



BIOENERGY



Biogas



Energy Crop



Biofuels

INTERNATIONAL OUTLOOK



350 GW
of heat produced
in 2014



133 GL
of biofuels produced in 2015
Including 98 GL of ethanol and butanol
and 30.1 GL of biodiesel



93 GW
of electricity produced
in 2014

Leading sector: **Biomass**
North America

- >> One of the global leaders in heat generation
- >> Major exporter of wood pellets to the E.U.

QUÉBEC ASSETS

- >> Target of **reducing GHG emissions by 20%** by the year 2020
- >> Ban on the burial of compostable organic waste by the year 2020
- >> Grant programs covering up to **75% of bioenergy innovations development costs**
- >> Across Canada, gasoline sold must contain a minimum of **5% ethanol**
- >> Quebec's Energy Policy aims to increase bioenergy production by **50% by the year 2030**



Abundant forest biomass



Biomethanisation projects

Research and associations



- >> Centre de recherche industrielle du Québec (CRIQ)
- >> Chaire de recherche industrielle en éthanol cellulosique
- >> Consortium de recherche et innovations en bioprocédés industriels au Québec (CRIBIQ)
- >> FP Innovations
- >> Réseau d'innovation en biocombustibles et bioproduits
- >> Réseau BioFuelNet



- >> Association québécoise de la production d'énergie renouvelable (AQUER)
- >> Association québécoise pour la maîtrise de l'énergie (AQME)
- >> Bureau de promotion des produits du bois du Québec (QWEB)



A sample of Québec's innovations

The Airex logo consists of the word "airex" in a white, lowercase, sans-serif font, followed by a stylized symbol of three horizontal lines of varying lengths, all contained within a blue rectangular background.

airex-energy.com

Airex Energy has developed a technology for biomass torrefaction. Using a cyclonic bed reactor, CarbonFX will enable the large-scale production of biocoal from raw materials like woody biomass and agricultural waste.



pyrobiom.com

Pyrobiom Energies works in the production of biofuel resulting from the transformation of timber resources. The company designs and establishes pyrolytic oil producing plants, a second-generation renewable energy offering a high-efficiency GHG reduction product.



biothermica.com

Biothermica supplies and installs patented systems for the destruction or recovery of industrial air pollution, landfill gas emissions and biomass for the production of renewable energy. The company also invests in infrastructure projects that make use of its proprietary technologies. Biothermica is the owner of a coal mine ventilation air methane (VAM) abatement system in Alabama that operates using its VAMOX technology.



xebecinc.com

Xebec provides gas purification and filtration solutions for the natural gas, field gas, biogas, helium, hydrogen, nitrogen and oxygen markets. Xebec specializes in the design, engineering and manufacture of innovative products that transform raw gases into marketable sources of clean energy used primarily as transport fuel.



enerkem.com

Thanks to its proprietary thermochemical technology, Enerkem converts non-recyclable waste into synthesis gas, and then into methanol, ethanol and other intermediate products that can be used in the manufacture of common consumer products. By using waste instead of fossil fuels, Enerkem is responding to the growing demand for renewable chemicals and energy sources while at the same time reducing landfill and GHG emissions.

The Écotech Québec logo features the word "écotech" in a blue, sans-serif font, with "Québec" in a smaller, blue, sans-serif font below it.

As the first organization of this kind in Canada, **Écotech Québec** brings together key decision makers of Québec's cleantech ecosystem.

Discover how Québec stands out in the clean technologies' sector

www.ecotechquebec.com