



MEDIA BACKGROUNDER

Making money by reducing emissions: the dual power of impact investment

Toronto Atmospheric Fund (TAF) was created in 1991 with a \$23 million endowment from the City of Toronto. TAF's mandate is to reduce air pollution and greenhouse gas emissions in Toronto, supporting the City of Toronto's target to reduce city-wide emissions by 80 per cent by 2050.

TAF invests its endowment based on a [Council-approved investment policy](#) overseen by a blue-chip volunteer investment committee. The following two impact investing strategies are used.

Public Equities

TAF's equity investments are managed by two firms who were selected for their superior financial performance and their sustainability-focused investment strategy. Both build their portfolios with consideration to valuation, growth potential, management, governance and social responsibility of the company, and carbon, water, and other environmental factors inherent to the business. Generation Investment Management LLP is an award-winning firm founded by Al Gore, David Blood and Peter Knight managing billions of dollars. Greenchip Financial Corp. is a Toronto-based firm with strong expertise in investments that solve environmental challenges.

Direct Investments

TAF invests in local initiatives that yield a double bottom line: market rate of return and greenhouse gas emission reduction. TAF expects a minimum eight per cent return and undertakes stringent due diligence to ensure credit quality and significant opportunity for emission reduction. There have been no loan losses for 14 years. Direct investments are strategically selected to allow TAF to innovate, demonstrate and reduce the risk of financing opportunities that will mobilize additional capital for low-carbon solutions.

Examples of TAF's Direct Investments

AutoShare

TAF provided a loan of \$20,000 in 1998 to help launch this fledgling company – the first auto-sharing service in Toronto. The loan is now repaid and AutoShare continues to run a successful business with 12,000 members. By reducing car ownership through a flexible hourly car rental service, this effort reduces emissions by 14,400 tonnes of eCO₂ per year and proves that the car-sharing model is financially viable and attractive to Toronto residents. Toronto now boasts three private car-sharing companies.

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GEMCO

TAF provided a loan of \$412,000 in 2011 to help GEMCO install and manage three solar water heating systems on City of Toronto facilities. The solar energy that is generated is purchased by the City at a rate guaranteed to be competitive with natural gas heating, without the emissions. This unique solar utility arrangement created a new way for local facilities to embrace solar water heating with little risk. GEMCO has since replicated the model to provide solar water heating at the Hospital for Sick Children, Woodgreen Community Housing Inc., Neighbourhood Link Homes, the Toronto Zoo, Birchmount Recreation Centre and True Davidson Acres long-term care facility. Assessments at the Zoo, Birchmount and True Davidson locations shows these installations reduce greenhouse gas emissions by 150 tonnes of eCO₂ per year.

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Tridel

TAF worked with Tridel in 2008 to create a new financing product called the “Green Condo Loan” to add high-performance energy systems to two new condominiums. TAF provided a loan of \$500,000 for the Nuvo 2 building, reducing emissions by 550 tonnes of eCO₂ per year compared to standard construction, and a loan of \$600,000 to the Grand Triomphe 2, reducing emissions by 530 tonnes of eCO₂ per year. The Green Condo Loan addresses the split incentive between builders who bear the construction costs and buyers who will ultimately pay utility bills. Tridel used the approach to apply a further \$6M in green loan financing on a dozen other buildings. TAF has also used the financing approach with other Toronto condominium builders.

TAF hired TowerLabs to compare two side-by-side towers – one with advanced energy measures funded by TAF and one without these measures. The assessment found that energy efficient building was generating \$125,000 in annual savings.

The results demonstrated by the Green Condo Loan helped pave the way for the Toronto Green Standard for buildings, which made it mandatory for all buildings in the city to achieve this level of performance. The standard is supporting city-wide reductions of 42,000 tonnes of eCO₂ per year.

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ZooShare

TAF has provided a loan commitment of \$250,000 towards the development of a 500 kW biogas facility at the Toronto Zoo. The facility will be fuelled by food waste from a major grocery retailer along with manure from zoo animals. Residual waste will be sold as fertilizer to retail and agricultural clients. The facility may also be used to offset heating needs at the Zoo through a district heating system. The initiative will demonstrate how local green waste processing can offset waste transportation and the release of methane from landfill. Emissions reductions are estimated at 6,876 tonnes of eCO₂ per year.

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EnerMotion

TAF has provided a loan commitment of \$250,000 to advance a technology used to reduce diesel fuel consumption in transport trucks. EnerMotion's innovative technology incorporates a proven thermodynamic cycle to capture waste heat from the truck's engine and re-use it to supply all the truck's heating and cooling needs. The application saves approximately 10.5 per cent in fuel consumption by eliminating idling and reducing fuel use for heating and cooling while the truck is in motion. Emissions from diesel fuel burned by trucks are a major source of local air pollution. Should the technology be adopted by just five per cent of the North American transport truck fleet, the resulting emission reduction would be 65,000 tonnes of eCO₂ per year. In 2013, the technology was [profiled](#) as one of Popular Science magazine's top 10 inventions.

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Robert Cooke Co-operative

TAF has provided a commitment of \$485,000 through an energy savings performance agreement to purchase, install and manage an energy efficiency retrofit for the building. TAF provides 100 per cent financing and is repaid solely through energy savings (which are insured). The project includes seven energy efficiency measures including condensing boilers, installation of efficient lighting (corridors, garage and in-suite lighting), upgrade of appliances (stoves and fridges), and a whole-building monitoring and control system. The result is estimated to reduce the building's emissions by 27 per cent or 170 tonnes of eCO₂ per year and generate annual savings of \$70,000.

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TAF's low-carbon finance innovation and impact investing approach:

- TAF finds key opportunities for emission reductions and creates programs to address them.
- TAF convenes and engages stakeholders from diverse sectors and industries to stimulate game-changing ideas and develop projects and technology for future scale-up.
- TAF mobilizes capital by testing new financing approaches that remove obstacles to investments in low-carbon initiatives and by promoting the results to the finance sector.
- TAF conducts technical and financial pilot projects and works to remove barriers to low-carbon solutions, making implementation easier.
- TAF takes a broad perspective by considering profitability, market-readiness, social innovation and policy considerations as well as technical viability.
- TAF walks the talk by directing its own endowment resources towards impact investing.
- TAF measures its achievements against strategic objectives and targets.

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