



UNIVERSITY OF
REGINA

Update

“Smart” outlets reduce electrical consumption

A string of Christmas lights used as a block heater extension cord; a baseboard heater serving as an interior cat warmer. The people who manage and maintain the University of Regina's parking lots have seen it all.

“You wouldn't believe some of the set-ups we see,” says Larry Couse, who manages electrical services for the University's Physical Plant department. “Of course, the reason we see them is because a service person has been called out to find out what's gone wrong.”

All too often, the problem is not the electrified pedestal or the power supply, but something associated with the vehicle parked in the stall. Faulty cords, block heaters that need replacement and overloaded circuits are the most common reasons service personnel are called out to troubleshoot a customer complaint.

There are at least two problems with running a troubleshooting operation, though. One is that those trouble calls cost money, which is added to the cost of parking fees the following year. “It's been University policy for years that those costs be included in the parking fee,” Couse explains.

The other problem is that they consume

time. Couse says he'd like to see his people “doing more useful work”, while also saving on energy costs.

Enter the Intelligent Parking Lot Controller (IPLC). About five years ago Couse learned about a Winnipeg company that makes “smart” power outlets for parking lots. He bought a few and installed them in the truck stalls beside the University's maintenance building. He was impressed. Two years ago he recommended that IPLCs be installed in all of the University's electrified parking lots. So far they have been installed in three lots. The long-term plan is to convert all electrified stalls to IPLCs.

The IPLC looks much like a standard outlet. The only visible difference is a green and a red LED on top of each power plug. Those little lights are the key to significant energy and other cost savings.

“When a customer drives into a parking stall and they see a flashing green light, they know power is running through the outlet, and can plug in,” Couse explains. “When they plug in and the light burns green continuously, they know the current is working. A flashing red means there is something wrong with the customer's power cord or vehicle equipment. If

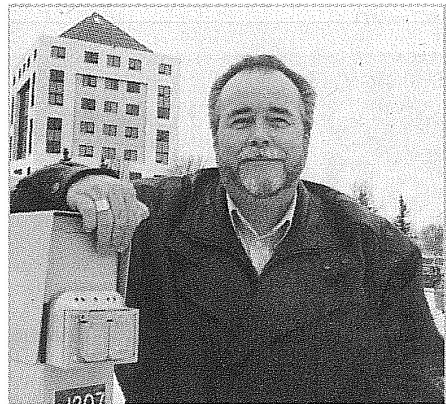
it switches to continuous red, that means there is a dead short or an overload, and power is not coming through the outlet properly,” Couse says. “The computer that monitors the IPLC will cut power before the circuit breaker in the pedestal trips, saving us a call out to reset the breaker.” The savings are significant. IPLCs saved 50 trouble calls in November 2003 alone.

But there's more to the gadget than reducing trouble calls. The IPLCs also cut energy consumption by 50 per cent or more by regulating the delivery of electricity to the vehicle. When a customer plugs in upon arrival the engine is warm, so the IPLC waits two hours before sending power to the block heater. The microprocessor inside the IPLC also monitors temperature and wind conditions, supplying power continuously if the temperature is below - 30 C, or in cycles if it is above - 30.

“Those are the factory default settings,” says Couse. “We can change that on the computer, or customize settings for stalls housing vehicles with diesel engines, or emergency vehicles.”

Couse is clearly enthused by the IPLC, calling it a great product, but one that is not yet well known. “Parking fees are not going to go

down, but this unit will help us minimize the increases, and contribute to the U of R being an environmentally sustainable campus,” he says.



Larry Couse, manager of electrical services for the U of R, shows off an Intelligent Parking Lot Controller unit - minimizing costs, and contributing toward a sustainable campus.