



Jackson Read
Sr. Technical Representative

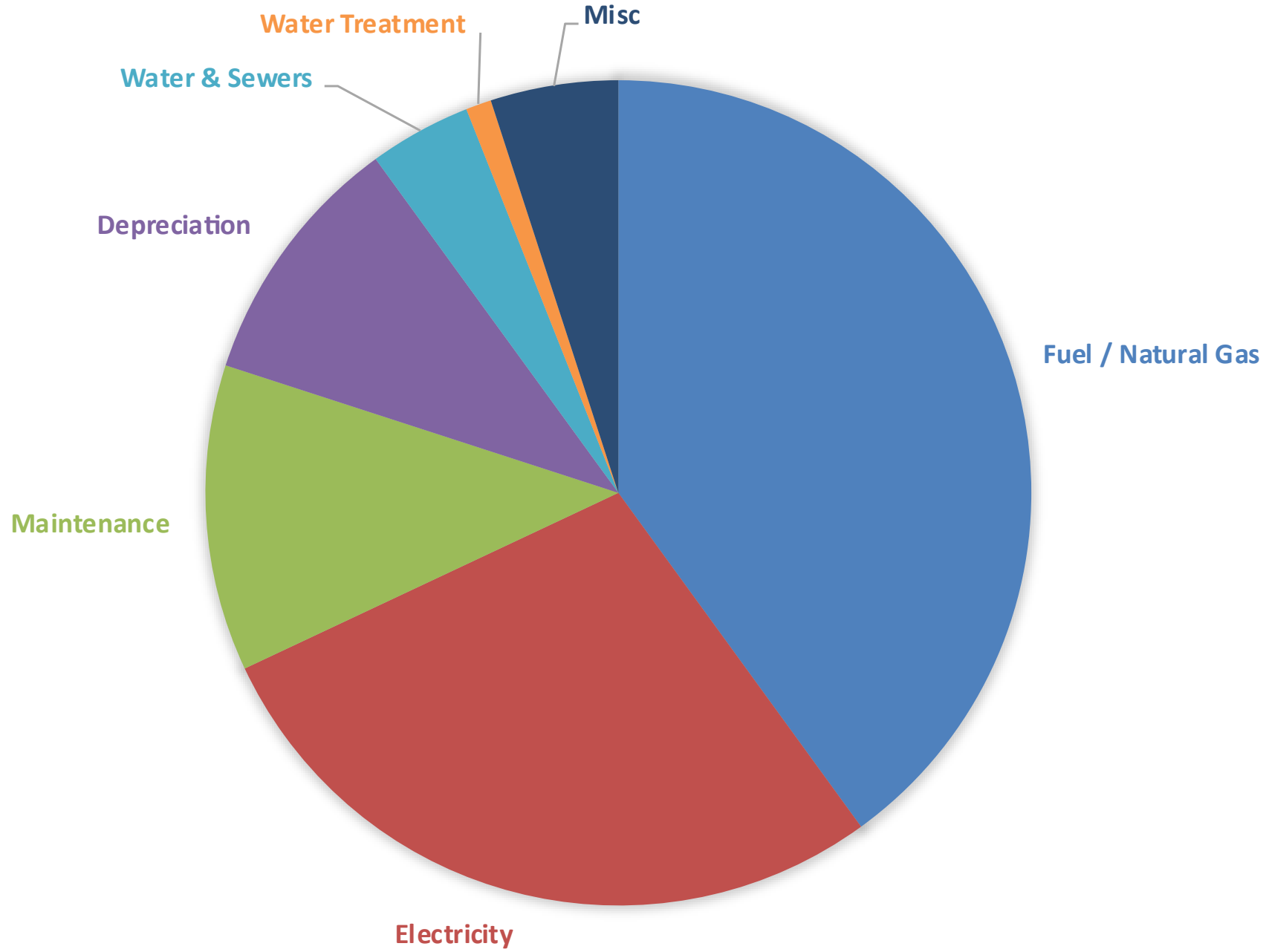




- 43 Years of Water Treatment
- Canadian Owned & Operated
- 11 Offices Across Canada



BUDGET PERCENTAGE (%)



Small Budget, Major Impact on Sustainability

Water Treatment Impact:

- Energy performance – improved heat transfer = less fuel demand
- Equipment longevity – less scale, corrosion and premature failure
- Carbon emissions – optimized systems = lower emissions

Sustainability starts with Water Treatment

EndoTherm

- Lowers Energy costs **15%** avg
- Reduces GHG Emissions
- Less Corrosive than Water
- Safe for Warrantees
- No Downtime
- No Extra Equipment Required



EndoTherm™ is an energy saving additive for commercial heating water systems proven to save up to 15% in energy costs.

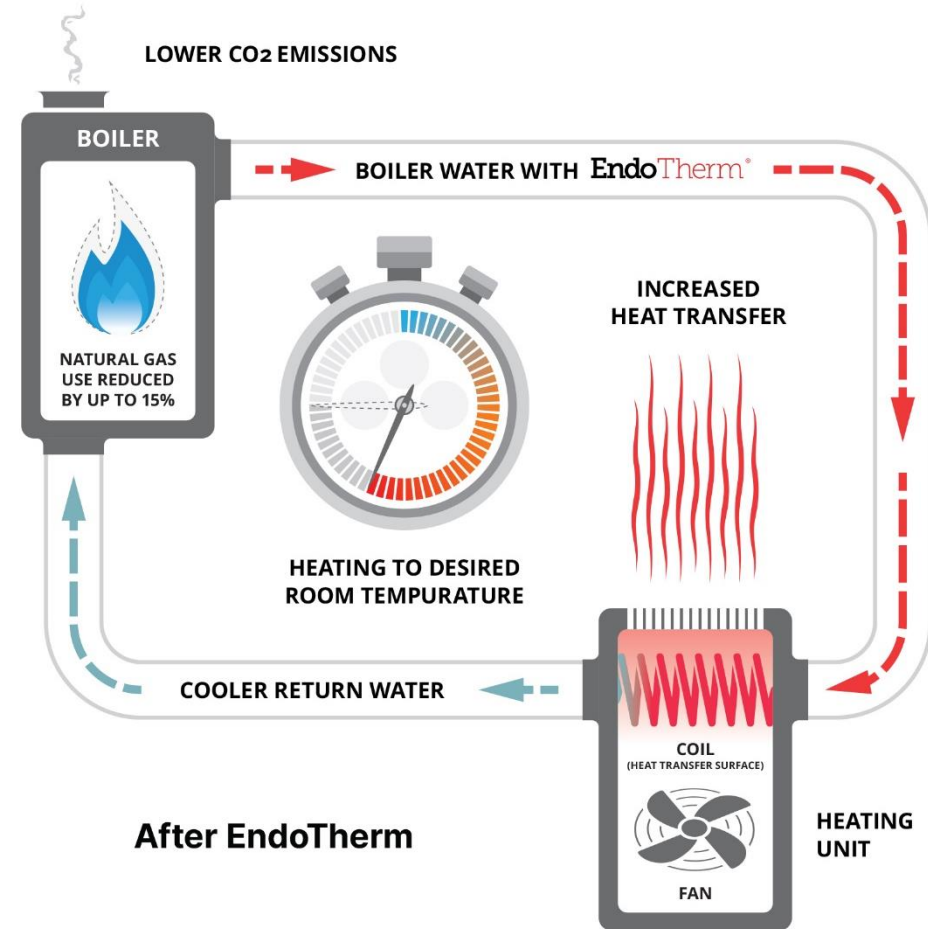
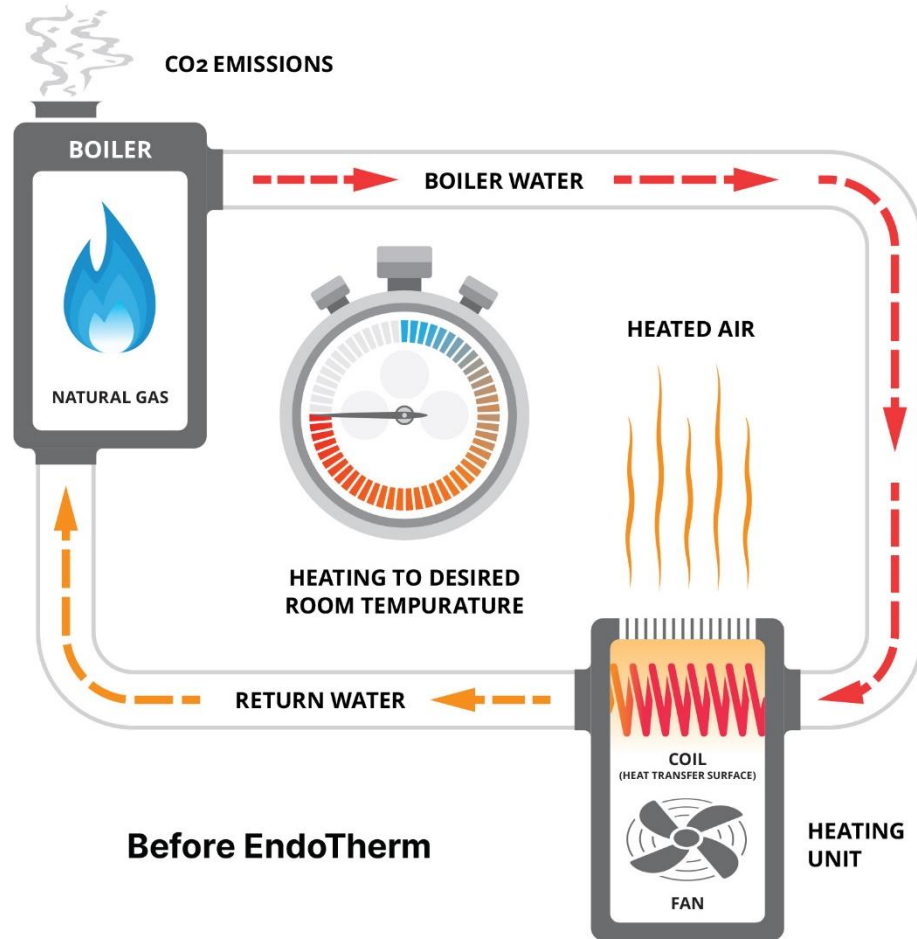
Water is used in heating systems because it is cost effective and readily available, however in reality water alone is not the most efficient transporter of heat.

EndoTherm™ improves the heat transfer properties of the water within a heating system resulting in a significant effect on the overall system efficiency and reduction in;

- Heating & energy costs
- Energy consumption by 15%
- Carbon emissions & footprint
- Carbon tax payments
- Demand on heating system & plant



EndoTherm - Heat Transfer Additive





Have conventional energy retrofits fallen short of carbon reduction targets?

Do deep retrofits have an unacceptable return on investment?

PACEeco

P R O G R A M

MAKING SUSTAINABILITY AFFORDABLE

HVAC systems in buildings account for 25% of all greenhouse gas emissions in North America. The PACE Eco Program is proven to lower energy consumption and emissions from your existing water-based HVAC system by up to 15% without any equipment changes or upfront investment.

Many HVAC systems use water to deliver or remove heat from a building because water is readily available and cost effective. Unfortunately, water's surface tension restricts heat transfer efficiency and its corrosive properties can lead to major system damage if left untreated.

- ▶ Regularly scheduled site service
- ▶ EndoTherm® treatment
- ▶ Filter changes and equipment checks
- ▶ Water testing and reporting
- ▶ Water treatment top-ups

How Does The Pace Eco Program Work?

- ▶ Reduces energy consumption by improving heat transfer efficiency
- ▶ Water treatment extends equipment life by protecting system metallurgy
- ▶ Regular service to monitor and maintain optimal protection and performance
- ▶ Reduced equipment runtime
- ▶ Fixed monthly cost

RESULTS



- Lower Utility Bills**
- Fewer Carbon Emissions**
- Reduced Operational Budget**
- Less Equipment Downtime**

How do **PACE^{ECO} PROGRAM** energy savings work?

Scenario #1

Building with one closed heating loop system (5,000L) treated with EndoTherm[®]

Annual Building Data	Before Program	With Program
Gas cost for boilers	\$45,000	\$39,375*
Water treatment	\$ 1,000	\$ 4,000
Carbon emissions (tonnes)	75	67
Carbon Tax (@ \$30/tonne)	\$ 2,250	\$ 1,950
TOTAL ANNUAL COST	\$48,250	\$45,325

This cost savings example not only offsets all annual water treatment costs, it also results in the following savings and reductions over three years:

1 year



- ▶ **\$2,925 Savings**
- ▶ **10,000kg Carbon emissions reduction**

3 years



- ▶ **\$8,775 Savings**
- ▶ **30,000kg Carbon emissions reduction**

Scenario #2

- Building consists of:
- ▶ 200-ton cooling tower operating 12 months/year
 - ▶ One closed heating loop system (5,000L) treated with EndoTherm®
 - ▶ One closed chilled loop system (5,000L) treated with EndoTherm®

Annual Building Data	Before Program	With Program
Gas cost for boilers	\$45,000	\$39,375*
Electricity cost for chillers	\$60,000	\$52,500
Water treatment	\$ 5,000	\$ 11,000
Carbon emissions (tonnes)	150	130
Carbon Tax (@ \$30/tonne)	\$ 4,500	\$ 3,900
TOTAL ANNUAL COST	\$114,500	\$106,775

This cost savings example not only offsets all annual water treatment costs, it also results in the following savings and reductions over three years:

1 year



- ▶ **\$7,725 Savings**
- ▶ **20,000kg Carbon emissions reduction**

3 years



- ▶ **\$23,175 Savings**
- ▶ **60,000kg Carbon emissions reduction**



EndoTherm[®]

1.800.799.6211

www.pacesolutions.com

info@pacesolutions.com

EndoTherm Automated Feed and Remote Monitoring System





**ENERGY
EFFICIENCY
SOLUTIONS**

The **EndoTherm Automated Feed and Remote Monitoring System** is designed to catch hydronic HVAC system leaks and maintain the EndoTherm concentration for peak performance. If water is lost through a leak or maintenance, a drop in pressure causes the system to automatically refill with city water, diluting the concentration of EndoTherm, leading to increased energy consumption. The EndoTherm automated system monitors water loss and injects a concentrated stream of EndoTherm from a reserve tank minimizing maintenance and ensuring peak energy efficiency.

This system package also includes **Pace RemoteLink™** which is a cloud-based, water treatment management service. The **Pace RemoteLink™** technology provides essential 2-way remote access to your feed system and historical data, 24/7. Email alerts can be set to notify internal staff or the Pace service team to catch and remedy leaks immediately, preventing critical energy efficiency losses.



Peak Energy Efficiency

Monitoring and maintaining the correct level of EndoTherm in hydronic systems is key to achieving peak energy efficiency and minimizing carbon emissions.



Leak Protection

Water meters are configured to catch system leaks immediately. Leaks can be set to trigger internal or external notifications so issues can be identified, saving money and downtime.

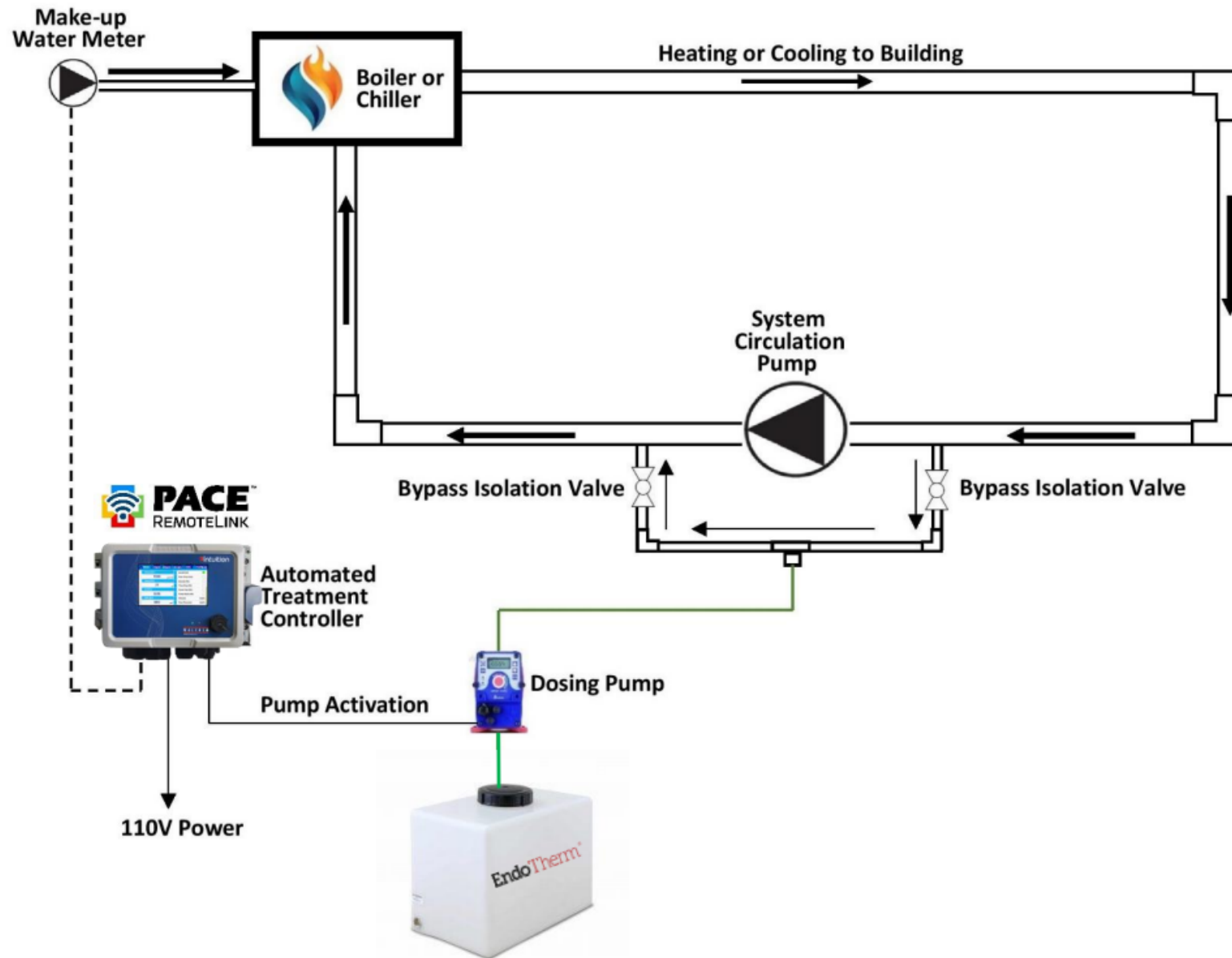


Data Management

Access key parameters at-a-glance to identify trends in system water losses. Helps distinguish routine maintenance water loss from equipment failures and ongoing leaks.

EndoTherm® Automated Feed and Remote Monitoring System

- RemoteLink™ access controller
- Track system make-up volume
- Automatic top up of EndoTherm
- Email notification for system leaks



EndoTherm[®]

City of Kingston - Two Sites
Ontario, Canada



AVG ENERGY SAVING

FINANCIAL SAVING

🇨🇦 \$1,913.80

CARBON SAVING


9,683kg CO₂e

INSTALLED DEC 2024 - 5 MONTH PILOT

“The City of Kingston’s EndoTherm pilot demonstrated meaningful energy and carbon reductions, supporting our ongoing commitment to sustainability and operational efficiency.”

Russell Horne
 Manager, Facilities Energy & Asset Management
 Facilities Management and Construction Services
 City of Kingston

Maple Ridge School District
Multiple Locations
BC, Canada



11.44
%

ENERGY SAVING

Calgary Board of Education
Multiple Locations
Calgary, Canada



13.20
%

ENERGY SAVING

Waterloo Regional District
School Board
Ontario, Canada



11.91
%

ENERGY SAVING


Centre de Services des Bois-Francs - Multiple sites
Quebec, Canada



10.08
%

ENERGY SAVING

Perimeter Institute for Theoretical Physics
Ontario, Canada



15.03
%

ENERGY SAVING


Coquitlam School District - Elementary Schools
BC, Canada



11.35
%

ENERGY SAVING

East Irondequoit School District
NY, United States



9.72
%

ENERGY SAVING


Northeastern Illinois University
IL, United States



15.96
%

ENERGY SAVING

Juniata College Huntington
PA, United States



14.86
%

ENERGY SAVING

Millersville University - Luek Hall
PA, United States



11.71
%

ENERGY SAVING

Burnaby School District Multiple Sites
BC, Canada



11.17
%

ENERGY SAVING

Simon Fraser University Multiple Townhouses
BC, Canada



14.30
%

ENERGY SAVING

Vancouver International Airport (YVR)
BC, Canada



17.32
%

ENERGY SAVING

Real Life Church Bedford
PA, United States



12.70
%

ENERGY SAVING

Drewlo Holdings - Multi-Unit Residential Building
Ontario, Canada



10.24
%

ENERGY SAVING

Drewlo Holdings, Phase 2 - Multiple Locations
Ontario, Canada



14.13
%

ENERGY SAVING

The Minto Group - Multiple Locations
Ottawa/Toronto, Canada



11.11
%

ENERGY SAVING

Dakelh & Quesnel Community Housing Society
BC, Canada



12.04
%

ENERGY SAVING



EndoTherm - Heat Transfer Additive

Interior Health
Multiple Locations
BC, Canada



11.99
%

ENERGY SAVED

Rochester Regional
Hospital
NY, United States



14.50
%

ENERGY SAVED

Maple Ridge School District
Multiple Locations
BC, Canada



11.44
%

ENERGY SAVED


Calgary Board of Education
Multiple Locations
Calgary, Canada



13.20
%

ENERGY SAVED

Station Medical Center
Altoona
PA, United States



18.30
%

ENERGY SAVED

Grand River Hospital
850 King Street
ON, Canada



12.09
%

ENERGY SAVED

Waterloo Regional District
School Board
ON, Canada



11.91
%

ENERGY SAVED

Centre de Services des
Bois-Francs - Multiple Sites
PQ, Canada



10.08
%

ENERGY SAVED

St Joseph Mercy Hospital
Education Centre & 5305
MI, United States



10.43
%

ENERGY SAVED


Point Grey Golf
& Country Club
BC, Canada



12.10
%

ENERGY SAVED


Perimeter Institute for
Theoretical Physics
ON, Canada



15.03
%

ENERGY SAVED

Coquitlam School District
Elementary Schools
BC, Canada



11.35
%

ENERGY SAVED



Independent Verification



Calgary Board
of Education

CONCERT® PROPERTIES

BentallGreenOak

Alberta Infrastructure

BGIS

Alberta Health
Services

TELUS®/MD

VANCOUVER
AIRPORT
AUTHORITY

Beyond, Every Day.



THE UNIVERSITY
OF BRITISH COLUMBIA

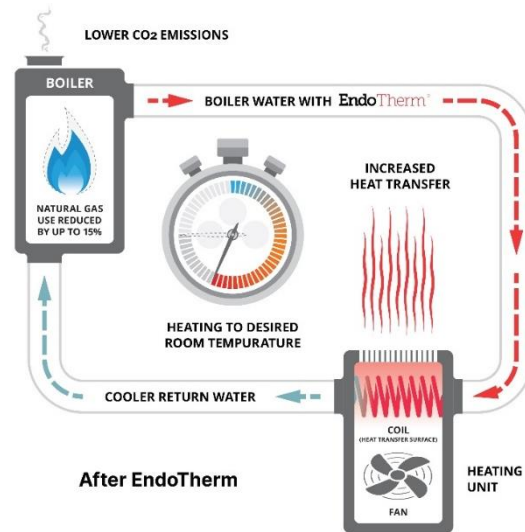
Energy at work



FORTIS BC™



Questions?



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www.pacesolutions.com



PACE
SOLUTIONS