

Thermal Energy recovery and bioenergy systems help cut energy costs and emissions while boosting profits

Ottawa's Thermal Energy cuts greenhouse gases by capturing waste energy or using biofuels, saves millions of dollars for pulp and paper, food and beverage, and other industries – with no capital expenses

Fast facts

Corporate profile

Thermal Energy is publicly traded on the Toronto Stock Venture Exchange (TSX-V: TMG) and is a member of the Chicago Climate Exchange (CCX) – the world's first and North America's only voluntary, legally binding rules-based greenhouse gas emission reduction and trading system. Thermal Energy is among only a few CCX companies providing solutions to reduce greenhouse gas emissions.

Why Ottawa

Ottawa also offers Thermal Energy employees a unique city-living experience – cross-city bicycle trails, top-notch post-secondary institutions, close proximity to skiing, camping and swimming, and a wide variety of festivals, including Winterlude, Bluesfest and the Tulip Festival.

Business advantage

Thermal Energy solutions can make boiler operations, such as those used in coal burning plants, 95% efficient. With typical boiler plant operations, \$200 or more of every \$1000 in fuel purchases will be wasted in exhaust stacks. In most cases, Thermal Energy can cost effectively recover up to \$150 (up to 75%) of that wasted energy and recycle it back into the heating systems of other processes.

Ottawa-based Thermal Energy International Inc. (TSX-V:TMG) is a leading North American provider of energy recovery and air pollution control systems that converts wasted heat energy into usable power and biowaste into high-efficiency bioenergy, while also reducing the amount of harmful air pollutants released into the atmosphere. Thermal Energy systems are built for use in institutional, commercial and industrial sectors, such as pulp and paper, oil and gas, food and beverage, automotive, and petrochemical companies.



Canada's Innovation Capital

Founded in 1991, Thermal Energy core solutions capture wasted energy and converts it back into usable energy or takes biowaste, such as sludge, wood waste or feedstock, and turns it into high-efficiency, dry biofuels. These solutions reduce the consumption of fossil fuels and energy costs, on average, from 10% to 35% with a commensurate reduction in emissions such as greenhouse gases (CO₂), sulphur oxides (SO_x) which cause acid rain, nitrogen oxides (NO_x) and volatile organic compounds (VOCs) – the primary cause of smog. Research and development is also underway on a new, cost-effective way to reduce NO_x emissions from coal-fired power plants and other industrial facilities.

In addition, Thermal Energy is a member of the Chicago Climate Exchange (CCX) – the world's first and North America's only voluntary, legally binding rules-based greenhouse gas emission reduction and trading system. Thermal Energy is among only a few companies involved with CCX that helps other companies implement strategies to help reduce greenhouse gas emissions at their facilities.

Why Ottawa

As a company located in our nation's capital, Thermal Energy can take advantage of the close proximity of federal organizations. For example, in February 2008, National Resources of Canada committed \$900,000 from its Climate Change Interim Strategy Technology

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With fossil fuels increasing in price at the same time as demand grows for eco-friendly alternatives, more and more manufacturers and producers are realizing that they can turn the output of industrial processes into valuable energy. Thermal Energy allows companies to save money on fossil fuel costs and run cleaner and greener facilities while increasing steam production and throughput of biomass plant operations by up to 35%.

Early Action Measures Fund to further develop Thermal Energy's technologies. Ottawa also offers Thermal Energy employees a unique city-living experience – cross-city bicycle trails, top-notch post-secondary institutions, close proximity to skiing, camping and swimming, and a wide variety of festivals, including Winterlude, Bluesfest and the Tulip Festival.

Ottawa's successful tech sector and reputation for innovation has allowed Thermal Energy to attract top-notch employees and seasoned senior managers, such as Tim Angus, President and Chief Executive Officer. Prior to joining Thermal Energy, Tim spent eight years with Johnson Controls Inc. as a Corporate Client Accounts Manager. He also served as Vice President of the Board of Directors for Electric Generating Corp. in Eastern Ontario from 2000 to 2004. He is currently on the advisory board of the Ottawa Sustainability Fund.



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Business advantage

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Where companies are unable to find the capital funds to invest in these energy saving solutions, Thermal Energy offers an innovative Alternate Utility Delivery program, where Thermal Energy will install the technology at no cost to the customer and sell the output to the customer as "green" energy at an attractive discount to the cost of the fossil fuels being replaced.

Thermal Energy's technologies are designed to capture up to 80% of wasted energy and effectively recycle it back into the manufacturing processes, adding back financially to a company's bottom line. Companies using Thermal Energy technology can expect energy cost savings of 15% to 50% in addition to eliminating fossil fuel usage and dramatically reducing greenhouse gases and other emissions. Other processes such as steam system optimization can increase those savings further.

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Future growth plans

Energy Ottawa is continually exploring alternative ways to generate green energy and the Ontario Standard Offer Program – which offers \$0.11 per kWh to producers of renewable energy – will financially assist Energy Ottawa in its goal to expand current operations to include wind, biomass and solar energy.

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