration management tools to track and compare versions of deliverables throughout the lifecycle.
- Through many years of experience completing modification packages, BWXT Software Engineering fully understands the engineering change control process. We can work with your processes and systems to take packages from preliminary engineering to closeout.

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## Knowledge Areas

- Process and motion control
- Interlocks and safety systems
- Human-machine interfaces
- Field simulation
- Computer emulation
- Data acquisition and analysis tools

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## Products & Services

- Original design and ongoing upgrades for Bruce and Darlington Fuel Handling (FH) systems
- Replacement of legacy control systems, including key FH safety systems
- Inspection and maintenance tool delivery systems
- Reactor retube and refurbishment tooling
- Data logging, analysis and automated testing tools
- Emulation of legacy computer hardware

People Strong

**INNOVATION DRIVEN >** . . . . .

*BWXT Nuclear Energy Canada Inc. is a subsidiary of BWXT Canada Ltd. (BWXT Canada), headquartered in Cambridge, Ontario. BWXT Canada has over 60 years of expertise and experience in the design, manufacturing, commissioning and service of nuclear power generation equipment. This includes steam generators, nuclear fuel and fuel components, critical plant components, parts and related plant services. BWXT Canada's sister company, BWXT Medical Ltd. (BWXT Medical) provides its customers, who conduct life-saving medical procedures for patients around the world, the benefit of decades of experience in the development, manufacturing, packaging and delivery of medical isotopes and radiopharmaceuticals. Headquartered in Cambridge, Ontario, BWXT in Canada has approximately 1,400 employees at locations in Cambridge, Dundas, Peterborough, Toronto, Arnprior, Pickering, Port Elgin, Owen Sound, Kanata and Oakville, Ontario and Vancouver, British Columbia. BWXT Canada is a subsidiary of BWX Technologies, Inc. (NYSE: BWXT). Follow us on Twitter @BWXTech and learn more at [www.bwxt.com](http://www.bwxt.com).*

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