

On the right track for energy savings

Even the betting tickets and horse manure are recycled in Woodbine's conservation retrofit

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It's tough to hold a standardbred horse race with the lights off, but officials at Woodbine Racetrack are looking at how to play their part during Earth Hour without putting the safety of patrons, jockeys and horses at risk.

"It's on our radar," said Jane Holmes, vice-president of corporate affairs at Woodbine Entertainment Group, which runs the tracks at Woodbine and Mohawk. "We're working with operations to see what we can do."

Expect a symbolic gesture – perhaps just a slight dimming of some lights – rather than darkness when the horses are called to the starting gates on the evening of March 29. But Holmes, recognizing the importance of Earth Hour and the awareness it will create, said Woodbine considers the reduction of its ecological footprint a year-round effort.

In the last two years alone, Canada's premier horse-racing track, which opened in 1956 and draws seven million visitors annually, has spent roughly \$5 million on an energy retrofit that has slashed the track's energy bill by \$500,000 a year.



RON BULL/TORONTO STAR

Tony Sarra, a Woodbine service supervisor, stands in the facility's boiler room. The empty area in the foreground is where the old boilers were, now replaced by the two more efficient CAMUS units.

It's a big bill. Woodbine, located at the corner of Rexdale Blvd. and Highway 427, spent \$3.2 million last year on electricity and natural gas. It used just over 27 million kilowatt-hours of electricity, enough to power more than 2,300 homes for a year. The gas it consumed was enough to heat and supply hot water to more than 700 homes.

Anchoring the track's effort is a new building automation system installed by Direct Energy that lets John Marhong, director of facility services, monitor and control energy use

throughout Woodbine, whether inside the building or on the track.

Sitting in front of his office computer in the basement, he pulls up a screen.

"I can control all of this from anywhere in the world," said Marhong. "Every minute, every hour that we can shave off using a piece of mechanical equipment saves us energy." Occupancy sensors, for example, will turn off lights in certain parts of the building if no movement is detected. Energy-efficient LED lights are used in all exit signs.

In the slot machine rooms,

which are open 24 hours a day and are always bustling, carbon dioxide sensors are set up as part of a demand-control ventilation system. The more people in the room playing the slots, the greater the amount of CO₂ released into the air. If the sensors detect an increase, they can speed up ventilation fans accordingly, keeping the air fresh and at a more consistent, comfortable temperature.

"It makes perfect sense," said Frank Cammalleri, manager of energy engineering services at

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Direct Energy. "At night there are three people to one slot machine. In the day it's one-to-one. So the whole ventilation requirements change dramatically through that 24-hour period."

He says by far the most dramatic impact on Woodbine's energy bill has been the installation of five new boilers – two for hot water that are about the size of a household refrigerator and three larger units for space heating. They replaced the facility's 52-year-old steam boilers, massive dinosaurs of another age, which required four engineers to run them 24 hours a day.

"It's a real winner," said Cammalleri. "You don't need staff anymore to operate them." And natural gas savings alone amount to about \$250,000 a year.

Outside, a new weather station sits on the inside of the track. Sensors monitor temperature, wind speed, particulate levels, ground-level ozone, and even how quickly moisture is leaving the track.

In the past, grounds workers had to guess when to water the track, resulting in the unnecessary use of water.

To further reduce the need for municipal water, storm drain water is collected in ponds and used for track watering.

Recycling doesn't end there. The facility recycles most of its cardboard, glass, kitchen waste, grease, and up to 70 per cent of plastic. Betting tickets usually

thrown onto the ground after each race are swept up and recycled. Even the horse manure is collected and sold to a farm that uses it to grow mushrooms.

Peter Love, Ontario's chief energy conservation officer, said it's important for high-profile destinations like Woodbine and the Rogers Centre, which recently completed its own energy retrofit, to take leadership roles on energy efficiency.

"A real challenge with a lot of this stuff is that it's invisible," he said. "So it's important to provide profile to these energy-efficient activities and these leaders."

Woodbine's efforts are ongoing. Marhong is exploring the idea of installing solar-thermal panels on the facility's rooftop for heating hot water. Direct Energy is also in the process of installing

daylight harvesting sensors near windows that will shut off indoor lights if the ambient outdoor light is bright enough to do the job.

Outside, where 700 lights are used for evening racing, the potential for power reduction is huge. Each light is 2,000 watts, or 20 times more powerful than a household light bulb. Each minute they're on costs the track \$2.50. At the moment, lights can be turned off manually between races, but it's an imperfect system that's throwing money out the window.

"Manual control means the lights are on 30 minutes too much every day," said Marhong, who wants to move to a dimmable system that automatically turns down the lights during the 25 minutes between races. "We might be able to dim by 60 per cent."

It's a good bet.