

Northern Ontario's Bio Products

Industry



Opportunities Abound

Bio-based products are leading the way to a new industrial revolution—and Northern Ontario is home to innovators in a number of areas, including bio-fuels, bio-chemicals, bio-composites and specialty products.

A wealth of natural resources

A successful bio-products industry requires available biomass. Northern Ontario has an abundance of biomass thanks to its 700,000 km of Crown forests, which is approximately the area of Sweden and Finland combined.

The North can produce more than 27 million metric tonnes of forestry biomass every year.

We're equally rich when it comes to industry expertise and support for development of our bio-products industry.

A skilled and available workforce

Northern Ontario's richest resources include its people, a vital key to success in developing innovative bio-products and technologies.

Over 50% of the workforce in Thunder Bay, Sault Ste. Marie, Timmins, Sudbury and North Bay has a post-secondary education.

We have three universities, two affiliated colleges, and six colleges of applied arts and technology in the North where more than 40,000 students are learning the skills needed to give our companies—including those in the bio-products industry—a competitive edge.

Support for innovation

There are hundreds of top-notch scientists at public and private research centres in Northern Ontario—and we're recruiting researchers from around the world. The Ontario Forest Research Institute, which focuses on supporting sustainable forest management, also researches forest species that could be used as sources of biomass or other value added materials.

The Canadian Forest Service Great Lakes Forestry Centre is identifying value-added chemicals and other co-products from forest biomass and forest plant species.

The Upper Lakes Environmental Research Network (ULERN) looks at ways to develop new bio-based products and technologies from forest-based biomass, including mill waste.

The Northern Ontario Heritage Fund Corporation's Emerging Technology Program encourages intellectual properties development and commercialization of new technologies in Northern Ontario by providing eligible companies with up to \$50,000 (Cdn) in non-repayable contributions for research and pre-competitive development technology projects and up to \$1 million (Cdn) in repayable loans for capital projects.

Ontario's R&D tax credits are among the most generous in the world—they can cut the after-tax cost of a \$100 R&D expenditure to less than \$41.

More Costs Qualify for Tax Credits in Ontario

	Ontario	United States
Wages and salaries	✓	✓
Capital equipment	✓	
Materials	✓	✓
Overhead	✓	
Contract expenses	✓	65% to 75%

A focus on commercialization

Researchers in Northern Ontario are collaborating with industry partners and colleagues around the world to unlock the commercial potential of bio-based products and technologies.

There are incubators and research parks across the North. The Ontario government recently committed \$160 million (Cdn) over four years to accelerate the growth of innovative start-up companies, including \$24 million (Cdn) specifically earmarked for development and commercialization of new bio-based, environmental and alternative energy technologies.

Science Enterprise Algoma, a joint venture of government, academia and industry, focuses on expanding science capacity and infrastructure while facilitating commercial applications of research, including bio-products research.

Innovative companies

Northern Ontario is home to a number of innovative bio-products firms.

Industry giant **Tembec** is actively investigating methods to extract, process and refine forestry biomass into a range of products, including biofuels and chemical extractives, while using sustainable bio-energy to power and heat several of its 13 Ontario operations.

EEC Energy Corp. has developed a system that processes organic materials to produce bio-gas to generate electricity and hot water or operate combined heat and power (CHP) systems for industrial, agricultural and municipal markets.

Using exclusive technology, for which it has worldwide rights, **NorWa Manufacturing & Distribution Company** produces environmentally friendly, clean-burning pellet fuel for residential and commercial markets—at a much lower cost than competitors.

Advanced Bio-Refinery Inc., in partnership with the Ontario Ministry of Natural Resources, is taking forest wood waste and producing bio-oil for fuel and value-added bio-products by way of transportable plants that go directly to the fibre source.

Business and technology development firm **Forest Bioproducts Incorporated** has interests in a variety of proprietary bio-based businesses including painting/coating, nutraceuticals, wind and water power and wood thermo-transformation and treatment.

Flakeboard produces high-quality medium density fibre board (MDF) from sawmill residuals like sawdust and planer shavings—with all the waste from the process recycled back into the operation.

Connected to markets at home and abroad

We're the northern crossroads of the North America Free Trade Area, a large and growing market with 420 million consumers and a GDP of \$13.8 trillion (US).

We have same-day business access to North America and Europe and an evening overlap to Asia.

Moving people and products easily across North American and around the world is no problem thanks to a sophisticated transportation infrastructure in Northern Ontario, which includes two trans-Canada highways, two ports, one international and 68 regional airports, four railways and four border crossings with the U.S.



Supportive government

The Ontario government's Northern Ontario Heritage Fund Corporation provides up to \$1 million (Cdn) in funding to help establish new businesses and expand existing ones and the Canadian government's FedNor Program provides capital financing to help Northern Ontario businesses compete.

There's also a new \$500 million (Cdn) Advanced Manufacturing Investment Strategy that provides interest-free loans for up to five years to help manufacturers develop leading edge technologies and innovations.

Competitive business costs

Canada leads the G7 countries in terms of low business costs according to KPMG's Competitive Alternatives – 2006 Edition. Key competitive factors for Canada include our lower labour and facility costs.

We can help

Connecting businesses in Ontario and throughout the world with the people, products and ideas that make Ontario "Canada's Economic Powerhouse".

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