Ben Breeden, a recent Ontario Tech University nuclear engineering grad says he and his classmates were excited but a little nervous about their final undergrad capstone project. “This was our last project in our last year of engineering school,” says Breeden. “Our group had to put forward a project application to COG. In other courses, no one other than your professor might look at your work. But for an industry project, it is much more meaningful, and if it works, it can have an impact in the real world,” says Breeden. “In the future, it would be interesting to tackle more problems.”

"I’d like to get into more research and potentially work for a lab,” says Breeden. “In the future, it would be interesting to tackle more problems.”

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“As a group, they have to understand the problem domain, characterize the requirements, do the background research and analysis,” says de Grosbois. “It helps build graduates that have tasted the challenge and rewards of complex systems engineering in a nuclear environment. The benefit to industry is not necessarily in the project outcome but the fact that it’s forming competent professionals that will soon be employed in our various technical environments.”

The experience gained could still benefit the nuclear industry. Breeden is pursuing a master’s degree, specializing in nuclear fuel safety under severe accident scenarios, in partnership with Sandia National Laboratories. “The disconnect can happen when our students graduate,” says Piro. “We want to ensure they are practical and aware of industry best practices, they understand quality assurance and reliability. Our intent with this capstone course and by having industry partners, like COG, is to hopefully deliver something meaningful for our industry partners, to really bridge the gap between academia and industry.”

COG accepted the project application. Breeden’s capstone team, which included classmates Siriram Saravanabavan, Michael Mai and James Liang, was one of a dozen Ontario Tech student-led projects supervised by professors from the school’s faculty of energy systems and nuclear science, as part of the annual nuclear engineering capstone course. One-third of the students teams are partnered with industry sponsors like COG, Ontario Power Generation (OPG), Canadian Nuclear Laboratories (CNL) and Kinectrics looking at real issues faced by these organizations. This was COG’s second year sponsoring an Ontario Tech nuclear engineering capstone project.

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