



## 407 Express Toll Route

The 407 Express Toll Route (ETR), a 108 kilometer (67 mile) highway in Canada, is the world's first all-electronic, open access toll highway. Toll information is captured automatically through a Vehicle Detection and Classification (VDAC) system that reads signals from transponders installed in vehicles or by photographing license plates and issuing an invoice based on vehicle registration.

### Background

Enabling business continuity on the first all-electronic toll highway requires more than just a reliable source of backup power during outages. It also requires ensuring sensitive electronics are receiving clean, conditioned power during regular operation and are isolated from extreme fluctuations.

### Case Summary

**Location:** Toronto, Canada

**Products/Services:**

- Liebert GXT UPS systems with external maintenance bypass
- Liebert OpenComms communication cards for remote monitoring and management

**Critical Needs:** Protect revenue stream and investment in electronics systems used to collect vehicle information on all-electronic toll highway.

### Results

- Eliminated power problems that were occurring with previous UPS systems.
- Survived extreme power fluctuations that occurred during the 2003 blackout with zero damage to expensive electronic systems.
- Enabled consistent, accurate performance of critical revenue-generating electronics.

## The Solution

“The ability to isolate equipment from bad power is the most important function our power protection system needs to perform,” says a team leader responsible for critical system availability at 407ETR. “We suspected a true online UPS such as the Liebert GXT would help alleviate problems we were having with our existing UPS.”

The Liebert GXT system not only alleviated the problems, it completely eliminated them.

As a result, all 196 of the roadside communications units used to collect tolling information are now protected by Liebert GXT UPS systems.

The UPS systems are housed in an outside enclosure with the tolling equipment. The UPS communications card notifies highway staff when tolling equipment goes on UPS power and when UPS batteries are down to 30 minutes of capacity.

Each UPS provides at least two hours of runtime and enclosures are equipped with a generator connection to provide power during extended outages.

“Power quality was extremely erratic during the period surrounding the 2003 blackout,” the team leader says. “When it was over, we had zero damage to our VDAC systems. With our previous UPSs we would have lost at least three VDAC systems during that event.



*“We always recommend Liebert. It is an off-the-shelf solution that delivers excellent value and protection.”*

*Team Leader, 407ETR*

If we couldn't read license plates and transponders every time the power went out, our losses would be tremendous,” he continues. “Fortunately, that's something we don't have to worry about.”

That has given the team at 407ETR the confidence to recommend Liebert technology.

“We always recommend Liebert. It is an off-the-shelf solution that delivers excellent value and protection.”

For more information on Liebert technology, visit [www.Liebert.com](http://www.Liebert.com).

### Emerson Network Power.

The global leader in enabling Business-Critical Continuity™.

- |                |                      |                             |                               |
|----------------|----------------------|-----------------------------|-------------------------------|
| ■ AC Power     | ■ Embedded Computing | ■ Outside Plant             | ■ Racks & Integrated Cabinets |
| ■ Connectivity | ■ Embedded Power     | ■ Power Switching & Control | ■ Services                    |
| ■ DC Power     | ■ Monitoring         | ■ Precision Cooling         | ■ Surge Protection            |