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RUNtime

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Q2-2021

The Art of Building Sustainability



Reliable®
controls

PRESIDENT'S MESSAGE

Green buildings in Canada



At the heart of every green building is an automation system that monitors and controls the HVAC, lighting, and security systems. Reliable Controls and its worldwide network of Authorized Dealers are pleased to support building owners and operators around the globe in their quest for building sustainability.

Canada ranked second in the U.S. Green Building Council's top 10 countries and regions for LEED-certified projects outside the United States in 2018, according to the Canada Green Building Council (CaGBC) *LEED Impact Report* that year.¹ Ranking was based on LEED-certified gross floor area; Canada's 3,254 LEED-certified projects at that time accounted for a combined gross floor area of 46.9 million m², just behind China's 1,494 LEED-certified projects, which had a gross floor area of 68.8 million m² in 2018. Considering Canada's relatively small population, its growing green building inventory is a testament to its national commitment to achieving a built environment that delivers a reputable triple bottom line.

Tom Zaban, P.Eng, LEED Green Associate

The CaGBC maintains a detailed, up-to-date project database of all registered and certified LEED projects in Canada for both commercial and residential buildings.² The database is available to the public and contains information on approximately 8,000 green buildings. An April 20, 2021, analysis identified the following LEED-certified commercial buildings that depend on Reliable Controls and its Authorized Dealer network in Canada:

- 5 percent of all LEED buildings that have achieved any level of certification in Canada depend on Reliable Controls.
- 7 percent of LEED Platinum-certified buildings in Canada depend on Reliable Controls.
- 12 percent of all LEED buildings that have received any level of certification in Nova Scotia depend on Reliable Controls.
- 13 percent of all LEED buildings that have received any level of certification, and 21 percent of LEED Platinum-certified buildings, in British Columbia depend on Reliable Controls.
- Every LEED building that has received any level of certification in Nunavut (there is only one) depends on Reliable Controls.

In its 2020 market impact report, titled *Canada's Green Building Engine*, the CaGBC says more than 160,000 new jobs were added to the green buildings sector between 2014 and 2018, bumping up the total sector jobs count to just over 460,000 people.³ By 2030, under a climate-forward scenario, the report forecasts direct green building employment of more than 1,470,000 jobs and a reduction of greenhouse gas emissions by 53 million tons of CO₂ equivalent compared with 2018 levels.⁴ The report concludes that although there has been a growing patronage of green building construction and renovation in Canada, the industry "still has a long way to go to become mainstream," and provincial building codes, municipal bylaws, and incentives such as the BC Energy Step Code⁵ are helpful in "driving market transformation."

The number of green buildings that depend on Reliable Controls and the Reliable Controls Authorized Dealer network is growing. Together, building owners, operators, and Reliable Controls are working together to help drive a market transformation that will result in healthier indoor environments, reduced greenhouse gas emissions, and new jobs.

1 Canada Green Building Council. (2018). *LEED Impact Report*. https://www.cagbc.org/CAGBC/Advocacy/CaGBC_Research/leed_impact_report_canada_2018/CAGBC/Advocacy/leed_impact_report_Canada_2018.aspx?hkey=9ee7f7a4-0b46-4101-9598-cfd51b0c5271.

2 Canada Green Building Council. (n.d.). Project Database. https://leed.cagbc.org/LEED/projectprofile_EN.aspx

3 Canada Green Building Council. (2020). *Canada's Green Building Engine*. https://www.cagbc.org/CAGBC/Advocacy/market_impact_report.aspx.

4. Ibid.

5. Energy Step Code Council. (n.d.). BC Energy Step Code. <https://energystepcode.ca>.

THE ART OF BUILDING SUSTAINABILITY

The Paris Agreement, adopted by 196 parties at COP21 in Paris in December 2015, committed signing nations to undertake ambitious efforts to combat climate change and adapt to its effects. The goal? Limit global warming to well below 2 degrees Celsius, preferably 1.5, compared to preindustrial levels. To do so, participating countries aim to achieve a climate-neutral world by mid-century.

The Paris Agreement provides a framework for financial, technical, and capacity-building support to countries that need it. Reliable Controls is particularly passionate about that second element: fully realizing technology development and transfer for both improving resilience to climate change and reducing greenhouse gas emissions.

Buildings account for more than 30 percent of global energy consumption¹; beyond that, heating, ventilation, and air conditioning (HVAC) consume about 50 percent of the energy used in buildings.² Improving the efficiency of these systems is crucial to a long-term climate commitment like the Paris Agreement.

In addition to the high level of interaction between HVAC, lighting, and security systems, building sustainability demands other technological and supporting elements that will endure over the long term. In 2019 Reliable Controls thoughtfully developed a concept called the Art of Building Sustainability—nine elements of building sustainability that guide the work of Reliable Controls team members and the evolution of its products. These nine elements are also intended to help Reliable Controls customers create true building sustainability—now and into the future.



Certified open standards

Open protocols certified by third-party testing labs ensure different IoT vendors effectively share information and services—to interoperate as a single, dependable system. Since 1995 the BACnet protocol has delivered the promise of interoperability for building owners around the world. All controllers Reliable Controls manufactures are certified by a third-party testing lab—BACnet Testing Laboratories. When customers see the BTL mark on Reliable Controls products, they can be confident the products have been rigorously tested to meet a high level of quality and open-protocol conformance.



Secure data

Perhaps more important than ever in the building automation industry is the need for improved information security and scalable network infrastructure. Integrating building controls from multiple vendors can introduce security vulnerabilities. Reliable Controls products support a single sign-on architecture and secure communication through an encrypted BACnet Secure Network to provide a comprehensive approach to security—no matter how many different BACnet devices are deployed in a building automation system.



Integrated fault detection and diagnostics

Reliable Controls integrates real-time fault detection and diagnostics capabilities into its products, saving customers the time and money involved in implementing third-party reporting. Using existing infrastructure, live fault-reporting technology from Reliable Controls empowers building operators to diagnose and resolve issues as they happen—so their facilities run smoothly and efficiently, reducing unexpected downtime and extending the life of their equipment.



Ownership of analytics

Facility owners, operators, and managers can effectively optimize building performance with timely access to actionable insights. Reliable Controls products allow stakeholders full control over data gathering, report formatting, and delivery without the burden of restricted licensing or copyright requirements—so they can quickly turn information into action while retaining full ownership and control of data.



Mobile-centric experience

Today's building occupants expect to interact with their environment to control lighting, ventilation, heating, cooling, and air quality. Empowering people to manage their own surroundings fosters accountability and efficiency. With technology from Reliable Controls, building occupants can use their smart devices to better connect with their space and take control of their environment in a holistic, mobile experience.



Minimal waste

Today's technology is often paired with a cavalier attitude about product life cycle. Vendors like Reliable Controls who are committed to sustainability understand that carefully engineered designs and meticulous component selection result in devices that endure for the long term. Reliable Controls provides comprehensive repair and responsible disposal services that extend customers' return on investment and minimize waste.



Backward compatible

The way manufacturers respond to new technologies highlights a fundamental challenge in the building controls industry: planned obsolescence. For decades, Reliable Controls has countered this challenge with an ongoing commitment to backward compatibility. When the company develops new products and improves existing ones, customers can be confident in a smooth transition to new technologies—without the need for third-party gateways or expensive hardware replacement.



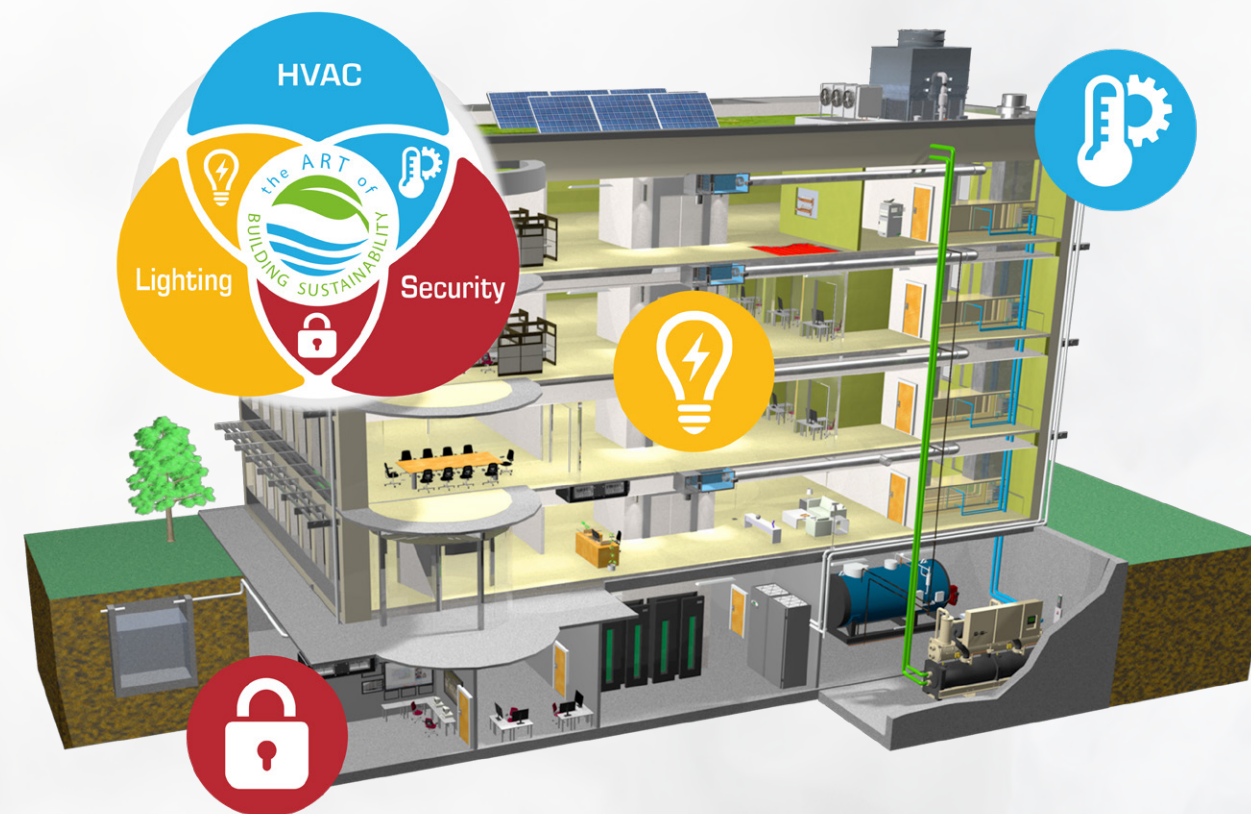
Training and support

With more than 30 years in the building controls industry, Reliable Controls is ideally positioned to deliver comprehensive technical services and expertise in building automation. Whether users are new to the industry or skilled professionals, Reliable Controls has the resources to support their goals. The Reliable Controls online portal provides access to operator certification training, engineering specifications, software manuals, hardware user guides, troubleshooting tools, videos and more.



Factory-certified service

Reliable Controls technology is supported by a global network of knowledgeable, factory-certified service partners who invest in their people and understand the expectations of their customers. Building operators and owners know the importance of authorized local service providers who deliver the consistent, high-quality support and the expertise demanded by today's built environment.



The integration of HVAC, lighting, and security systems is the foundation of the Art of Building Sustainability.

“The Art of Building Sustainability isn’t just a pretty graphic or clever slogan,” says Cameron Lutz, marketing manager at Reliable Controls. “It’s a road map for building owners and operators to achieve true sustainability in their built environment. Each of the nine elements is carefully considered to highlight real issues owners face—and each is countered with a common-sense solution that will sustain for years.”

Reducing greenhouse gas emissions from the world's building sector is a key component to meeting the goals of the Paris Agreement. Approximately two-thirds of the built environment today will still exist in 2050. Currently, building renovations affect only 0.5–1 percent of the building stock annually.³ A significant increase in renovations to existing buildings is required to meet the emission-reduction targets of the Paris Agreement.

The knowledge and experience of Reliable Controls Authorized Dealers’ and the Art of Building Sustainability empowers facility operators to stand at the helm of

sustainability. After a challenging year with COVID-19, building sustainability is especially important. Designing and retrofitting buildings to operate safely is the focus of most built-environment professionals in 2021. Pre-pandemic, sustainability in commercial buildings focused mostly on resource consumption, access to public transportation, and emissions. Now, true sustainability requires that buildings be flexible and adaptable to the needs of occupants. The Art of Building Sustainability can help facility owners address all these objectives.

This November, the UN COP26 will convene in Glasgow, Scotland, bringing parties together to accelerate action toward the goals of the UN Framework Convention on Climate Change. A world of opportunity awaits to reduce the impact of the built environment. Reliable Controls is making a difference by empowering building owners and operators to help advance these critically important long-term climate goals.

¹ IEA. “Energy Technology Perspectives 2017.” <https://www.iea.org/reports/energy-technology-perspectives-2017>

² US Energy Information Administration, Commercial Buildings Energy Consumption Survey: Energy Usage Summary, 2016.

³ Architecture 2030. “Why the Building Sector?” https://architecture2030.org/buildings_problem_why

Reliable Controls is pleased to announce a new initiative that can help its customers minimize waste in the field: eCycle. The eCycle service allows Reliable Controls Authorized Dealers to send non-repairable Reliable Controls and peripheral partner devices to be disposed of in an environmentally responsible manner.

The simple, flexible, sustainable products Reliable Controls has manufactured since 1986 balance comfort and efficiency while helping building owners all over the world reduce their greenhouse gas emissions. One of the hallmarks of the company's commitment to true building sustainability is its work to minimize waste in the manufacturing process. eCycle can help minimize waste even after Reliable Controls products leave the manufacturing floor.

When electrical and electronic equipment, including building controllers, is disposed of properly, electronic materials are recovered and can be used in new products, but programs for proper collection and disposal of e-waste vary widely by region. With the new eCycle

service, it doesn't matter where in the world Reliable Controls customers are; the company can arrange for its Authorized Dealers to ship non-repairable controllers to a responsible recycling partner for disposal.

The products Reliable Controls manufactures follow the WEEE, RoHS, and R2 directives, which set collection, recycling, and recovery targets for electrical goods and restrict the use of certain hazardous substances. The company's robust in-house recycling program diverts waste and e-waste from landfills and incinerators and helps reduce its environmental impact. With the introduction of eCycle, customers can be confident that the Reliable Controls long-term, better by design approach

not only provides an excellent return on investment but also mitigates the negative impact of waste management; all products are recycled responsibly and built to last. That's a sustainable return on investment.

*People and technology
you can rely on™*



@Cycle



Professional performance reports

Charting and
performance reports
Right to your mobile device



RCReporter®
Building Performance Reporting
Software



*People and technology
you can rely on™*

Looking for readable and actionable analytics delivered to your inbox or integrated with your building control system? RC-Reporter extracts intelligence from your building data and provides insights to help improve your operational efficiency. Find out more today.



Project profiles

Zurich Tower

AUSTRALIA

In the heart of North Sydney, the newly constructed 29-story Zurich Tower offers spectacular views of the harbor and Sydney central business district. Completed in 2020, the building was developed by Zurich Insurance Group to house the headquarters of Zurich Financial Services Australia, which occupies more than 64 percent of the site. Zurich Tower provides 20,600 square meters of office space and includes a two-level podium, a café space, a sky terrace, and three basement parking levels. It earned a 5-star Green Star sustainability rating from the Green Building Council of Australia and 5-star NABERS ratings for energy and indoor environment.

Reliable Controls hardware

- 330 MACH-ProAir™ controllers
- 9 MACH-ProCom™ controllers
- 4 MACH-ProPoint™ Input expansion modules
- 37 MACH-ProPoint Input/Output expansion modules
- 10 MACH-ProSys™ controllers
- 12 MACH-ProZone™ controllers

Reliable Controls software

- RC-Archive®
- RC-Reporter®
- RC-Studio®
- RC-WebView®



Total objects

- 2,900 hard objects
- 3,000 soft objects

Reliable Controls Authorized Dealer Rega Controls implemented a Reliable Controls system that includes more than 400 controllers in the new Zurich Tower.



Rega installed 330 MACH-ProAir controllers, which each include an air flow sensor and onboard damper motor, to control the variable air volume system. Numerous MACH-ProCom, MACH-ProSys, and MACH-ProZone controllers are seamlessly integrated with the building's mechanical equipment, including two boilers, two chillers, three cooling towers, heat exchangers, 10 air-handling units, and more. Rega added MACH-ProPoint expansion modules to expand the input and output capabilities of the MACH-ProCom and MACH-ProSys.

Rega used RC-Studio software to implement a variety of control strategies that optimize comfort and energy efficiency. Today, building managers use the simple, browser-based interface in RC-WebView to connect all control systems in the building into a single Enterprise Website. RC-Archive delivers a robust record of building performance for facility operators, who depend on RC-Reporter to bring clarity to collected data with readable, reliable, rational reports.

Reliable Controls and Rega Controls are proud of their work in this modern landmark in Sydney. "Congratulations to the project team, who have delivered a 5-star Green Star-rated building, which will contribute to a more sustainable Australia—something we can all be proud of," said Justin Delaney, CEO, Zurich Life & Investments.



Reliable Controls Authorized Dealer Anso SRL upgraded the facility automation system during a retrofit of UNIBE in 2018.

Anso connected a MACH-ProWebSys controller with four MACH-ProPoint expansion modules to the facility's LAN to operate the chilled water plant. Six MACH-ProWebCom controllers and 10 MACH-ProZone controllers control the air handling systems on campus. The building management system also includes chillers, a cooling tower, and variable frequency drives for fan operations integrated via BACnet/IP, and electrical power meters are connected to the Reliable Controls system using BACnet MS/TP. SMART-Space Controller devices service fan-coil units in the chiller-plant-equipment and remote-monitoring rooms.

The flexibility of RC-Studio software allowed Anso to integrate multiple third-party devices into the building automation system with ease. Today, building operators use RC-Archive software to collect data on water and energy use.

The challenge of this retrofit was to guide facility operators and support personnel to abandon manual operation of chilled-water-plant equipment and instead use only the equipment required to meet the demand on campus at any given moment, leading to cost and energy savings. Anso was pleased to provide an interoperable system with a simple interface that easily met the client's needs.

Reliable Controls is proud to be part of this project with Anso that improved operator and building efficiency at UNIBE.



Ibero-American University

DOMINICAN REPUBLIC

Founded in 1982, Ibero-American University (UNIBE) in Santo Domingo serves more than 5,000 students with 17 undergraduate programs and 45 postgraduate programs. UNIBE strives to be an inclusive, evolving higher-ed institution that fosters innovation and a positive impact on society. The university's strategic plan for 2018–2022 highlights technology and digital transformation as a means to achieve streamlined building management solutions and energy efficiency.



Reliable Controls hardware

- 2 MACH-ProPoint Input expansion modules
- 2 MACH-ProPoint Output expansion modules
- 6 MACH-ProWebCom™ controllers
- 1 MACH-ProWebSys™ controllers
- 10 MACH-ProZone controllers
- 2 SMART-Space™ Controller devices

Reliable Controls software

- RC-Archive
- RC-Studio



Total objects

- 153

Read other exciting profiles of projects that use Reliable Controls technology:
reliablecontrols.com/projects/profiles.



WELCOME

New Reliable Controls Authorized Dealers

Advanced Energy Management Ltd – New Brunswick
Moncton, NB, Canada
aemltd.ca



Advanced Energy Management Ltd – Ontario
Brampton, ON, Canada
aemltd.ca



Energy Management Control Services – Kingston
Kingston, ON, Canada
emcs.ca



Energy Management Control Services – Peterborough
Peterborough, ON, Canada
emcs.ca



Excellent System Integrator Co., Ltd.
Nonthaburi, Thailand
esi.co.th



Intelli-Building Control & Solutions – Indianapolis
Indianapolis, IN, United States
intelli-building.com



Integrated Systems Inc.
Douglasville, GA, United States
isi-energy.com



Les Contrôles A.C. Inc. – Montreal
Laval, QC, Canada
engieservices.ca/a-propos/contrôles-ac



Les Contrôles A.C. Inc. – Nunavut
Lqaluit, NU, Canada
engieservices.ca/a-propos/contrôles-ac



Mechanical Technology Inc.
Billings, MT, United States
mticontrols.com



Refrigeration Electrical Engineering
Hanoi, Vietnam
hvac.vn



Setpoint Building Automation Inc. – Peterborough
Peterborough, ON, Canada
setpoint.ca

Reliable Controls sales, installation, service, and support are all performed by a growing network of independent, factory-trained Authorized Dealers. Each dealer is committed to the green building controls industry and to providing total customer satisfaction.



Since 1986 Reliable Controls has developed a global network of highly skilled independent controls contractors called the Authorized Dealer network. The *RUNtime* newsletter supports the collective efforts of the company to earn and sustain the most satisfied customers in the building automation industry. Information on the latest Reliable Controls products and services and insight into industry news and trends can be found in each issue of the *RUNtime*.

As a leader in the industry, Reliable Controls supports their Authorized Dealer network to achieve their goals with a motto that together, they can be better by design.



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