

## HYBRID/DUAL FUEL HVAC SYSTEMS: SAVING CLIENTS MONEY AND HELPING THE ENVIRONMENT

When essential equipment at our managed properties reaches the end of its lifecycle, CBP Management leads the team that undertakes its replacement. We guide owners through the analysis, selection and installation of new systems that align with project goals and budget; as well as prioritize environmental sustainability, reduce carbon emissions, and lower operating costs.

For HVAC, many of our properties currently use systems that cool with electricity and heat with fossil fuels (both natural gas and oil). These were the systems of choice during building construction, but over time have proven to significantly contribute to air pollution and climate change.

As replacements arise, most owners are seeking solutions which will reduce the environmental impact of their asset and achieve sustainability goals, but which are also budget-friendly.

To ensure owners have all the information for their replacement project, CBP Management performs an in-depth analysis of both like-for-like and enhanced options. In most cases, owners are selecting hybrid/dual fuel systems - which heat and cool with electricity, and only as the demand requires, top up with natural gas.

While upfront costs of a hybrid/dual fuel HVAC system are higher, they are offset by long-term savings. As well, these modern systems have a considerably reduced environmental impact than their predecessors.

To date, CBP Management has led the replacement of one hybrid system at our 24,332 sq.ft. industrial property at 2751-2783 Thamesgate Drive in Mississauga. Several other replacements are planned across our portfolio in the Ottawa region, GTA and Southwestern Ontario, and Atlantic Canada in the coming months.



### COLONNADE BRIDGEPORT'S ESG COMMITMENT

By embedding environmental, social, and governance (ESG) principles into our strategy, policies, and practices, Colonnade BridgePort creates lasting value for the properties we manage and enhances long-term investment performance for our clients.

This commitment ensures our business not only thrives today, but also contributes positively to the future of our communities.

# BENEFITS OF HYBRID/DUAL FUEL HVAC ROOFTOP UNITS (RTU)



## HYBRID RTUs

Heat/cool with electricity, top-up with natural gas

## STANDARD RTUs

Heat with fossil fuels, cool with electricity

### 1. Energy Efficiency

**Reduced Consumption:** Hybrid RTUs typically combine traditional HVAC systems with renewable energy sources leading to lower energy usage.

**Optimized Performance:** Advanced control systems can adjust the operation of hybrid RTUs based on current conditions, ensuring it operates at peak efficiency.

### 2. Cost Savings

**Lower Utility Bills:** Improved energy efficiency translates into lower monthly energy costs. Hybrid RTUs holds a distinct advantage because the system can optimize its energy use based on the temperature outside which can result in annual heating and cooling cost savings compared to standard RTUs.

**Incentives/Rebates:** Property owners may be eligible for incentives for energy-efficient or renewable energy systems.

**Maintenance Costs:** Maintenance costs for hybrid RTUs are equivalent to or less than standard RTUs.

**Electricity Power Assessment:** Hybrid RTUs may use existing power supply eliminating power upgrade requirements.

**Natural Gas Pricing:** Carbon pricing for natural gas is expected to increase by >18% in 2024-2025 which results in a 13% (net) increase in natural gas price assuming a 2% increase in commodity pricing. (Source: Enbridge Gas) The higher price of natural gas year over year is greater than the increased cost of hybrid RTU equipment.

### 3. Environmental Benefits

**Reduced Carbon Footprint:** Standard RTUs use electricity for cooling and fossil fuels for heating. Hybrid RTUs uses electricity for cooling and a combination of electricity and natural gas for heating. In areas where the electricity grid has a lower carbon emissions profile (Ontario, Quebec), when a hybrid RTU is heating with electricity, it produces less carbon emissions than when heating with a fossil fuel. By utilizing renewable energy sources, hybrid RTUs help decrease greenhouse gas emissions.

**Environmental Social Governance (ESG):** Contributing to environmental sustainability can enhance a property's publicly reported benchmark performance results, demonstrating corporate responsibility towards planetary health.

### 4. Improved Comfort and Air Quality

**Consistent Temperatures:** Hybrid RTUs can provide more consistent indoor temperatures.

**Enhanced Air Quality:** Many hybrid RTUs come with advanced filtration systems that improve indoor air quality by removing pollutants and allergens; the filter trays can be modified to accept better filters in most cases. New units come equipped to accept MERV 8 filters.

### 5. Increased Property Value

**Market Appeal:** Properties with modern, energy-efficient systems are often more attractive to buyers/tenants.

**Higher Resale Value:** The long-term cost savings and environmental benefits of hybrid RTUs can increase the property's market value.

**Risk Mitigation:** Contributing to environmental sustainability can enhance a property's image and appeal to eco-conscious tenants, thereby improving marketability and reducing the risk of tenant turnover.

**Certifications:** Less greenhouse gas emissions result in improved Energy Star scoring, which can lead a property to certifications.

## 6. Reliability and Longevity

**Durability:** Hybrid RTUs are often built with high-quality components that can last longer than standard RTUs.

**Reduced Maintenance:** Advanced diagnostics and control systems of hybrid RTUs can predict maintenance needs, reducing the likelihood of unexpected breakdowns and extending the unit's lifespan.

## 7. Regulatory Compliance

**Meeting Standards:** Installing hybrid RTUs can help property owners comply with local, provincial, or federal energy efficiency targets, regulations, and/or building codes.

**Futureproofing:** As regulations become stricter, having an efficient system can prevent the need for costly upgrades.

## 8. Enhanced Control and Monitoring

**Smart Technology:** Many hybrid RTUs come with smart controls and remote monitoring capabilities, allowing property management to optimize performance and quickly address issues.

**Data Insights:** Detailed performance data from hybrid RTUs can help property owners make informed decisions about energy use and system maintenance.

# BY THE NUMBERS (PROJECT DEPENDENT)

### LIFETIME COSTS FOR HYBRID RTU VS 5-TON STANDARD RTU

SYSTEM	INITIAL COST	ANNUAL MAINTENANCE COST	PROJECTED ANNUAL ENERGY COST	TOTAL LIFETIME COST
HYBRID RTU	\$23,500	\$600	\$4,578	\$101,171
STANDARD RTU	\$18,000	\$600	\$8,832	\$159,474

A hybrid RTU provides a financial savings of 36.56% VS the standard RTU at the end of its lifespan.

### CO2 EMISSIONS FOR HYBRID RTU VS 5-TON STANDARD RTU

SYSTEM	ANNUAL COOLING EMISSIONS	ANNUAL HEATING EMISSIONS	TOTAL ANNUAL EMISSIONS	TOTAL LIFETIME EMISSIONS
HYBRID RTU	0.194	13.003	13.197	197.954
STANDARD RTU	0.200	30.007	30.207	453.102

The reduction in carbon dioxide emissions by using a Hybrid RTU VS a Standard RTU is approximately 56.31%.

**COST AND POWER CONSUMPTION ANALYSIS REPORT COMPLETED BY PROFESSIONAL MECHANICAL ENGINEER**