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HEAT-POWERED ECOFAN SAVES 14 PERCENT ON HOME HEATING FUEL COSTS

Collaborative Study with Representatives from University of Waterloo Confirms Results

WIARTON, Ontario. (Aug 9, 2010) – [Ecofans](#), heat-powered portable fans designed to circulate warm air generated by residential wood stoves, reduce home heating fuel costs by approximately 14 percent. Researchers from the faculty of Engineering at the University of Waterloo and Caframo, manufacturers of the Ecofan, collaborated on a scientific study to measure the reduction in firewood needed to maintain comfort with the use of the fan. Ecofans help circulate the warm air generated by a wood stove, which can make a room more comfortable using less fuel.

“We are pleased to help people save money, and were excited to see that the savings can be as much as 19 percent,” says Elliott Good, sales and marketing manager for Caframo. “Ecofans have the added benefit of reducing the amount of trees used and particulates released into the air. It’s a positive impact on our customers’ wallets and the environment we all share. If every wood stove owner in North America was using an Ecofan, we are talking about the potential elimination of thousands of tons of particulate emissions.”

Ecofans work when thermoelectric technology¹ converts heat to electricity. The generated electricity propels the fan blades, circulating warm air generated by the stove without noise. It does not require the use of batteries or electricity.

Mr. Good reports that the company has long received anecdotal feedback that customers burn a reduced amount of firewood when using the product. Caframo leadership wanted to quantify those results so they entered into a collaborative relationship with representatives at the University of Waterloo to develop a study. Working with University representatives, the team developed protocol and procedures to measure, evaluate and verify the effectiveness of Ecofans in reducing the quantity of fuel used. Conducted under controlled conditions, tests were designed to maintain a human comfort level of 22.5°C (72.5°F), as defined by the ASHRAE 55 Standard.

The test facility was developed and constructed by Caframo, under the guidance of Professor Rick Culham, Associate Dean, and Assistant Professor Peter Teertstra, PEng, of the Department of Mechanical and Mechatronics Engineering, of the University of Waterloo.

The test facility was constructed as a room within a room. The inner room was set up similar to a living room with a wood stove, a couch, finished floors, ceilings and walls; and the outer room was set up to control the outside temperature, accurately modeling the heat loss from a typical house. The facility included a customized ventilation system that allowed controlled temperature situations to conduct comparative tests. Within the facility, 54 temperature sensors were strategically located throughout the

¹ The thermoelectric effect is the direct conversion of [temperature](#) differences to electric [voltage](#) and vice versa. A thermoelectric device creates a voltage when there is a different temperature on each side.

test facility to measure air and surface temperatures during each test burn. Each sensor had an accuracy of 0.2°C.

Conducted during the winter of 2010, tests were completed in pairs with comparable conditions and burn rates between wood stove operation with and without an Ecofan. The maintenance of the designated comfort temperature and the total weight of wood burned were the determining factors in establishing the wood usage outcomes. The representatives from the University of Waterloo have verified the data as being accurate. A full summary report is available for review.

Ecofans retail for \$99.99-\$199.99 (USD) and are available in the U.S. and Canada through major retailers such as Ace, Do it Best, Cabela's, The Home Depot, Menards, Home Hardware and Canadian Tire as well as independent hearth dealers. The Ecofan is also sold throughout Europe via local distribution partners. For more information visit: <http://www.ecofan.com>

About Caframo Limited: *Founded in 1955, Caframo manufactures innovative fans and heaters for a variety of retail markets. Located on the shores of Georgian Bay in Wiarton, Ontario, Canada, Caframo is a privately owned company focused on innovation and consumer comfort. Other Caframo products include the original Ecofan 800, the Ecofan Airplus 802 and the True North AC Heater.*