

A remedy for the operating room

The challenge: Persuading hospitals to buy Blue-Zone's anesthetic gas recovery and recycling service

The plan: Build up a stock of recycled gas and sell it back to cash-strapped hospitals, which could reduce their anesthesia costs by 25%

The payoff: Signing up Ontario hospitals, then expanding service across Canada and around the world

FRANK ARMSTRONG

March 23, 2009

When Dusanka Filipovic formed Blue-Zone Technologies in 1999, she knew its unique clean technology could capture the attention of global markets.

Ontario's hospitals spend \$20-million a year on the chemicals that induce anesthesia during operations, only to vent 95 per cent of them into the atmosphere. Blue-Zone says these greenhouse gas emissions equal the annual exhaust output of 30,000 cars.

The Concord, Ont., company captures the gas not used by the patient in special canisters and recycles it so it can be sold back to hospitals, at reduced cost, in its pure liquid form. This lowers expenses for hospitals and keeps anesthetic chemicals and greenhouse gases out of the air.

"From the beginning, it was very clear it would more than just benefit the company - it would benefit the entire world," says Ms. Filipovic, the company's president and chief executive officer.

Ms. Filipovic, an engineer, founded Blue-Zone using intellectual property she co-developed while working for Union Carbide Canada (now Praxair Canada Inc.) and with help from the Department of Anesthesia at the University of Toronto.

Blue-Zone's patented Deltasorb system was tested over five years in 150 operating rooms in 14 Ontario hospitals. The pilot project was financed with \$2.7-million from Sustainable Development Technology Canada, a not-for-profit federal program.

The money ran out in February, but two hospitals in Eastern Ontario continue to use the technology, sharing the costs with Blue-Zone. Ottawa's Children's Hospital of Eastern Ontario and Peterborough Regional Health Centre are paying \$90 of the \$300 monthly service while Blue-Zone is shouldering the rest of the cost.

Blue-Zone assures subscribers that, within two years, they will reduce their anesthesia costs by 25 per cent once the company builds a stock of recycled gas.

But hospitals have been reluctant to sign on, though Blue-Zone says the amount eventually saved would dwarf the costs of the service.

Blue-Zone's service includes weekly maintenance and removal and recycling of anesthetic gases.

The gases are collected in special canisters, which are taken to its plant in Concord, where its staff separate the gases and distils them into their original liquid forms. The liquids are then returned to operating rooms.

Blue Zone says adoption of the technology province-wide would allow it to create 100 jobs and also develop a new industry for Canada: the remanufacture of anesthetic gases.

None of the chemicals used in the \$1.1-billion global market are made in Canada, Ms. Filipovic notes.

Blue-Zone is now lobbying the Ontario government for creation of a rebate program to help hospitals buy its services, and allow the company to build a critical mass of gases.

If the technology were offered province-wide, Ms. Filipovic estimates hospitals would save more than \$5-million on the \$20-million annual cost of anesthetic chemicals.

"It's not cost-prohibitive, and this is an investment in the future with immediate and long-term rewards," Ms. Filipovic says.

Once Blue-Zone is widely used in Ontario, she says, the company aims to spread its services across the country and around the world.