



# CENTRE FOR GRID INNOVATION

As a leading polytechnic, NAIT partners with industry in all that it does. Through our Industry Solutions we help partners develop applied research solutions for industry challenges, adopt new technologies, develop and test new products, provide workforce training for productivity and improve business practices.

## OVERVIEW

The electric utility sector is rapidly reducing its dependency on fossil fuels due to consumer preferences, policy changes and cost-effective technology innovations. This results in a need to develop new technologies and evaluate their integration with existing infrastructure. Alternative energy generation technologies, such as wind and solar, are often small-scale and located near the end-user, which may be disruptive to the traditional utility business model. Likewise, recent mandates for the use of intermittent renewables at large scale in Alberta, as well as the increasing use of electric vehicles, pose challenges and opportunities for energy management, efficiency and storage. The Centre for Grid Innovation provides innovation support to accelerate the transformation of electric power grids from a traditional unidirectional generation and distribution model to a modernized renewable and distributed model that reduces climate impact.

## AREAS OF FOCUS

The centre supports industry by developing, testing, demonstrating and validating distributed energy prototype solutions prior to commercialization and full scale-up.

The centre assists industry in the following areas:

- Laboratory evaluation of candidate technologies (i.e. generation, storage, etc.)
- Integration with model distribution infrastructure
- Load management simulation and monitoring
- Living lab demonstration projects
- Prototype design and fabrication
- Cold weather and environmental testing
- Technology showcase for utility operators
- Opportunity for municipal officials and citizens to explore innovations

The Centre for Grid Innovation builds on NAIT's existing expertise in alternative energy, electrical engineering, digital communications, skilled trades and business.

The centre works in partnership with Future Energy Systems at the University of Alberta, which is funded by the Canada First Research Excellence Fund.

## INDUSTRY PARTNERSHIPS

Working in partnership with Alberta utilities and international equipment vendors, the centre plays a role in advancing the adoption of distributed energy resources within Alberta's energy industry.

### FOR MORE INFORMATION:

Jeanie Chin  
780.378.5995  
JEANIEC@nait.ca