

Ontario bill targets stray voltage from power lines as threat to human health
by GREGORY BONNELL

TORONTO (CP) - Canada's dairy cows are acting as "canaries in coal mines" when it comes to detecting stray electricity in the ground that poses a significant threat to human health, experts said Thursday.

While research and courtroom victories suggest stray voltage from power lines can negatively impact on a cow's milk production, there's also a documented case of it claiming a human life.

Cattle herds, to the dismay of dairy farmers, are on the frontlines of detecting the problem, said Magda Havas of Trent University in Peterborough, Ont.

"We normally hear about this from dairy farmers, because the cow becomes the canary in the coal mine," said Havas, a professor of environmental science.

"The cow, because they milk it twice a day . . . they record how much milk (they) give. If there's a change in that 24-hour period, they can pick it up instantly."

The problem lies in the neutral wires on hydro transmission lines which carry electricity back to the transformer to complete the circuit.

If there isn't a neutral wire, or the one present can't handle the load, then power will stray - traveling through yards, buildings, fields, animals and humans on its way back to the transformer.

"It would knock our cows down," said Lee Montgomery, a former dairy farmer from southwestern Ontario.

"We're were getting (power surges) over 1,000 volts, and I've got the tapes to prove it, I've still got 'em."

In the late 1970s, Montgomery went from being one of the top dairy producers in the Chatham-Kent region of Ontario to ranking near the bottom.

"He went from being a top quantity as well as top quality, then he went right down," said Barry Fraser, a former Ontario agriculture ministry worker assigned to monitor the problems on Montgomery's farm.

That work led the ministry to concede that stray electricity could be a factor. Montgomery sued the province's giant power utility, then called Ontario Hydro, and settled out of court.

"(The power utilities) fail to consider what effect (stray voltage) would have for people and animals who stand on that ground and are exposed to that current," said Havas.

Last week, a jury in Washington State ordered a local power utility to pay \$1.1 million in

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Exhibit J-7 from June 5, 2009 Hearing - Refused by ALJ. Irrelevant

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damages to a dairy farmer who argued ground current devastated his business.

The problem isn't solely the concern of farmers.

Two years ago in New York City, a woman walking her dogs was killed by stray voltage when she stepped on a steel plate.

"We want to make sure that it doesn't happen here," said Havas.

"We want to get rid of the problem so that it helps farm animals, it helps farmers but it helps people in urban areas as well, before there's a death (in Canada)."

In the majority of cases, adding a neutral wire where there isn't already one, or a second wire to help handle the load, would solve the problem, said Havas.

To that end, legislation calling for fines of up to \$1,000 for each day a utility fails to act on complaints of stray electricity passed second reading Thursday in the Ontario legislature.

The private member's bill originated from the backbenches of the Liberal government. Ontario Energy Minister Dwight Duncan said he was "glad" to see a discussion on the "little-known issue."

"We don't have many neutral wires in the province right now," said Duncan.

"We take advice from the legislature, from the people of Ontario, (but) I can't say we'd move on it in a fast time frame."

The problem of stray electricity isn't confined to farm fields and city streets, said Havas.

"When you turn on that tap to get a drink of water, to do your dishes, to have a shower, there is current flowing through from the tap through your body," she said.

"The way it comes into our house is through the plumbing. Everything is grounded to plumbing, that's how our code works."

Electricians measuring stray electricity coming through shower heads have found levels strong enough to seriously harm, or even kill, people, said Havas.