



## TROES INNOVATION HIGHLIGHT



### COMPANY OVERVIEW

TROES is a Canadian-based company operating in the Battery Energy Storage Systems (BESS) marketplace. BESS units are designed to provide grid stabilization and increased power quality by storing energy in batteries and delivering it to the users at a controlled rate. TROES develops, designs, manufactures, and commissions high-performance energy storage systems that integrate the company's proprietary battery modules, Battery Management Systems (BMS), enclosures and Power Conversion Systems (PCS).

**LOCATION:** MARKHAM, ON

### TECHNOLOGY



### Network Applications

### THE LIMITATIONS OF A CENTRALIZED ENERGY GRID

After more than a century, the limitations of the centralized energy grid have become an impediment to cleaner, less costly power. To overcome those limitations, Distributed Energy Resources (DERs) are being deployed at locations much closer to the customer. DERs are often linked with Energy Storage. TROES' goal is to enable mid-size customers to participate in this transition; they do this by bringing a state-of-the-art hardware and software energy storage combination to commercial, industrial, and institutional power consumers.

### PROVIDING CUSTOMIZED SCALABLE SYSTEMS

Small and medium power consumers have an increasing spectrum of applications where BESS can be utilized, such as frequency regulation, peak shaving, uninterrupted power supply, critical load back-up, and replacing lead acid. Given this wide spectrum of applications and benefits, TROES differentiates themselves by developing, designing, manufacturing, and delivering complete modular "Off-The-Shelf", flexible, and scalable systems. These systems cover a wide range of applications from 100kWh-40+MWh and are designed in increments of 7kWh to match project needs, preventing unnecessary oversizing and overpaying.

### TROES ON THE CENGN TESTBED

TROES successfully tested their cloud-based monitoring and newly developed control system in the CENGN Testbed. TROES proved their strong system was stable and functional through various simulated testing scenarios. During their CENGN project, the TROES team also validated the BMS and gained more knowledge on how to configure the BESS to different cloud base servers while ensuring communication security. Testing at CENGN helped TROES understand the nuances of a cloud-based environment so they can continue to improve the scalability of their platform in the future.

**"The result from this project further pushes our remote monitoring system's commercialization allowing us to provide more diversified products and services to the market."**

**Vienna Zhou**  
CEO, TROES



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