



## MURB, HOTEL & RESORT HVAC FACILITY SOLUTIONS



8 Haus Boutique Condos, Toronto, Ontario

At TRAK International® we design dependable and rapidly installed hydronic HVAC Smart Energy Systems in new or retrofit facilities. Over 28 years of design and construction experience includes award-winning hotels, resorts and multi-suite buildings with market-leading energy and carbon footprint reduction. We provide a comprehensive approach to building mechanical systems including heating, ventilation, air-conditioning, waste heat utilization, controls automation and plumbing.

On-site combined heat and power (CHP) cogeneration can reduce electrical costs and provide high-temperature water for domestic hot water, HVAC, and community amenities like restaurants, swimming pools, hot tubs, spas, and laundry. The CHP enables off-grid electricity supply, fully assuring the indoor environment for residents and guests at all times.

TRAK can arrange financing for your new build or retrofit with our cleantech measures that ensure a quick return on investment. We assist clients with ongoing monitoring and maintenance to ensure optimal building performance.



### OPERATING COST REDUCTION

Integrated Design Centred  
Around Energy Savings can  
Lower Your Operating Costs

### DESIGN-BUILD ENGINEERING & CONSTRUCTION MANAGEMENT

Turnkey Custom Build  
Facility Financing

### MODULAR HEAT PUMPS Move Your Heat Efficiently

### COMBINED HEAT & POWER Provides On-Site Power, Backup Power, Lowers Electricity Costs, and Supplies High Grade Heat

### GEOEXCHANGE & “FREE” COOLING Provides Natural and Efficient Heat Exchange and Storage

### UNIFIED CONTROLS Energy Management Control System Automates Your Facility

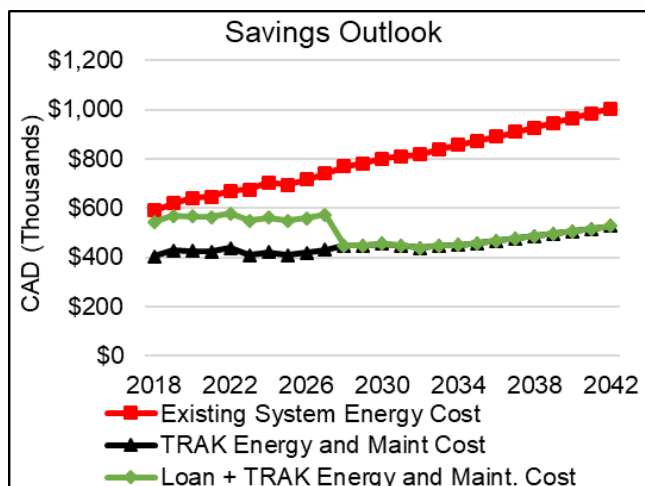
### ONGOING MONITORING & PREVENTATIVE MAINTENANCE

Watch Your Facility Online  
24/7 to Ensure Systems are  
Operating Correctly and  
Efficiently

## ONGOING COST SAVINGS AND FINANCING

TRAK has designed and built the mechanical systems of numerous properties that continue to consume less energy than comparable buildings. **Energy savings of 40-60% are most often achievable, resulting in a large reduction in ongoing operating costs.**

Our team offers optional financing for new construction or to fund the additional capital expenditures of installing energy-efficient systems. The operating cost savings will often pay back the loan in the first few years of operation, while having realized net savings from Day 1.



## MODULAR HYDRONIC HEAT PUMPS

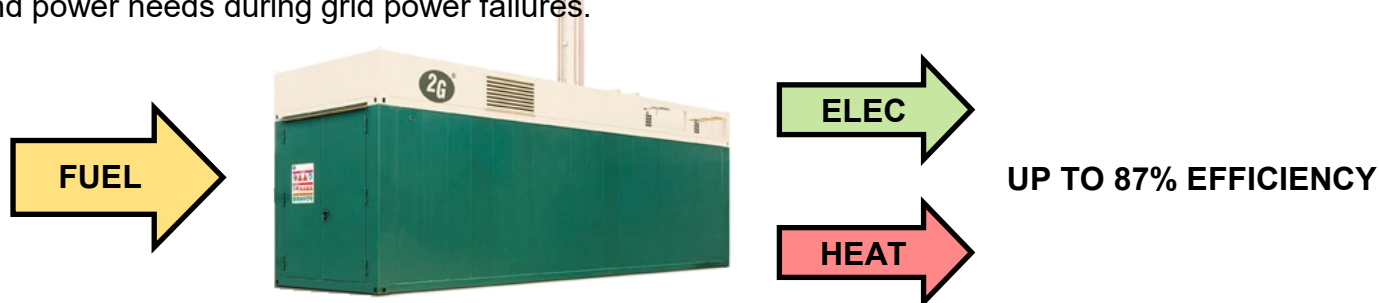


Energy is efficiently moved throughout the facility, removing heat from warm rooms and delivering the heat to cool rooms. Heat can also be distributed to domestic hot water systems, pools, snow melt, or stored in GeoExchange ground loop systems for later use. Moving heat throughout the building efficiently reduces wasted heat and energy, reducing equipment operational costs.

The Heat Pumps are designed for easy access and can be serviced by standard refrigeration technicians.

## COMBINED HEAT AND POWER INTEGRATION

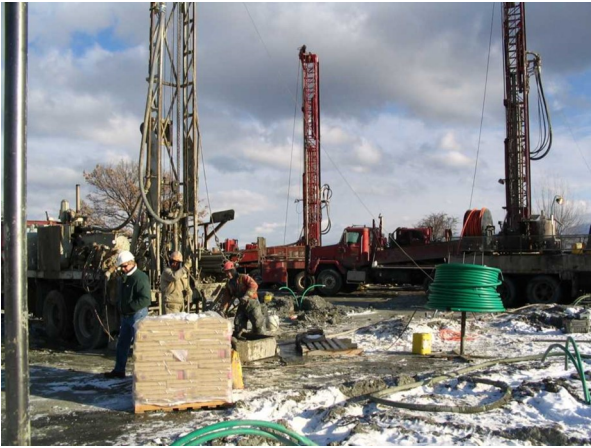
If well suited to your property, most or all of the facility's electricity load remaining after efficiency upgrades can be produced on-site by a natural gas Combined Heat and Power (CHP) cogeneration plant. The CHP plant generates electricity in parallel with the grid, and provides all or part of the heat and power needs during grid power failures.



Heat from the CHP adds to the heat collected by the Heat Pumps. This free, high-temperature heat by-product is used to provide instantaneous and abundant domestic hot water in addition to suite, make-up air, and garage heating. It can also be used for other facility features such as swimming pools, spas, snow melt, laundry, kitchens and various activity areas. The CHP and Heat Pumps work together to cost efficiently assure power and ideal facility conditions.



# GEOEXCHANGE



Vertical boreholes of the GeoExchange field go down to depths of 500 ft (~150 m).

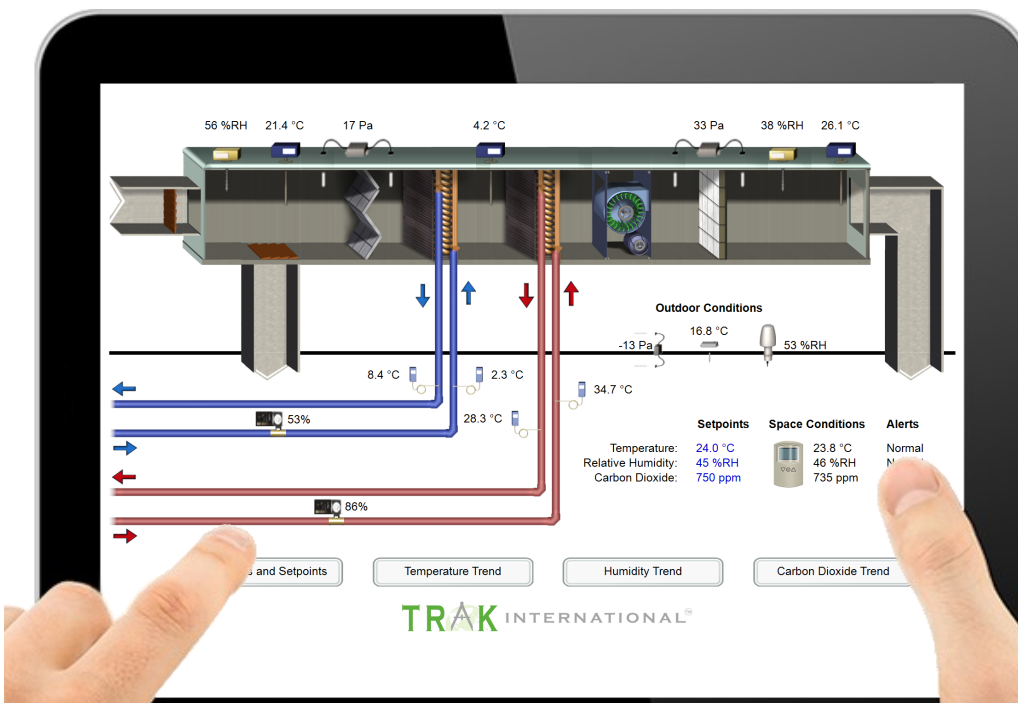
The steady temperature of the ground relative to outdoor air enhances the efficiency of the Heat Pumps, helping to level the energy load. In the summer, heat is removed from the building and when not used for other features can be stored in the ground for daily or seasonal heat recovery. This efficient storage and use of heat generates significant savings throughout the year.

## HEAT REJECTION AND FREE COOLING

Surplus heat can also be rejected at a water conserving dual purpose Dry Cooler. The Dry Cooler(s) can also be used for “free” heating and cooling, displacing Heat Pump compressor work.



## TRAK ENERGY MANAGEMENT CONTROL SYSTEM



The facility operation is coordinated and optimized by an industrial-quality energy management and control system.

TRAK's controls keep the mechanical and electrical systems operating cohesively, maximizing energy savings.

# CONTACT INFORMATION

**If you think we may be of assistance, our  
Professional Engineers and specialists would  
be pleased to meet with you.**

## **MAIN OFFICE**

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