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Pharmaceutical disposal companies turn unwanted, outdated drugs into power

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MILWAUKEE: Don't be so quick to throw out that expired blood pressure medication. Drug disposal companies are taking outdated or recalled prescription drugs from pharmacies and manufacturers and incinerating them, generating energy.

Milwaukee-based Capital Returns Inc. last year created enough energy to power more than 220 homes for a year. To do that, it incinerated 6.5 million pounds (2.9 million kilograms) of pills and other pharmaceuticals, which are sent from pharmacies and drug manufacturers around the country.

The company predicts individuals and not just corporate clients soon will be able to have their unwanted drugs incinerated, too, creating an even larger source of energy. Such a move □ which the federal government must OK □ would give people an alternative to flushing the often toxic substances down their toilets, which can pollute the environment.

The Environmental Protection Agency encourages local drug-collection programs to limit the amount of medication that makes it into the water supply, said Ben Grumbles, the EPA's assistant administrator for water. Studies have shown adverse effects on fish, such as to their reproductive organs, though nothing has been shown to harm humans, he said.

Incineration, when done properly, has minimal effect on the environment. But federal approval could take years. In the meantime, pilot disposal programs are popping up around the country.

The push for these programs will grow as the population ages and people rely on more pharmaceuticals, said Len Kaye, director of the University of Maine Center on Aging, which just received an EPA grant to start a pilot program where people return drugs by mail.

The possibility to create more energy will grow as well then.

"That would make it a win-win situation for everybody involved and certainly add to the payoff," said Kaye, who also spearheads a conference of academics and others on ways to expand drug disposal. "We want simply at this point to destroy them properly. That's an accomplishment in and of itself."

The pharmaceutical disposal industry □ now only used by manufacturers and pharmacies □ started in the early 1990s. Before that, pharmacies had to do returns themselves or wait for pharmaceutical companies to pick up unwanted drugs and handle destruction.

Since the beginning, Capital Returns decided to use incineration plants that convert to energy to limit environmental impact, said president Larry Hruska.

Last year it created nearly 2 million kilowatt hours of electricity, enough to light up 220 homes for a year. The electrical industry figures the average home uses 9,000 kilowatt hours a year.

"Instead of just having this product go some place and be destroyed, and have no benefit whatsoever because it's dumped in the ground, it's great it's able to create some energy and a resource that people are able to use," he said.

Capital Returns has 28 percent of the returns market and expects a 20 percent increase this year in revenues, Hruska said. He would not give dollar figures for the company, a unit of privately-owned GENCO, based in Pittsburgh. There are about 40 medical returns companies — called "reverse distributors" — registered with the Drug Enforcement Administration, according to its Web site.

Even though Capital Returns figures only about 1 percent of all drugs are returned, either because of recall or expiration, there's plenty to be had. The company estimates the value of pharmaceuticals returned to third-party disposal companies each year is \$4 billion (—2.9 billion) to \$5 billion (—3.6 billion), though that's not what disposal companies are paid. It declined to release such numbers.

Day after day, semis carrying millions of pharmaceuticals come to the company's headquarters where Capital Returns' 600 workers unload them and scan them into a computer system. Companies can track their shipments online, which is especially important in the case of a recall, when the government must be assured of destruction.

The drugs travel to an incineration plant in Indianapolis run by Covanta Energy, which sells the steam energy to a local utility. Hazardous materials are taken to an incinerator in Arkansas, which is licensed for their destruction.

Pharma Logistics Inc., which takes drugs back from pharmacies, sends about 24,000 pounds (10,900 kilograms) of pharmaceuticals — a semi-truck full — for disposal each week to the same incineration plant Capital Returns uses. President Mike Zaccaro said they chose the plant because it generates energy. He figures the entire industry disposes of about 16 million pounds (7.2 million kilograms) of pharmaceuticals a year.

Covanta Energy Corp. has converted waste to energy for 20 years, using everything from municipal sludge to everyday trash. It has incinerated pharmaceuticals since the mid 1990s, and now does such disposals at 21 of its 32 facilities, said spokesman Derek Porter.

Porter said pharmaceutical disposal is a small part of the business but growing. The Indianapolis plant sells steam directly to the local utility to use as energy, though the majority of Covanta's other plants harvest the steam created from incineration and use that to create electricity, which is then sold to utilities.

Capital Returns is devising its own pilot program for consumers to mail back medications in a three-county area around Milwaukee.

States are starting to craft their own pilot programs as well, and some of them create energy. The state of Washington has tested return programs at pharmacies in a five-county area since last October. People return their unused drugs anonymously at pharmacies, and they are eventually incinerated and turned into energy, said Emma Johnson, resource efficiency coordinator for solid waste programs in the state's Department of Ecology.

The incineration is done, for now, at the Spokane Waste-To-Energy facility, though Johnson said the program hopes to switch to a hazardous waste facility if it can get waivers to handle such materials from the government.

So far, they've collected about 2,000 pounds (907 kilograms) of medicine. That translates into a tiny amount of energy — she couldn't even estimate it — but any amount helps, she said.

Most program participants don't know their drugs are being turned into power, she said. They like knowing their drugs aren't getting into the hands of children, pets, or people abusing medication, or that they won't pollute nearby water.

"There are a lot of people out there who really want to do the right thing," Johnson said. "They just don't have either the resources or some place convenient to go."

On the Net:

Capital Returns: <http://www.capitalreturns.com>

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