

THE ESTRIE REGION

... A LEADER IN THE RECOVERY OF RESIDUAL MATERIAL

The Estrie region is renowned for the management and recovery of residual material and is determined to make its ZERO WASTE vision a central concept for its development.

PROACTIVE MUNICIPALITIES

100% of its 89 municipalities practice 2-way collecting and 40% practice 3-way collecting.

Sherbrooke recovers over 34,000 tons of residential residual material and more than 13,000 tons of organic material per year!

Lac-Mégantic recovers 70% of its residual material as a result of 3-way collection from residents and IBI (institutions, businesses and industries).

- > More than 400 tons/year of greenhouse
- > Production of AA quality compost

Coaticook has instituted a program to collect agricultural plastic.

> Over 200 tons of plastic recovered!



SHERBROOKE INSTITUTIONS IN PARTNERSHIP

Nine Sherbrooke institutions work together at the TABLE DES INSTITUTIONS and develop common sustainable development and residual material management strategies.

The Université de Sherbrooke innovates!

- > Ranked 3rd internationally among universities regarding sustainable development for its residual material management
- > 80% of its residual material is recovered as a result of comprehensive sustainable waste management and use of compostable bioplastic dishes

The CEGEP of Sherbrooke, a green CEGEP!

- > First organization to obtain the carbon-neutral certification from the Canadian Standards Association (CSA)
- > Institution active in the recovery of residual material: elimination of bottled water on campus, use of non-disposable, compostable or recyclable



SUSTAINABLE EVENTS

Université de Sherbrooke

1st university certified by BNQ (Bureau de Normalization du Québec) for sustainable event certification.

NOVA Envirocom

Winner of the Vivats prize (Conseil québécois des évènements écoresponsables - Québec Council of sustainable events) in the "Supplier" category for its expertise and the tools it provides to allow businesses and organizations to perform sustainable events.



esVivats #

HERE WE RECYCLE PROGRAM

Estrie's regional environmental council (CREE), an essential player for the last 20 years! The CREE has certified more than sixty organizations

(IBI) in the Estrie region for achieving improvement objectives relative to the Québec Policy for residual material management.

... AN ENVIRONMENT THAT IS A CATALYST FOR INNOVATION

FROM RESEARCH TO BUSINESS: THE ENERKEM MODEL

Firmly rooted in the Estrie region, Enerkem is a rapidly growing business established in Sherbrooke since 2000. Enerkem is known in the residual material recovery sector for its exclusive gasification technology platform enabling the production of biofuels and green chemical products from waste.

1999 > PILOT at the Université de Sherbrooke

2000 > Business START-UP

2003 > Pilot plant in Sherbrooke

2009 > Commercial DEMO PLANT in Westbury

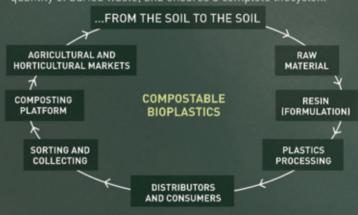
- 2011 > Internationally renowned business (cited among the 50 MOST INNOVATIVE COMPANIES in the world by Fast Company alongside Twitter, Apple and Google)
- 2012 > Released February 6th: Construction project for the FIRST COMMERCIAL PLANT FOR BIOFUEL PRODUCTION from waste in the Province of Québec

Under construction > Full scale commercial plant in Alberta

Under development > Full scale commercial plant in Mississippi

AN EMERGING SECTOR: COMPOSTABLE BIOPLASTICS

Including COMPOSTABLE BIOPLASTICS in the lifecycle chain allows better management of organic waste, minimizes the quantity of buried waste, and ensures a complete lifecycle..



NOVA ENVIROCOM is the precursor of bioplastics in Québec! Innovating organization that collaborates in the development and marketing of compostable bioplastic dishes and containers in the Province of Québec.

Université de Sherbrooke: Chemical Engineering and Biotechnological Engineering Department
Development of compostable bioplastic polymers made from
natural resources (sugar, corn, vegetable oils, etc.).

A PIONEER IN INTEGRATED COMPOST MANAGEMENT: **UNIVERSITÉ DE SHERBROOKE!**



Reuse in University green spaces and collective garden



Compost

Valoris technical burying site

GREEN ECONOMY **FULL SPEED AHEAD!**

MORE THAN 100 ORGANIZATIONS IN THE ESTRIE REGION

Sorting at source or sending to a sorting center 70% of construction, renovation and demolition waste from the building sector.

SORTING

More than 32,500 tons of material from municipalities and IBI processed in 2011: paper-cardboard (22,000 tons), glass (4,900 tons), plastic (1,300 tons), metal (1,300 tons).

Recycling sites for citizens.

SORTING EQUIPMENT

Multimaterial sorting

BIOMETHANATION

TEXTILE

organization specialized

in clothing recovery.

Non-profit social reintegration

RÉCUPEX

BIOMETHANATION

Valoris is preparing

to build a plant at

recover organic

material and the

biogas produced by biomethanation and digestate as compost or a source of energy.

its Bury location to

PLANT

VALBIO CANADA

Biomethanation systems for the production of biogas from organic waste.

BIO-TERRE SYSTEMS

Low temperature biomethanation systems for energy recovery or fertilizer.

> **CANADIAN DAIRY AND** SWINE RESEARCH AND DEVELOPMENT **CENTRE** Treatment of agri-food waste

and effluent. Scientific partner for Bio-Terre Systems

RESEARCH CHAIR ON BIOFUELS

ENERKEM Biofuel and green chemical

products from urban waste through a

BIOCARDEL Biodiesel and glycerol

from vegetable or animal oil and algae.

gasification process.

Academic and industrial partnership for the development of technologies to produce cellulosic ethanol from agricultural and forestry biomass, and urban waste.

ALGAE-BASED FUELS

Group of businesses and researchers at the CEGEP and Université de Sherbrooke working to optimize the production of biodiesel from the cultivation of micro-algae.



COMPOST

4 BUSINESSES

Bury (Valoris): 15,000 tons of AAA quality compost produced annually

MRC de Coaticook: 2,000 tons of compost per year Lac-Mégantic: 3,000 tons of compost annually



BIOGÉNIE

Composting, and agriculture and energy recovery products and services. Bury composting site operator.

ENV CONSULTANTS

FRM1 recovery (muds) on hybrid poplar plantations to supply biomass heating systems. Fertilizing Residual Material

BURIAL



> Les Métaux B. Hinse Ltée - Magog

Magotteaux Ltée - Magog

St-Denis-de-Brompton

Matériaux usagés de l'Estrie

MI Intégration - Sherbrooke

Nova Envirocom - Sherbrooke

Olympique Métal - Sherbrooke

> Récupération Centrestrie - Sherbrooke

Régie de Tri et de Récupération de la Région

Récupex (Sherbrooke) - Sherbrooke

Ovide Rouillard - Sherbrooke

Sherbrookoise - Sherbrooke

Sanitaire Lac-Mégantic 2000

Sherbrooke OEM - Sherbrooke

Sintra (Estrie) - North Hatley

Sherbrooke Pièces d'autos usagées

Solution EAS (division d'EnGlobe Corp)

> Surplec (équipements électriques)

> Tafisa Canada - Lac-Mégantic

> Ressourcerie du Granit - Nantes

Ressac - Sherbrooke

SDD - Sherbrooke

Solinov - Sherbrooke

Sherbrooke

SaniEstrie - Sherbrooke

Récupération CC - Magog

SOME OF THE BUSINESSES INVOLVED IN

THE RECOVERY OF RESIDUAL MATERIAL

12 SUBSURFACE CONTAINMENT SITES

centres and optical sorting systems.

COLLECTING **3 BUSINESS**

ENERGY RECOVERY AND COMPOSTING

15 BUSINESSES

TRÈD'SI

OVIDE ROUILLARD

telephone poles, etc.).

Dry material reclamation (natural, treated

Reclamation and recovery of treated wood.

or dyed wood, melamine, wood pallets,

BIOFUELS

6 BUSINESSES

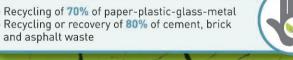
12 BUSINESSES

70 BUSINESSES

RECOVERY AND RECYCLING

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> Recycling of 70% of paper-plastic-glass-metal Recycling or recovery of 80% of cement, brick



Enhanced responsibility on the part of producers - Product reclamation and recovery (ICT, HHW1, tires, etc.)

In addition to increasing the recovery rate and the value of targeted products, this approach promotes sustainable design logic. Producers have an interest in designing products that are less harmful to the environment and easier to recover in order to reduce recycling costs. Household Hazardous Waste

LEGEND





INFRASTRUCTURE

RESEARCH



UNIVERSITÉ DE SHERBROOKE Development of mixed glass usage



GLASS

SAQ CHAIR FOR THE RECOVERY OF GLASS IN MATERIAL, in cement fabrication.



OIL

METAL

PLASTIC

4 BUSINESSES

BIO-SOLUTIONS CR Lubricants and biodegradable solvents from reclaimed vegetable oil.

FURNITURE 4 BUSINESSES

DOMESTIC WASTE 7 BUSINESSES

HAZARDOUS

PAPER-CARDBOARD 7 BUSINESSES

INFORMATION AND COMMUNICATION TECHNOLOGIES (ICT)

Non-profit social reintegration electrical and electronic appliances.

and small photocopier laser ink cartridges.



6 BUSINESSES RECYCLAGE

HOUSEHOLD APPLIANCES

ÉCO-SOLUTIONS (RES) Recycling of appliances containing substances negatively impacting the ozone layer



Recycle 60% of organic putrescible

Forbid organic material elimination

material starting from 2015.

starting from 2020.

RUBBER

Global leader in the

manufacture of rubber mats

by revulcanizing reclaimed tires

Design and manufacture of handbags

and accessories from bicycle inner tube:

ANIMAT

RESSAC

CONSTRUCTION RENOVATION DEMOLITION

Acier et métal Belfer - Waterloo Animat - Sherbrooke

Bourque, acier et métaux inc. - Sherbrooke

- > Armée du Salut Sherbrooke
- Rin-Solutions CR Sherbrooke
- Biocardel Sherbrooke
- · Biogénie (division d'EnGlobe Corp) Sherbrooke
- Bio-Terre Systems Sherbrooke > Bureau en Gros - Sherbrooke
- Cascades East Angus
- Centre industriel de Confection Windsor Inc.
- Certi Auto Sherbrooke
- > CFER Memphrémagog Magog
- Clinique Électronique Sherbrooke
- DéfiRécupAir (Une division d'Atelier PolyTeck)
- Sherbrooke
- Domtar Windsor Dumas Jean-Paul et Fils - Windsor
- E.A.I. Technologie Windsor
- > École-Entreprise du Centre Saint-Michel
- Sherbrooke
- > Enerkem Sherbrooke > ENV Consultants - Sherbrooke
- Excavation René St-Pierre Div. Démolition
- Sherbrooke
- > Faber Moore East Angus

> LaserPro - Sherbrooke

- Gestion Michel Couture Sherbrooke
- Granules Combustibles Energex Lac Mégantic
- > GSI Environnement (Bury) Sherbrooke
- > Intro-Pak Sherbrooke
- > Kruger (Usine de Brompton) Sherbrooke
- > La Cartoucherie (Sherbrooke) Sherbrooke
 - Waste Management Magog

> Trèd'si - Westbury

Valoris - Bury

> Valbio Canada - Magog

- > Veolia ES Canada Services Industriels

MAJOR BUSINESSES INVOLVED IN REPROCESSING IN THE ESTRIE REGION!



COMMITTED PLAYERS



The Environmental bio-industries Niche of excellence rallies common objective of reducing or eliminating environmental impacts caused by the use of biotechnologies, bioprocesses or biomass.

It spans the three following industrial clusters:

- Bioenergy: technology and production of ethanol, biodiesel, biogas, and energy pellets made of wood and agricultural plants
- New material/green chemistry: biopolymers, biofibres, bioplastics
 Bioremediation: biological treatment of water, soil, air and residual material

Unique to the Province of Québec, this Niche of excellence stands out with targeted networking activities and its ability to generate new alliances and partnerships leading to large-scale collaborative projects. A specific financing program is available to facilitate the implementation of such projects.

Information

Jean-Jacques Caron > 819 620-8508 jjcaron@bioenv.accordestrie.ca www.bioenv.accordestrie.ca

Valoris

Two hundred hectare eco-industrial park in Bury that integrates a panoply of residual material recovery resources in a single location, including a sorting center, a methane plant, a subsurface containment site and attractively priced lots for industries that want to use available material on site. The park offers equipment sharing and permanent monitoring of wastewater treatment and of the water table and is conveniently situated away from lived-in areas.

Information

Claude Brochu > 819 560-8403 cbrochu-valoris@hsfqc.ca www.valoris-estrie.com

Financial support available via the Regional County Municipality (MRC) of Haut-Saint-François Information

Dominic Provost > 819 560-8500, extension 2103 dominic.provost@hsfqc.ca

sherbr ke innopole

The mandate of Sherbrooke Innopole is to support the economic turnaround of the City of Sherbrooke by capitalizing on innovation and the development of five clusters, including the Cleantech sector. Sherbrooke, the main city of the Estrie region, dominates the Cleantech market because of the prevalence of businesses established in the sector.

Sherbrooke Innopole offers the following advantages:

- Accompanying businesses at every step of their development
 Access to investment funds enabling Sherbrooke Innopole
 to invest up to \$1M in business projects
 Access to an international network



Consulting firms 9 3% busines

Biofuels and bioenergy 4.5% businesses

Other sectors 9.1% businesses

Bioproducts

5.7% businesses

Renewable energy and energy efficiency

Water, air, and soil treatment 12.5% businesses

Management and recovery

of residual material

22.7% businesses