

## **TOP 10 REASONS QUÉBEC COULD BECOME A TRUE CLEANTECH LEADER**

Québec is Canada's largest province in terms of area and its second largest in terms of population. Quebec is well known for its creativity and high-tech industries, such as aerospace and life sciences. However, Québec's clean technology sector has remained a well-guarded secret for too long. The truth is the Québec is quickly becoming a force to be reckoned with when it comes to the clean technology sector.

### **1. A large territory rich in natural resources.**

Québec encompasses an area three times larger than France, five times larger than Japan and seven times larger than the United Kingdom. The region is covered with freshwater lakes, waterways and forests. Québec boasts major underground mining deposits, particularly of the key metals used in green high tech industries. In 2009, the global mining industry gave the province its top score for best mining location in the [Fraser Institute's Survey of Mining Companies](#). This resource-rich land has led to the development of companies like [5N Plus](#), a leading producer of pure metals and compounds used in numerous cleantech applications, including solar cells. In addition, the Québec government announced in May 2011 investments totalling nearly \$80 billion over 25 years, including \$47 billion in renewable energy, within the ["Northern Plan"](#), a new initiative to develop this area.

### **2. Leadership in the battle against climate change.**

Supported by a strong public consensus, successive Québec governments have adopted concrete measures to fight climate change. Jean Charest, the Premier of Québec since 2003, is one of the most active government leaders in this area. Québec has adopted very ambitious goals, aiming to reduce greenhouse gas (GHG) emissions by 20 percent by 2020 (1990 levels), and it has also the lowest GHG emission in Canada ([10.7 metric tons of CO<sup>2</sup> equivalent per person](#)). Québec is an active member of the [Western Climate Initiative](#) and in 2012 will implement a cap-and-trade system for GHG.

### **3. Mobilized players.**

Québec is home to many players in the cleantech sector, including [regional networks \(ACCORD\)](#) in addition to an active cleantech cluster covering the entire province. ÉCOTECH Québec unites and mobilizes all cleantech players: businesses that use cleantech, businesses that develop cleantech, investors, public authorities, research and development organizations, associations, etc. An active member of various international organizations, ÉCOTECH Québec will host the first international meeting of the [Global Cleantech Cluster Association \(GCCA\)](#) in August 2011, as part of the [Ecocity World Summit – Montréal 2011](#).

### **4. Dynamic Research and Development.**

In 2007, Québec devoted 2.6 percent of its GDP to research and development, the highest such percentage of any Canadian province. The government actively supports research and development with tax credits and direct measures funded by the [Québec Research and Innovation Strategy](#). This strategy was launched in 2010 with nearly \$1 billion in funding. Approximately 200 research groups work in clean technology fields, facilitating the development of intellectual property. Between 2000 and 2007, approximately 750 patents related to clean technologies were granted to Québec innovators. This dynamic ecosystem has encouraged development of promising firms grown out of Québec university research.

#### **5. A solid, growing core of innovative businesses.**

Québec is home to nearly 400 innovative clean technology businesses, which can be seen on the interactive map developed by [ÉCOTECH Québec](#) in partnership with the [Centre de recherche industrielle du Québec](#) (CRIQ). Québec businesses have distinguished themselves particularly in the fields of energy (efficiency, storage cells), water treatment ([H2O Innovation](#), [Premier Tech Aqua](#), [Ovivo](#)) and waste material management and development ([Innovente](#), [Pyrogenesis](#), [Terragon](#)). There are also businesses in some very promising niche sectors like [Odotech](#), working in the measuring and monitoring of odors, [Biothermica](#), a pioneer in methane capture and destruction as well as carbon credits monetization, and [Quantis](#), becoming a leader in life cycle assessment.

#### **6. Enlightened energy choices.**

Québec has some of the [greenest and cleanest electricity in the world](#) (98 percent from renewables sources), placing it just behind Iceland and Norway. It is the world's fourth largest producer of hydroelectricity. By the year 2015, the amount of electricity produced by wind turbines should increase by nearly 600 percent (to reach approximately 10 percent of total electricity production). As a result, Québec's carbon footprint is probably the lowest in North America.

#### **7. Concrete initiatives to encourage sustainable mobility.**

Transportation is one of the primary sources of greenhouse gas emissions in Quebec. Even though it has no automobile manufacturers, Québec is committed to developing electric transportation. The province is home to major companies like [Bombardier Transport](#) and [Nova Bus](#), as well as small and medium-size businesses like [CVT Corp](#) and [TM4](#). In April 2011, the government announced several measures totaling \$250 million as part of its [2011-2020 Action Plan for Electric Vehicles](#). Moreover, Québec is the first Canadian province to adopt California's restrictive fuel emission standards. In its energy strategy, the government also intends to promote renewable fuels such as ethanol and biodiesel. The goal is to reach 5% ethanol on average sales of gasoline by 2012. [Enerkem](#) is a leader in this sector. Inspired by competitive natural gas prices, but also due to an estimated 25 percent reduction in carbon emissions, companies like [Transport Robert](#), are working alongside [Gaz Métro Solutions Transport](#), to use trucks in their fleet that run on liquid natural gas.

## **8. A community of investors.**

Access to financing is a prerequisite for the development of cleantech businesses. Both the public and private sectors in Québec have understood this, leading to the creation of venture, start-up and development capital funds such as [Cycle Capital Management](#), Cycle-C3E and [Teralys Capital](#), in addition to labor-sponsored funds like [Fondaction CSN](#) and [Fonds de solidarité FTQ](#). The most recent Québec budget helped create the [Fonds Capital Anges Québec](#), a fund of \$30 million to help start-ups.

## **9. A diversified economy with a global outlook.**

Firmly anchored in North America but maintaining strong ties to Europe, Québec is ideally positioned to bridge the two continents. Nearly half of the Québec population is bilingual and 11 percent is trilingual, which makes Québec the most multilingual province in Canada. Its industrial sector is the most diversified in Canada and includes high tech sectors like aerospace, information and communication technologies and life sciences, where cleantech is both developed and used. Representing more than 21,000 jobs and operating revenues of over \$4 billion, Québec engineering consulting firms include many international players like [SNC-Lavalin](#) and [Roche](#), which are major vehicles of Québec expertise.

## **10. A well-established education system.**

The Québec college and university system is well-established in both the urban centers and outlying regions. [Greater Montreal](#) has the most university students per capita of any North American metropolitan area. Many of Québec's universities rank among the best in Canada and the world. Moreover, Québec's college system ([CEGEP](#)) features both pre-university and vocational programs training high-caliber technicians, thanks to college centers for technology transfer ([CCTT](#)), which work directly with industry.