

Geothermal energy to expand in Richmond

Alexandra District Energy Utility is a city-run company that provides condos with geothermal energy at or below market rates.

[Graeme Wood](#) / Richmond News

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Alexandra District Utility equipment, housed on Alexandra Road in West Cambie

A \$12.3 million expansion of a city owned and operated geothermal energy project has been approved by Richmond City Council.

The Alexandra District Energy Utility (ADEU), that primarily heats and cools condos in the West Cambie neighbourhood, will triple in size by 2018, servicing a total of 10 developments, the largest of which will be a portion of the SmartCentres commercial retail site, home of a planned Walmart.

Having already spent \$6 million to date, ADEU presently services two developments (Mayfair Place and Remy) with over 600 units and is expected to include a third (Omega) this summer.

After the expansion (Phase 3), ADEU is expected to be heating and cooling 2.3 million square feet of residential and commercial space, or about 65 per cent of the full service area upon full completion of the project (this number is expected to fluctuate as buildings go online over the years).

In order to expand, a new geo-exchange field and a supplementary building to house equipment and a cooling tower will be constructed in the West Cambie Neighbourhood Park, starting in 2015.

ADEU takes water from surrounding buildings and pumps it through underground pipes, heating it in the winter and cooling it in the summer.

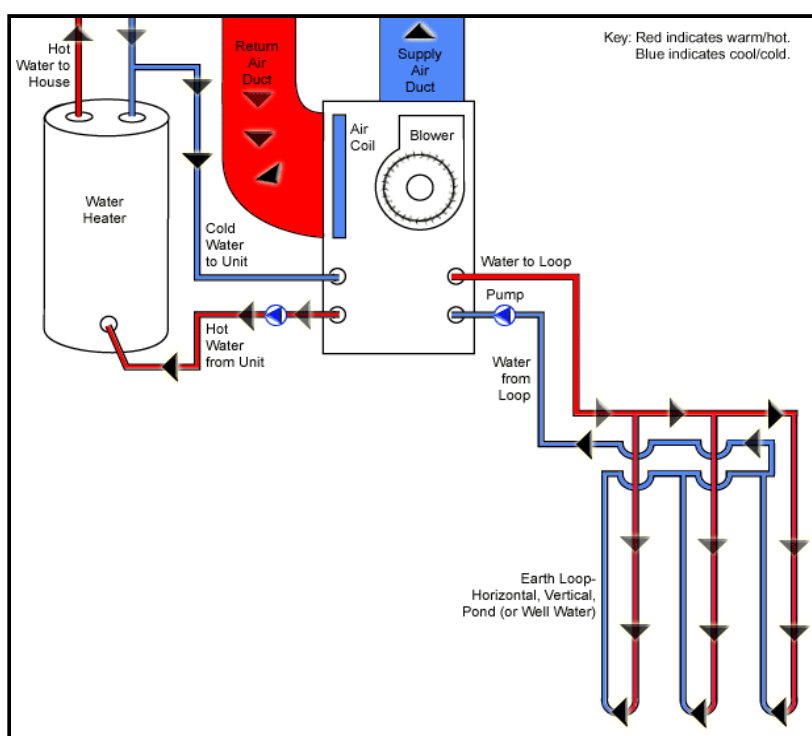
The city will borrow the money from its water utility surplus over the next five years. The total investment of \$23.3 million should be paid back, in full and with interest, within 19 years; the city charges land owners for the energy at, or below, market rates to service the loans.

According to a staff report the city expects to save 9,500 tonnes of greenhouse gases (GHG) over 12 years, when the project is expected to be complete (a typical car today emits 5-9 tonnes of CO2 annually, according to the U.S. Department of Energy). Thereafter, the utility is expected to reduce greenhouse gases by 671 tonnes each year.

The city is targeting a 33 per cent reduction in GHG from 2007 levels, by 2020.

Other developments included in the Phase 3 expansion are: Alexandra Court; 9500 Cambie; Alexandra Gate; Jingon; Polygon East and the Jamatkhana Temple.

The project was phased in to accommodate development in the neighbourhood. ADEU is a sort of precursor for a much larger geothermal district energy project in the City Centre, which will have a total capital investment of \$142 million and be operated and financed by a partner.



The report notes ADEU could eventually implement a sewer heating system.

[Read the full report here. \(http://www.richmond.ca/shared/assets/ADEUPhase3_CNCL_07281439260.pdf\)](http://www.richmond.ca/shared/assets/ADEUPhase3_CNCL_07281439260.pdf)

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