



La Cité Verte, Québec City



- ▲ A concrete and modern example of the cutting-edge technology in green heating using wood pellets

La Cité Verte is the first large-scale, multi-residential project in Québec City comprised of green, intelligent buildings, serviced by a communal energetic network. There are more than 800 housing units – including condos, townhouses and affordable housing. La Cité Verte currently employs the most advanced wood pellet district heating system in North America for its space heating and domestic hot water needs.

At the heart of the system is a power station housing four Viessmann wood pellet boilers in a 5 MW cascade system. The boilers heat two buffer water tanks of 22,000 liters each before the heated water is distributed through a highly efficient, low temperature hydronic heating network. Pre-insulated underground piping is spread over a 2.2 km network. Prefabricated district heating substations in each Cité Verte building distribute the appropriate amount of heat and calculate thermal consumption.

The boilers have met their published performance ratings for combustion efficiency (up to 85%) since the biomass heating system went into service in October 2011. When completed, La Cité Verte will use 30% less total energy than conventional residential developments. Particulate emissions in the combustion gases are a third of the acceptable standard.

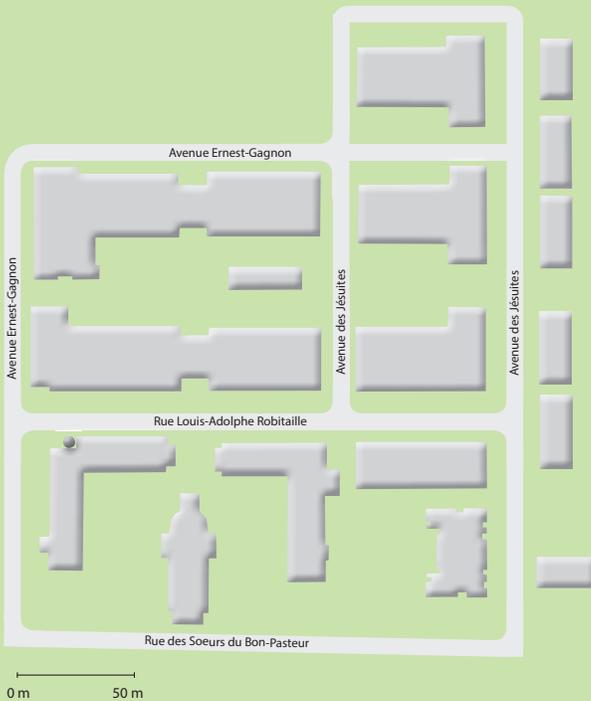




▲ The Renewable Energy Solution: Wood Pellets

Manufacturing processes used by Québec wood pellet manufacturers guarantee a final product that meets the highest quality standards, without the use of glue or binders. The result is a standardized fuel with low moisture content and excellent combustion efficiency. The pellets can be used as fuel in residential stoves or commercial, industrial, institutional or multi-residential boilers designed for this purpose, such as La Cité Verte project.

Choosing Québec wood pellets means choosing an alternative to fossil fuels, which in turn helps fight climate change and ensures true sustainable development. It is choosing to curb the consumption of non-renewable and polluting energy and contribute to reducing greenhouse gas emissions. Heating with wood pellets has a small environmental footprint due to the low emission of fine particulates and pollutants, and therefore helps maintain air quality. Wood pellets are a sustainable solution for district heating projects.



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Promotor: **SSQ Immobilier**
Engineering: **Régulvar, Génécór** and **Poly-Énergie**
Photos: **Poly-Énergie** and **Régulvar**
Plan: **Viessmann**

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