

District Energy in Surrey

BC Expropriation Association Conference

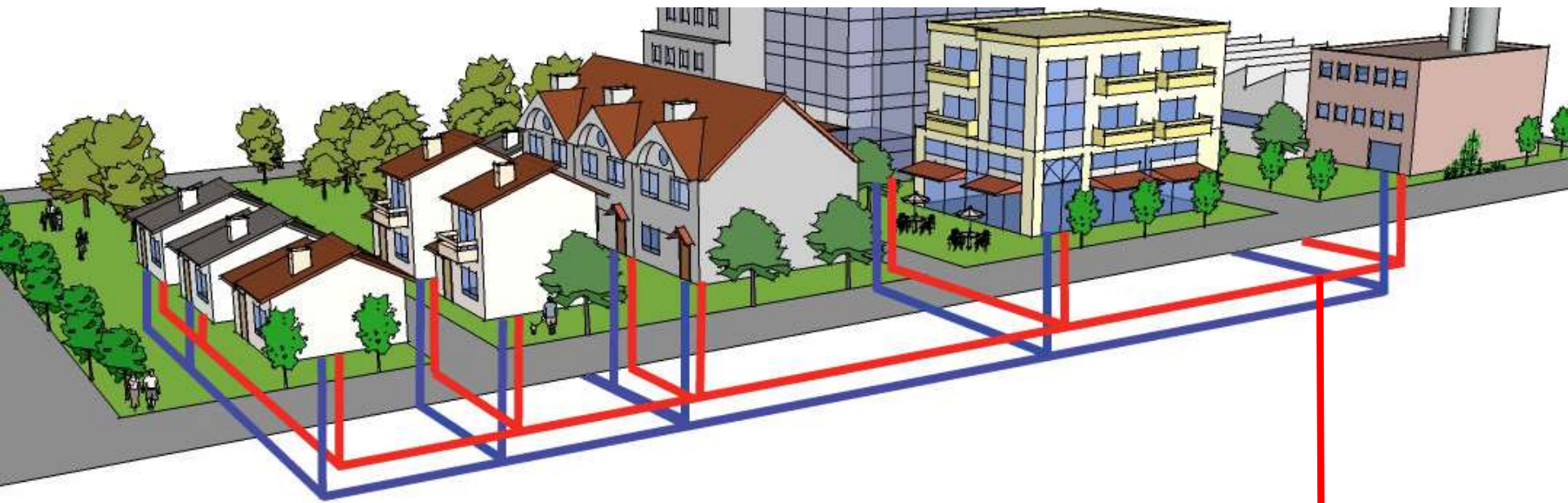
October 23, 2015



Surrey City Energy

- Hot-water district energy in City Centre
- 100% Municipally-owned
- Operational unit of Engineering Dpt.

What is District Energy?



Biogas



Solar Thermal



Sewage Heat



Geo Exchange



Natural Gas



Wood Pellets



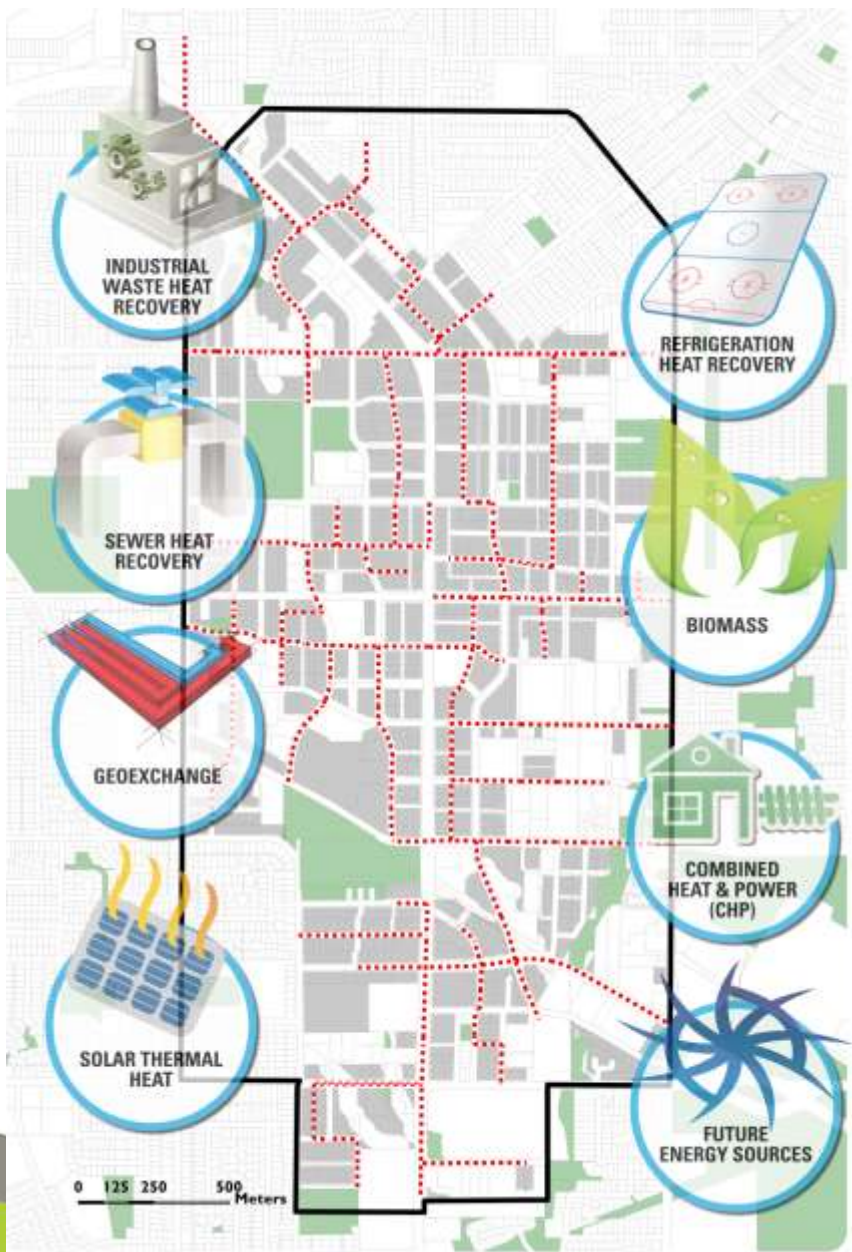
Waste Wood

DE Objectives

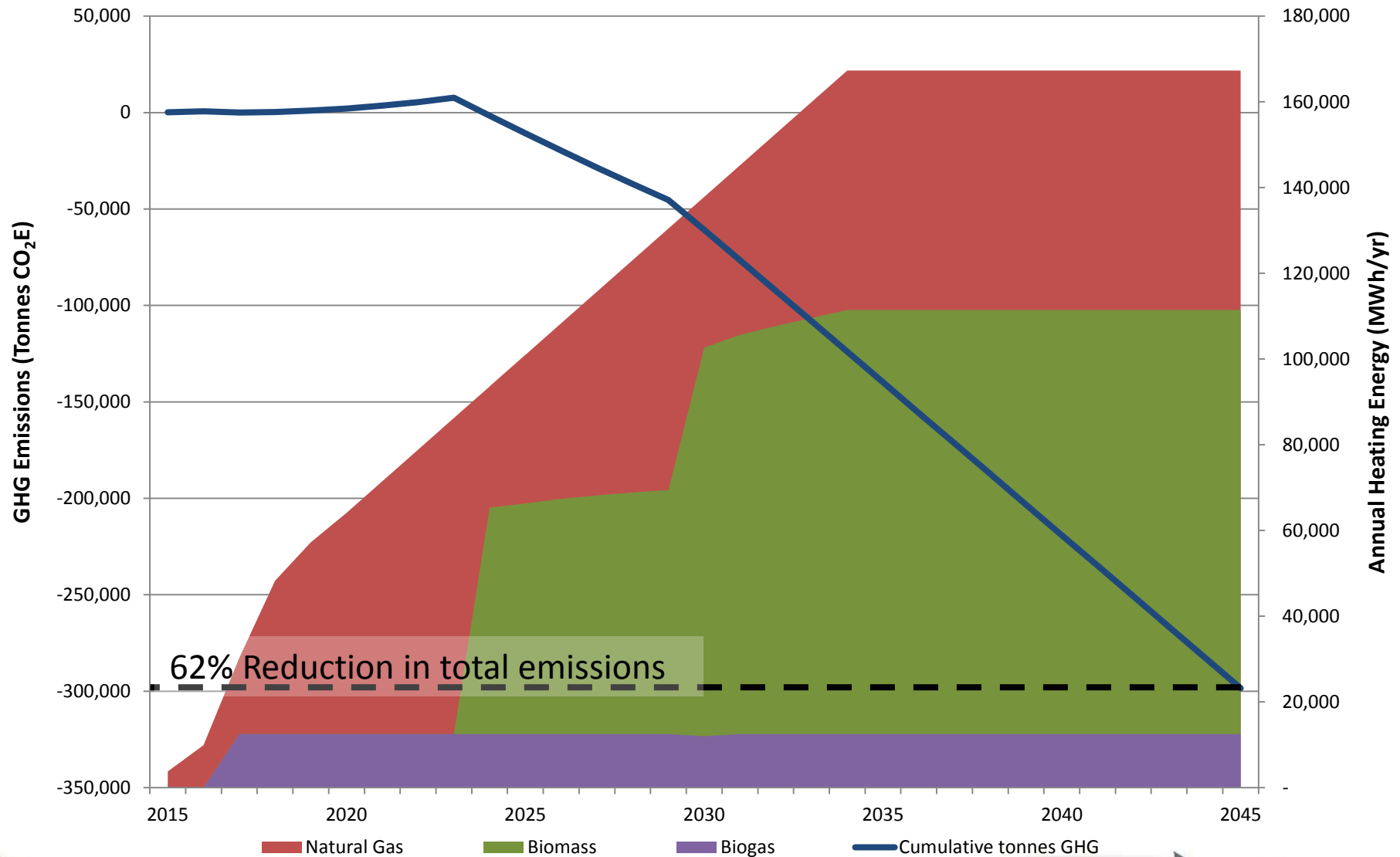


1. Resilient Infrastructure;
2. Neighborhood-Scale GHG Reductions; and
3. Long-Term Energy Price Stability

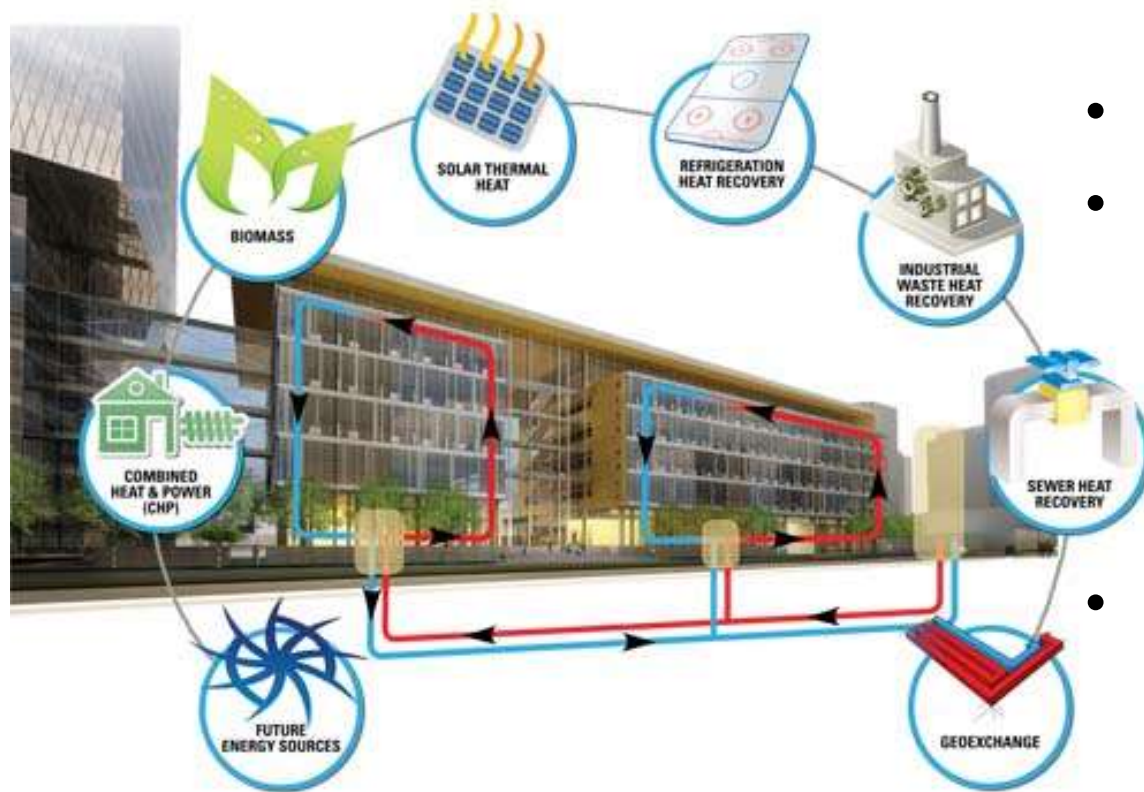
The Vision



Neighborhood-Scale GHG Reductions



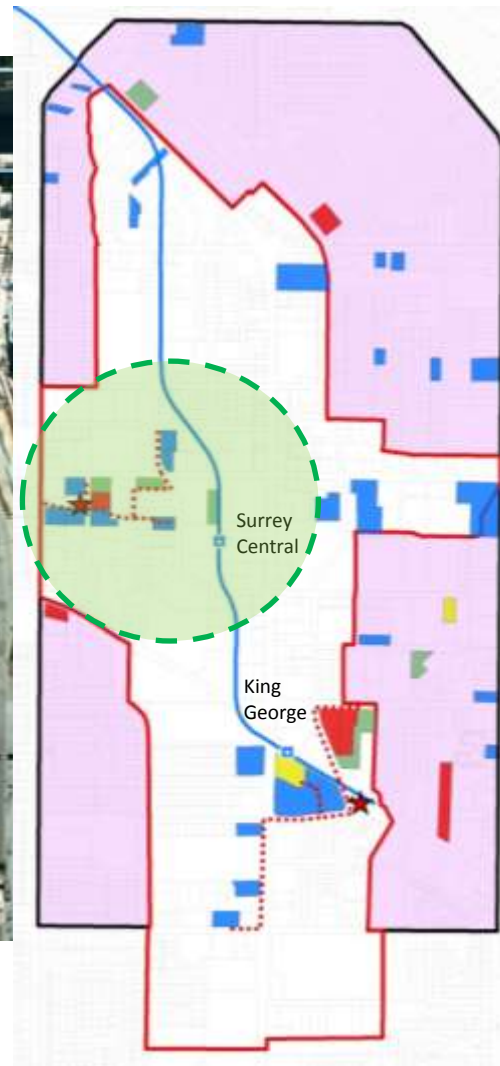
Ownership Model

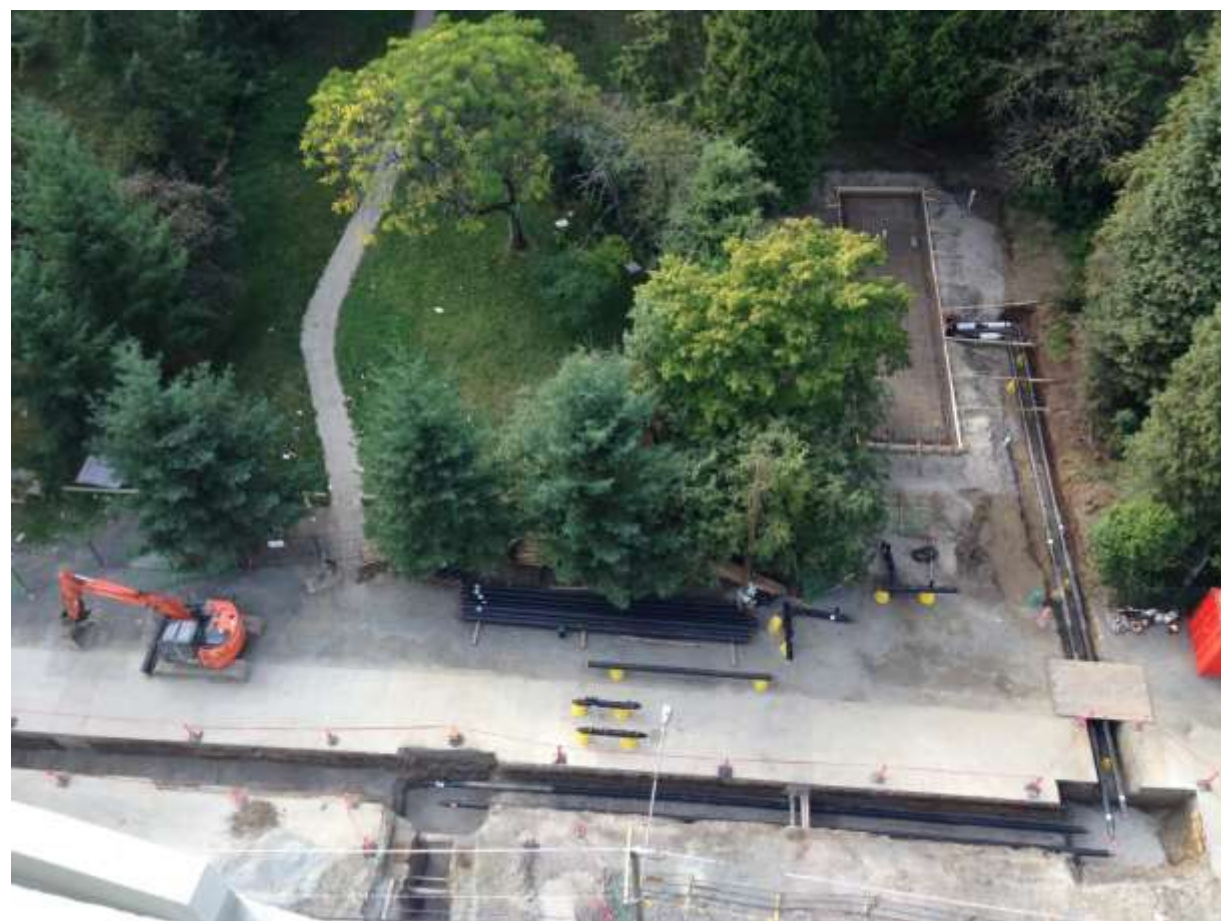


- *Surrey City Energy*
- Municipal Ownership:
 - Low cost of capital
 - Departmental Synergies
 - Access to grants
 - Experienced utility operator
- Does not preclude future Partnership Opportunities

Surrey City Energy is to be owned and operated as a business unit of the Surrey Engineering Department.

Current Projects

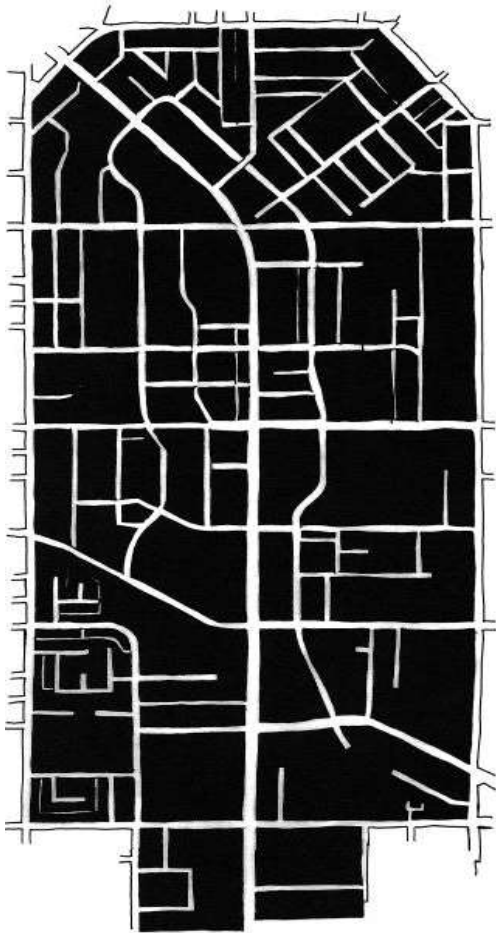




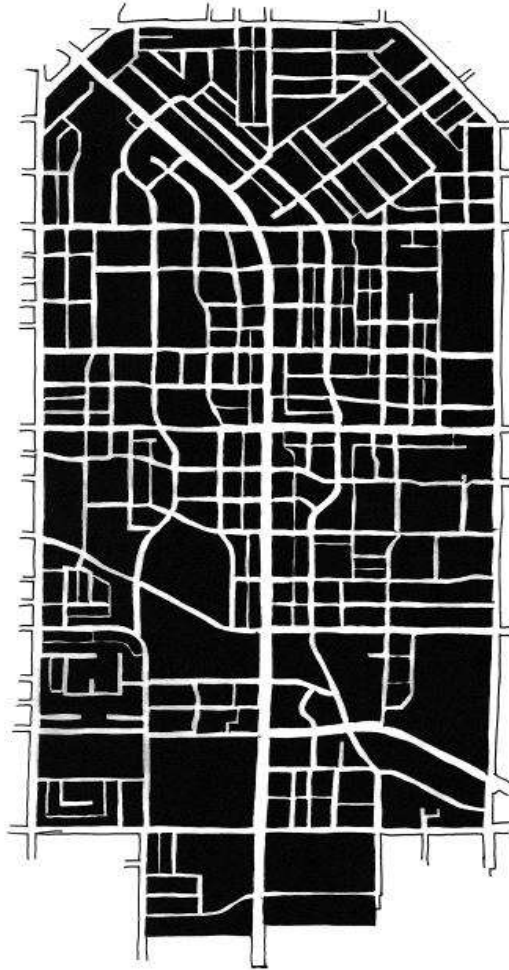
Site Build-out



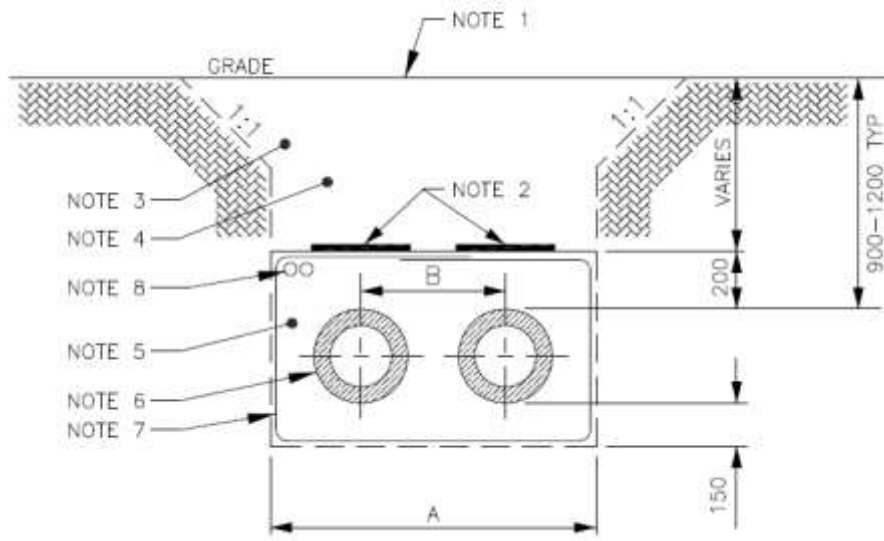
Finer Grained Road Network



Suburban City Centre
existing road network



Urban City Centre
future road network

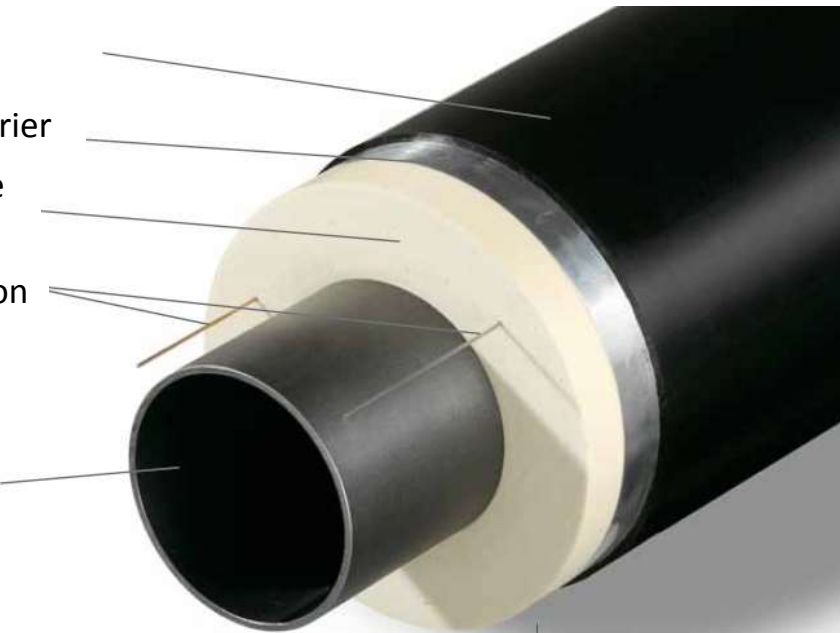


Diffusion Barrier

Polyurethane Foam

Leak Detection System

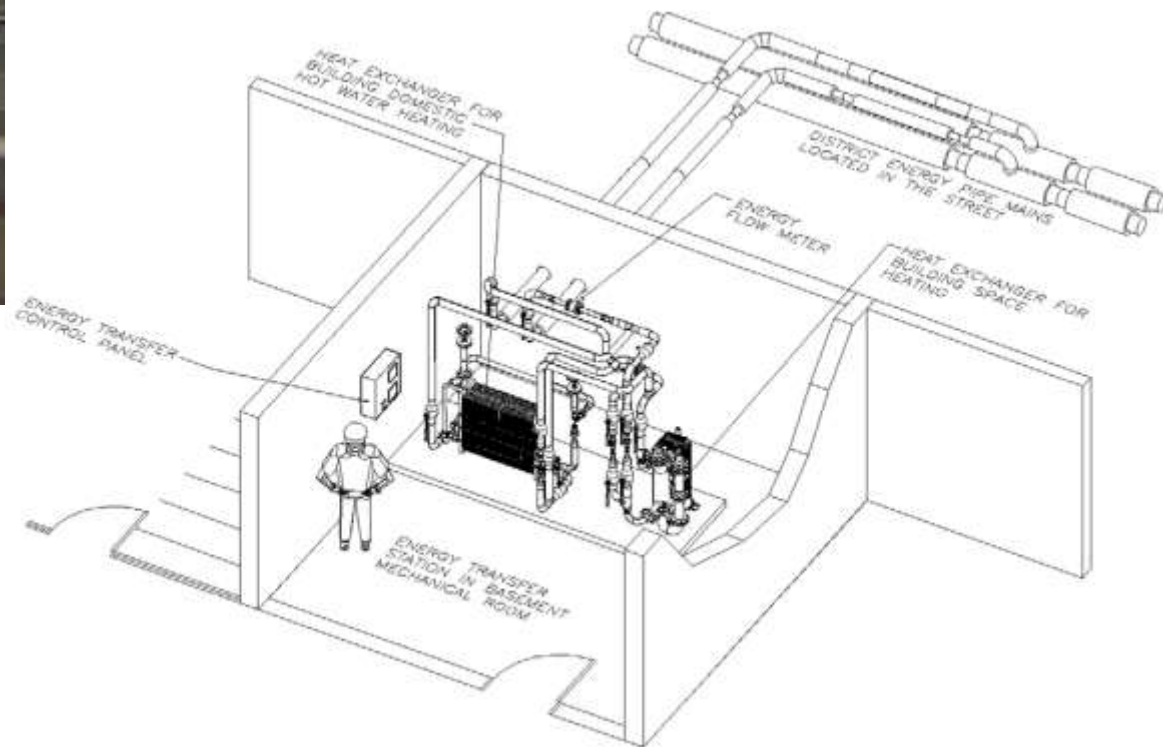
Steel Pipe



Infrastructure within Future Road Dedication



City Infrastructure Within Customer Building



Required SRW Agreement

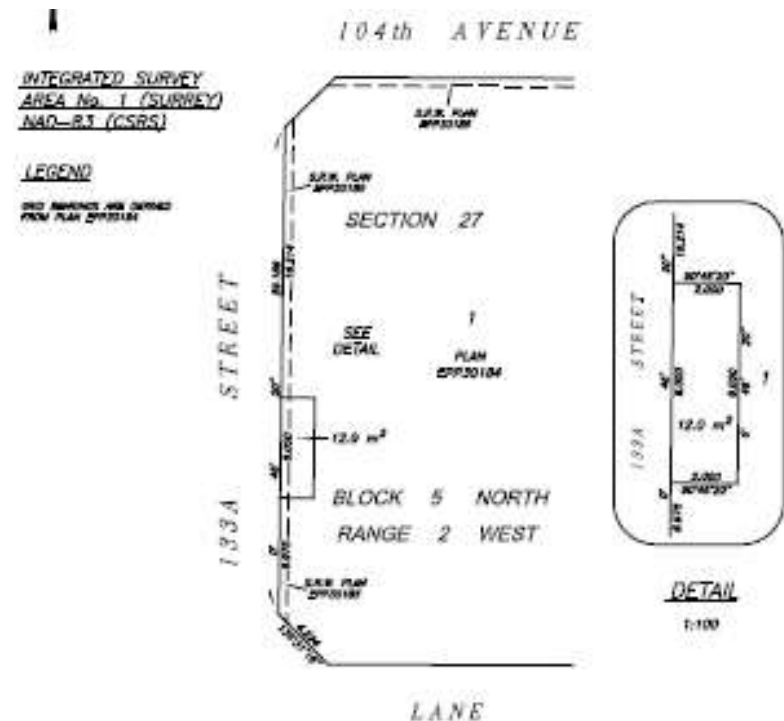
1. Blanket SRW

- To construct, install, replace, maintain, etc. City-owned equipment
- Have reasonable unobstructed access to the building for the above
- Use the building infrastructure to convey heat.

2. Section 219 Covenant

- Owner shall not build or locate any structures location shown in the Explanatory Plan

Explanatory Plan



Conclusion

- DE is a platform for the use of local, renewable, flexible heating sources
- DE can help communities reduce GHG's, improve energy resilience and stabilize long-term energy costs
- Acquisition of land is an essential requirement implementing DE systems



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