



NEWS RELEASE

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Geothermal Work Nearing Completion at the new Civic Facility

The Township of Langley's new Civic Facility features a GeoExchange Heating & Cooling System (also known as a Ground Source or Geothermal System). These systems are gaining in popularity due to rising energy costs and increased environmental concerns. GeoExchange Systems are not dependent on fossil fuels, but use electricity to move low grade heat energy from the earth to the building in cold weather and reject this heat energy from the building into the earth during warm weather. Some of the benefits of this new system will be:

- to significantly reduce energy consumed in heating and cooling the facility
- to reduce the production of greenhouse gases

The New Civic Facility will use forty-eight vertical wells drilled 250 feet deep as its GeoExchange Field, all located under its new parking area.

GeoExchange Systems capitalize on the fact that the earth has the ability to absorb and store heat. In the Lower Mainland, just below the frost line, the ground has a constant temperature of about 12 degrees C (53 F). In the winter, the stored heat can be extracted from the earth through a loop system and pumped to the heat pump, which in turn circulates the heat through the duct system into the building. In the summer, the process is reversed, as indoor heat is extracted from the air and transferred to the earth.

The new GeoExchange system being installed at the Civic Facility will be integrated into the existing building's closed loop heat pump system that uses a cooling tower to provide heat rejection in the summer and heating boilers to provide heat in winter. The new GeoExchange system will significantly reduce the use of the building's heating boilers and the cooling tower.

The benefits to society as more GeoExchange systems are installed will be to significantly reduce both energy consumed and greenhouse gases produced (reduce greenhouse gas emissions by 66% or more) compared with conventional heating and cooling systems that use fossil fuels.

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