

GEOCITY 4 — BIGCITY



MUNICIPALITY OVERVIEW

- * Population: 2 000 000
- * The City has been increasingly suffering from periods of smog.
- * Municipal Council adopted a very ambitious GHG emissions reduction plan.
- * A municipally owned Local Distribution Company (LDC) delivers electricity.

CHALLENGES

- * High peak electricity demand during summer leads to higher costs and supply bottlenecks.
- * Many residents are installing individual window cooling units, thereby amplifying the summer peak concerns.
- * Window cooling units are increasing ambient noise and neighbour complaints.
- * City officials know that ground source heat pump systems represent the most energy efficient technology to heat and cool homes and buildings and wish to reduce conversion costs of traditional heating systems to geothermal energy.
- * City officials are preoccupied with the increasing use of underground telecommunications and energy infrastructures, and want to know where underground heat exchangers will be located to avoid damaging them during eventual local improvement work.

SOLUTIONS

- * The city has chosen to provide innovative financing for CGC certified systems via local improvement charges (LICs), conditional upon an *EnerGuide for Houses* home audit.

RESULTS

- * The city is experiencing an increased number of conversions to ground source heat pump systems.
- * The LDC is better able to manage its peak electricity demand during summer and winter months.
- * The city is able to recover its financing cost via a higher tax base due to increased home value.
- * Energy savings contribute for most of the homeowner LIC reimbursement.
- * The *GeoCity*® is kept informed by the CGC on an ongoing basis of the localization of underground heat exchangers.

