Bruce Power Selects Vortex for Nuclear Refueling Simulator

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Bruce Power is Canada's first private nuclear power generator and a vital part of Ontario's energy future. Its 2,300-acre site on the shores of Lake Huron houses the Bruce A and B generating stations, which each hold four CANDU reactors. Six of those units are currently operational and produce more than 4,700 megawatts, which is enough to power one in five hospitals, homes, and schools in Ontario.

Refueling of CANDU reactors involves operation of refueling heads, transported by carriages and maneuvered into position in front of the calandria tubes by a bridge lift.
The machines are simple in principle but highly complex in practice. As a new generation of operators comes on board, Bruce Power has a huge need for rapid and efficient training. The goal of reducing training time from 18 months down to 12 months is a challenge only achievable with the help of simulation-based training.

Bruce Power turned to CM Labs to build a high-fidelity visual simulation of the fuel handling mechanical systems. The project involves the development of the environment representing the fuel route and the simulation of the fuel handling components operated from the main control room. The system will be integrated with a replica control room and the existing reactor control room simulator. The Bruce Power fuel handling simulator will allow operators to train on operations tasks such as new fuel and irradiated fuel transfer and storage; fueling machine head operations and reactor bridge and carriage operation.