

Brattleboro Memorial Hospital is the First U.S. Hospital To Install Anti-idling Kiosk Stations for Ambulances



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Truck stops provide anti-idling stations for tractor trailer drivers so when they have to park overnight and sleep, they can control the cab temperature and operate electrical components without burning diesel fuel. The driver, or his employer, saves on fuel costs and engine maintenance while reducing toxic emissions and noise pollution. Thanks to a U.S. Environmental Protection Agency (EPA) grant administered by the Vermont Agency of Natural Resources, Brattleboro Memorial Hospital (BMH) is the first hospital in the country to provide this anti-idling technology for ambulances.

The volume of patient visits in BMH's emergency department will allow the kiosk manufacturer, AireDock, to measure

effectiveness before implementing at larger hospitals across the U.S. The timing was good for our emergency department as well, which at 13,000 annual visits has outgrown its current facility. We were able to incorporate the placement of the kiosks into the existing plans for expansion and, like the construction of the Richards Building a couple years ago, we're seeing how we can be more energy-efficient and environmentally-friendly at the start of the project.

Our AireDock units would have cost \$ 14,000 each, but our federal grant paid for them as well as the installation by local contractors completely. The State of Vermont came to me asking if we would be interested in being a trial facility for this technology. We accepted the offer and installed the units after getting feedback from ambulance drivers. Actually, the person who was an intermediary in this process worked with both BMH and the local ambulance service to come up with a plan that would work. Ambulances are not charged for use of the kiosks.

The kiosks, located in the Emergency Department side lot, are metal pillars that look like futuristic gas-pumps. But instead of engine fuel these kiosks provide a power source for an emergency vehicle's battery-operated systems. The electricity-powered kiosks work by connecting to a duct in the vehicle after it's been turned off. The kiosks keep the vehicle warm in the winter and cool in the summer.

Without the kiosks, the diesel engines of ambulances must run in order to maintain stable interior

temperatures and ensure continual operation of necessary medical equipment. An ambulance spends an average of 20 minutes docked at the Emergency Department while EMTs admit a patient they've transported. During that time it is imperative to maintain a constant temperature to ensure equipment is operational and medicines are safely stored.

But keeping the engine running generates fumes and odors that get into the facility's ventilation system. Exterior doors are constantly opening and closing at a hospital, bringing in a lot of outside air. Any time you have idling, depending on which way the wind blows, people will get affected by it. Removing these noxious gases is the big benefit for us. The engine noise from an ambulance is minimal compared to a large truck, and an ambulance burns about two-thirds less fuel per hour than an 18-wheeler, but any emissions from idling engines are a detriment. The kiosks will also lower operating costs for ambulance operators by reducing engine wear and tear.

Since we mentioned outside air coming in through our entrances, this influx also makes temperature control a challenge. As with most hospitals our number one energy consumer is our heating and air-conditioning system. The Richards Building project (a three-story, 34,000 square-foot outpatient building, completed in 2008) allowed us to install an energy wheel that

(To Page 10)



Left: An ambulance is idling via the kiosk. Right: The kiosk, the MediDock, gets a protected space in the BMH parking lot.

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Brattleboro Memorial

(From Page 9)

facilitates air exchange, pre-cooling outside air in the summer and pre-heating it in the winter. It's a great energy-saver.

Other Energy-Saving Steps Taken at BMH

- We're also planning to install more LED lighting when we renovate the emergency department, both in the new entranceways as well as in the parking lots. We've been using LEDs in the employee parking lot we began leasing last year. They offer bright, consistent illumination, which is good for dark parking lots, and save on maintenance as well as energy consumption. There was no existing power source at the lot's location, so rather than paying to install a new meter and wiring we purchased solar collectors. They are working great and we expect to use them at other parts of the campus to reduce our electricity use.
- Our aluminum recycling station has become a drop-off resource for the public, with the redemption proceeds funding a local playground.
- Jamie Baribeau, our Director of Nutrition Services, is investigating ways food waste can provide compost to individuals. He also wants to start a small herb garden in a section of the Richards Building rooftop.

- We have ceased delivery of bottled water. The water in our pipes gets double-filtered and uses UV in the cooling area to keep bacteria from growing. A lot of people say the water tastes more refreshing than the bottled water.
- At our Touch-a-Truck event in September for children, we were thinking about effectively using resources when we opted for 2,200 pounds of mulch for the play area instead of sand — our groundskeepers can re-use it for landscaping when the event is over.

For More Information about Anti-idling Kiosks:

- www.airedock.com
- <http://www.fhwa.dot.gov/publications/publicroads/05mar/02.cfm>
- All issues of the publication, *National Idling Reduction Network News*, may be found at http://www1.eere.energy.gov/vehiclesandfuels/resources/fcvt_national_idling.html

About Brattleboro Memorial Hospital:

Brattleboro Memorial Hospital has provided health care services for over 100 years. A 61-bed community hospital located in Southeast Vermont, it serves a rural population of about 55,000 people in 22 towns in Vermont, New Hampshire and Massachusetts. The medical staff includes 137 board-certified physicians, both primary care and many specialists, and its 515 employees enjoy the help of over 150 active volunteers. BMH is accredited by The Joint Commission.

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