

CORIX Utilities

Helping Build a Sustainable Community at UniverCity



CORIX





Creating a sustainable community

Situated on Burnaby Mountain in Metro Vancouver, and adjacent to Simon Fraser University, UniverCity is an award-winning, mixed-use community that is a model of sustainable living.

It offers residents and visitors a host of shops, services and amenities, including an elementary school, a childcare centre, a library and direct access to one of the largest outdoor recreational areas in the Lower Mainland. Nestled in a protected wild forest, UniverCity has become one of Greater Vancouver's most attractive new communities in which to live, work and learn.



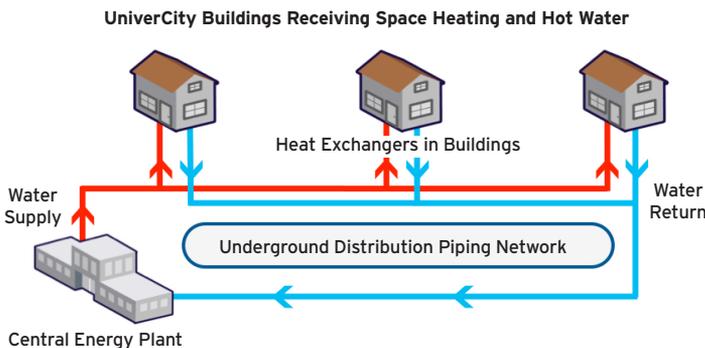
An effective, responsible energy solution

As a model for practical and affordable sustainability, UniverCity required a cost-effective, long-term and environmentally responsible alternative energy system that could provide heat and hot water to the community's new housing projects. After a comprehensive technical and financial evaluation of various alternative energy sources, CORIX and SFU Community Trust (which oversees the development of UniverCity) selected a biomass-based district energy system as the best option.

The high-efficiency heating plant will use recycled urban and construction wood waste as its primary fuel and provide an estimated 1,750 tonnes of greenhouse gas emissions savings annually when complete. This is equivalent to:

- 4,057 barrels of crude oil not consumed per year
- 750,000 litres of gasoline not consumed per year
- 395 acres of forest absorbing carbon each year

For the short-term, the community's energy needs are being met by a small heating plant, installed in early 2012, that uses high-efficiency condensing natural gas boilers.



District energy systems use a central energy plant to produce hot water, which is then distributed through an underground piping network to heat exchangers located in each building. The heat exchangers, in turn, provide space heating and domestic hot water for residents.



A trusted, experienced provider

CORIX, an integrated provider of utility infrastructure, will design, build and operate the district energy system. Headquartered in Vancouver, BC, CORIX brings extensive related experience to UniverCity.

Past sustainable energy and district energy projects include:

Dockside Green, Victoria, BC

CORIX provides a suite of sustainable multi-utility services and solutions, including a biomass-based district energy system, creating a new generation, master-planned community that has attained LEED Platinum status.

Beaver Barracks, Ottawa, ON

CORIX owns and maintains a GeoExchange loop field system and central energy plant which provides heating, cooling and domestic hot water to 247 low-cost rental units managed by Centretown Citizens Ottawa Corporation, a private non-profit housing organization.

Sun Rivers Golf Resort Community, Kamloops, BC

CORIX operates a comprehensive range of utilities, including ground source heating and cooling, making Sun Rivers Canada's first GeoExchange community.



Good for the community, good for the earth

The Burnaby Mountain district energy system will provide numerous benefits to the community and its residents, including:

Enhanced Comfort - residents will enjoy comfortable space heating provided by radiant sources, rather than traditional perimeter electric baseboard heaters.

Increased Price Stability - because the system uses alternative fuel sources, residents' exposure to fluctuating gas and electricity prices is reduced.

Improved Reliability - exposure to weather-related power outages is reduced compared to traditional electricity-based systems.

Better Energy Delivery - the centralized production of thermal energy results in highly efficient delivery and eliminates the need for each building to have its own boilers, hot water storage tanks and other associated equipment.

Lower Operations and Maintenance Costs - all costs normally associated with in-building heating systems (boilers and storage tanks), including insurance, maintenance, upgrade and replacement, are eliminated.

Flexible Building Design - as buildings do not require their own boiler system, design options are expanded. In addition, on-demand hot water systems can eliminate the need for hot water storage tanks, further increasing usable space.

Reduced Carbon Footprint - greater energy efficiency and the use of alternative energy sources results in lower greenhouse gas emissions.



A better energy delivery model

In most new strata developments, electric baseboards provide heat, while natural gas fuels the hot water and ventilation systems. Under this model, all the required heat and hot water equipment is provided by the developer and then paid for by the homeowner as part of each unit's purchase price. After the sale, residents continue to pay, first, for the electricity used to heat their homes and second, for monthly strata fees, which typically go toward ongoing operations, maintenance and commodity costs, as well as a reserve fund for future replacement systems.

Under the district energy delivery model, the district energy provider develops the system. Strata corporations are then simply charged a stable, monthly rate that covers all associated costs, from fuel to the system's design, construction, ongoing operations and maintenance. While the initial capital investment to develop a district energy system is higher than for traditional on-site energy systems, these expenses are offset by lower operations and maintenance costs, together with better efficiencies. Additionally, district energy systems deliver numerous "soft" benefits, such as increased reliability, comfort, risk transfer and environmental benefits, making green energy systems a superior choice over traditional fuel sources.

Burnaby Mountain's district energy system will be regulated by the BC Utility Commission, an independent agency responsible for ensuring customers receive safe, reliable and non-discriminatory energy services at fair rates.



DELIVERING THE CORIX ADVANTAGE

Integrated approach

CORIX designs, builds, finances and manages utility infrastructure systems, and supplies a broad range of related products and services. This unique, integrated approach enables us to deliver our products and services with exceptional accountability, stability and risk-management to our clients, allowing them to save time and money.

Unparalleled expertise

With more than 70 years experience and a team of more than 2,000 highly skilled people, CORIX has the in-house expertise to address any utility challenge. Headquartered in Vancouver, BC, we have extensive experience designing, operating and maintaining water, wastewater and energy utilities throughout North America.

Solutions that fit

We work closely with our clients to develop and deliver efficient, cost-effective utility infrastructure solutions that meet their technical, operational and financial requirements.

Commitment to sustainability

CORIX is focused on delivering practical, real-world utility solutions that are socially, environmentally and financially sustainable. Our ground-breaking infrastructure designs employ the latest technologies to help our clients reduce their environmental footprint.

Commitment to community

CORIX is a caring partner to the communities where we live and work, helping to build long-term and reliable utility infrastructure solutions that improve service delivery, cut costs and increase efficiencies.

Building a World of Sustainable Communities

1.866.575.3330
www.corix.com

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