

# Training Center Goes Green With Driving Simulators

By Scott Schrecengost, Freelance Writer

**Rising fuel prices** and global warming continue to capture greater attention in the U.S. and around the world. Increased fuel consumption by trucking companies and their big rigs operating on the nation's highways hurts the pocket-books of truck operators and consumers, and threatens the environmental health of the planet. In addition, there is a shortage of qualified truck drivers and an urgent need to efficiently train new professional drivers. One solution that can address all these problems is more effective and efficient driver training.

A study done in a partnership between the U.S. Environmental Protection Agency (EPA) and leading carriers found that better driver training is one factor in reducing fuel consumption. The EPA study found that companies could save \$3,000 per truck by improving fuel economy by just five percent, and eliminate eight metric tons of greenhouse gas emissions per truck every year. \*

## A New Approach to Training

These global issues created an opportunity for a unique public-private collaboration. The Center for Transportation Training Charlesbourg, or CFTC, a Quebec, Canada, publicly funded training school, has teamed up with Virage Simulation, a developer and provider of state-of-the-art driving simulation systems, to tackle these issues with both experienced and new truck drivers.

The school's director, Eddy Vallieres, first saw truck driving simulators in 2000. "At the time, the price was way out of reach," he said. But Vallieres decided to invest in simulation in 2005 to train the center's over 1,300 new drivers each year. These systems, purchased in 2005, from another company had mixed results. "The systems we used previously focused mainly on driving maneuvers,



Eddy Vallieres, CFTC Director

and it was difficult to create specific scenarios for our training needs," Vallieres said.

The school now works closely with Virage's research and development professionals to incorporate the company's VS600M simulators and programs into the school's training curriculum.

According to Vallieres, Virage approaches truck driver training from a totally different perspective. They work hand-in-hand with the school to create programs that break down individual driving tasks into short, specific scenarios. The school now uses Virage Simulation's VS600M simulators and the Eco-Drive Pro™ program with experienced drivers, in addition to their Golden Shifter™, Golden Mirror™ and Golden Steering™ programs to more efficiently help new drivers master basic skills.

Investing in simulation was a good way to keep their operating costs down while enhancing their overall training program. Simulation technology has grown by leaps and bounds since 2005 and a good high-end simulator today costs only about the same as an actual truck. Since there are no accidents, fuel use, or a need for insurance with the simulators, CFTC has been able to keep their tuition costs affordable at a time when other operating costs are rising.



Student on the Virage VS600M at CFTC

## Creating Greener Drivers

While vehicle manufacturers work to increase fuel economy with the actual vehicles, Virage worked with the Quebec government to develop Eco-Drive Pro™ to help reduce the financial impact and environmental harm of driving. "The program is designed for drivers with years, even decades, of experience behind the wheel," stated Virage Simulation's President, Remi Quimper. "We don't tell the drivers what to do, but help them understand the physics behind fuel consumption, how they can manage acceleration for increased fuel economy, and tips to improve their shifting habits."

Virage reviewed the existing approaches, and decided to focus on two basic questions; what causes a vehicle to consume fuel, and what can the driver do to reduce it? Research done using the Eco-Drive Pro™ program found that it can improve driver fuel efficiency between 4 percent and 24 percent after training.

CFTC has been delivering Eco-Drive Pro™ on their simulators for the past three years and found it to be a valuable training tool for companies concerned about fuel consumption. “We’ve trained over 400 drivers with the program and demand is growing,” said CFTC’s Driver Training Supervisor, Martin Tardif.

CFTC now has three 53-foot trailers, each equipped with two Virage VS600M truck simulators, that they can take right to the carriers to train their drivers with the Eco-Drive Pro™ program, saving the companies time and money.

### Training the Drivers of Tomorrow

CFTC and Virage Simulation did a comprehensive evaluation of the school’s training program for new drivers and found that they were spending a large percentage of time teaching students how to shift. After analyzing the issue, Virage developed the Golden Shifter program, which segments every part of the shifting maneuver. “Simulation allows us to focus on teaching specific actions, like proper clutch depth, double clutching, and downshifting,” said Quimper.



Students training on VS600M simulators at CFTC’s Quebec, Canada site

Studies conducted by the prestigious business and research university, HEC Montreal, found that it took students much less time to learn shifting skills using the Golden Shifter™ program. The research study showed that students who used the program attained shifting competence in half the time compared to students who learned shifting skills in-truck with an instructor.

CFTC’s Tardif was tasked with implementing the Golden Shifter™ program into their existing curriculum. “We started with 10 instructors working with their students on the simulators,” said Tardif. “As they became more comfortable with the program, we trained more instructors on how to utilize the simulators.” Once the instructors saw how quickly the students mastered their skills on the simulators, they were eager to expand the use of the systems in their training.



Martin Tardif CFTC Driver Training Supervisor

The VS600M simulators have allowed the center to pack more training into the same amount of time. Students can spend three hours in a truck and may only practice four backing maneuvers. With the simulators, they can spend the same three hours and get ten times the practice on backing. “With the simulators, you just press ‘reset’ and you’re ready for the next maneuver,” said Vallieres.

### The Road Ahead

CFTC’s Vallieres sees opportunities for specialized truck driver training. “In Quebec, we have a lot of log hauling and mining operations with trucks that carry 400,000-pound loads,” he said. “We see a definite need for properly training drivers carrying mega-loads. A simulator program for these types of drivers would be invaluable.”

Quimper also pictures a bright future for the simulation industry. “The beauty of simulation is that you can adapt it to each customer’s needs,” he said. “Putting together the hardware to build the simulator is one thing, however, creating a good training and teaching tool is quite another. That’s why we work so closely with CFTC and all our customers to understand their training requirements and how best to teach and integrate them with simulation.”