



trade force tech
Integrated Energy Solutions

Retail Mall HVAC System

CASE STUDY

Improved Control and Ventilation

RTU Retrofit Delivers 55% Savings



**FIRST
CAPITAL**

For the past decade, First Capital Realty has taken a leadership position in ensuring sustainable practices for new developments and existing properties. We integrate operational efficiency into how we manage our neighbourhoods every day. We are constantly engaging the community to create awareness and further improve our energy consumption and waste programs.

Energy Cost Reduction Focus

As part of an ongoing effort to reduce energy costs and reduce the carbon footprint in the retail properties that it manages, First Capital Realty engaged the HVAC and refrigeration efficiency experts at TradeForce Tech to assess the opportunity for savings and improved ventilation in the existing HVAC systems at eight retail mall locations across Ontario.

The common areas at each location are heated and cooled using traditional packaged rooftop units (RTU's) ranging in size from 5 tons to 30 tons. The HVAC strategy varied across the portfolio with some locations having a larger number of small units and one having a single 30 ton unit.

Typical of many facilities, the RTU's were controlled using programmable thermostats controlling temperature set points and schedules. In roughly 50% of the cases the fans

were set to "on" instead of "auto" to maintain circulation even when not actively heating or cooling. This has now become the recommended setting since the COVID pandemic has illustrated the need for even better levels of ventilation in all buildings.

Based on the analysis of the existing assets, **TradeForce Tech** recommended retrofitting the existing RTU's with the Catalyst ARC system. The energy savings achieved ranged from 52% to 62% with an average of 55% across the portfolio resulting in a project payback of 3 years after utility incentives. Beyond the operational savings, there are maintenance and repair costs savings enabled by this state of the art installation.

The dashboard toolset is accessed via any web connected device and provides visibility of key RTU performance parameters on a facility level, or portfolio of facilities, with alarms grouped into 3 categories. Energy, Occupant Comfort and Health (CO₂) data is provided to allow operators to prioritise service and repair calls. It also allows building operators and their service providers to drill down to the individual unit level to adjust settings and retrieve a wide range of performance reports.

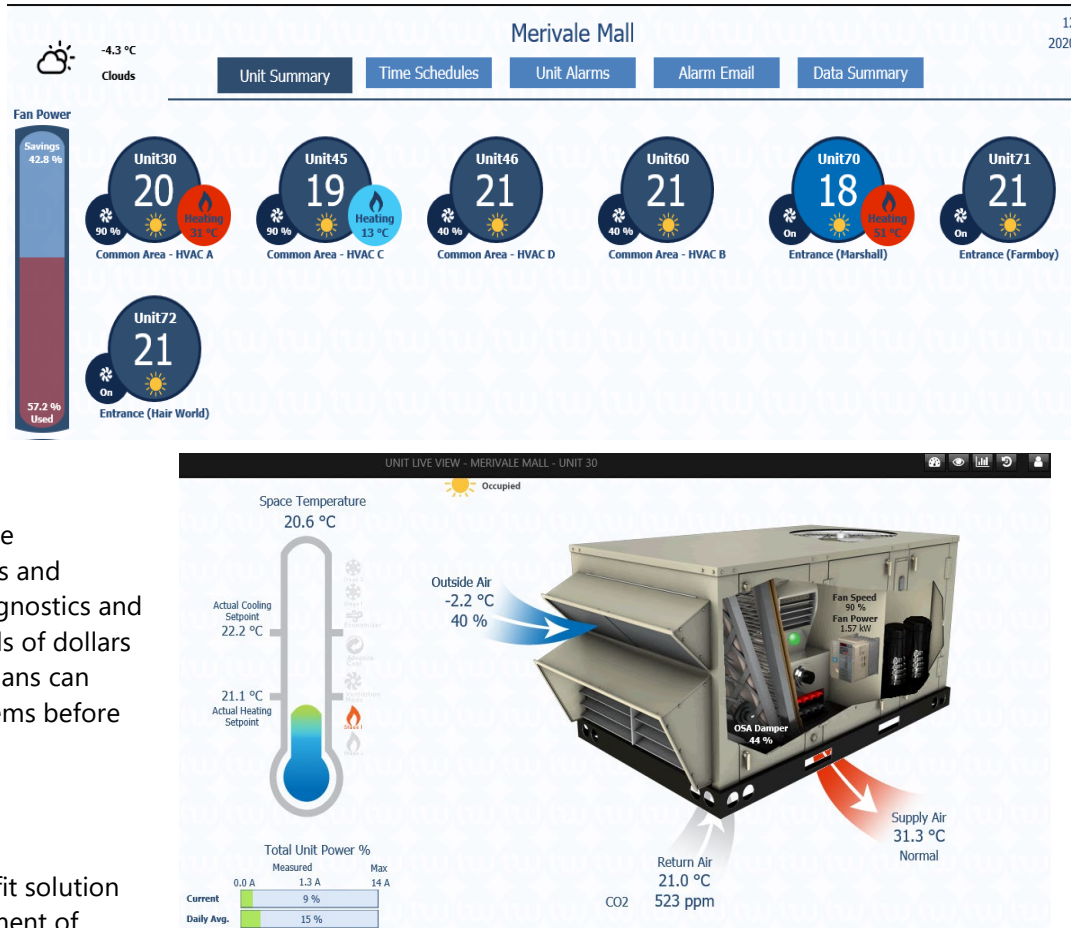
The system provides detailed performance information of critical system components and enables operators to perform routine diagnostics and trouble shooting. This can save thousands of dollars in service calls each year because technicians can come prepared to address specific problems before even leaving the shop.

Proven Results

The Catalyst system is the only RTU retrofit solution independently verified by the US Department of Energy and was named the “#1 Game Changing Technology”, however tens of thousands of installations across North America by companies like First Capital are the real proof of its value.

About Us

Tradeforce Tech is the only multi trades services and installation company that specializes in energy conservation retrofits and is the leading affiliate integrator of the Catalyst system in Canada. Contact sales@tradeforcetech.com or call one of the numbers below to arrange for a free, online live demonstration of the Catalyst system in action.



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