



Ontario, Canada

CASE STUDY

CANLAN OAKVILLE

Radiance Energy efficiently retro-fitted Oakville's Canlan Ice Sports Arena.



CHALLENGE

Canlan's second highest operating costs, after labour, was electricity. The poor lighting quality affected 20 facilities and 57 ice pads across North America.

SOLUTION

Radiance Energy replaced the arena's outdated fluorescent lights with new LED lighting. This resulted in over 80% of energy savings, increased light output, and an annual electricity saving of \$46,000.

PROJECT SUMMARY

- \$46,000 saved in electricity costs annually
- 80% in energy savings
- Increased light output
- Won Oakville Hydro's Conservation Leadership award





CASE STUDY

CANLAN OSHAWA

Radiance Energy selected for LED retrofit for ice rinks, change rooms, restaurant, mechanical rooms, and hallways.

CHALLENGE

Canlan Oshawa sought to reduce operational costs while improving lighting quality for athletes and patrons. The existing lighting was energy-intensive and required frequent maintenance, leading to high costs.

SOLUTION

Radiance Energy provided a tailored LED retrofit plan featuring high-efficacy T8 LED tubes and 102,000-hour high bay lights. The solution offered:

- 76% energy savings (267,143 kWh annually)
- Annual cost savings of \$41,614
- Reduced maintenance needs and glare-free lighting

PROJECT SUMMARY

The project achieved a 3.1-year ROI with an estimated cumulative net savings of \$395,562 over 10 years. Enhanced lighting conditions improved player performance and reduced shadows on the ice, increasing customer satisfaction.





CASE STUDY

CANLAN WINNIPEG

Radiance Energy selected for LED lighting for four rinks, main lobby, offices, pro shop, and stairwells.

CHALLENGE

The Canlan Winnipeg facility was experiencing high energy consumption and inconsistent lighting quality. A solution was needed to modernize the facility while cutting costs.

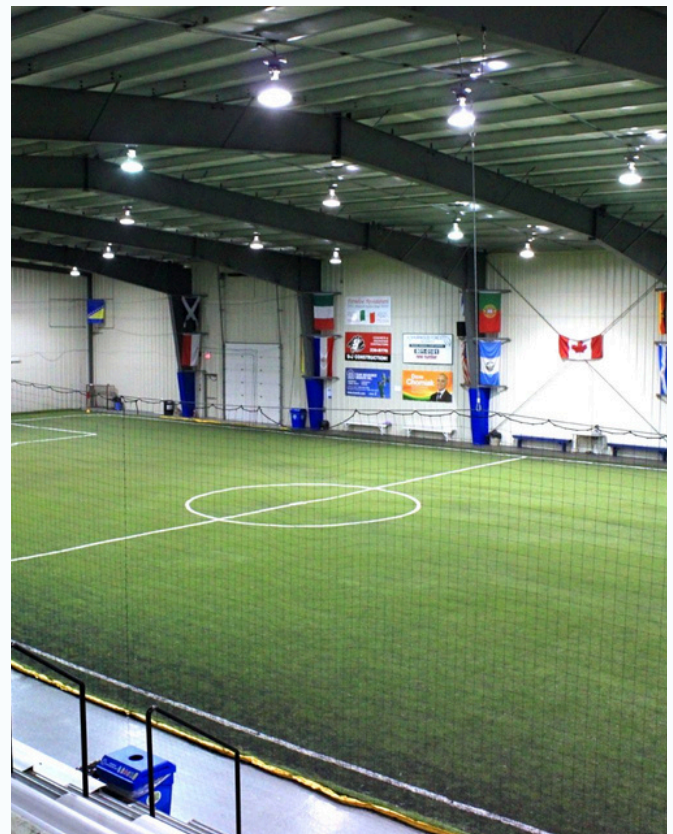
SOLUTION

Radiance Energy installed Linmore LED High Bays with integrated controls and high-efficacy 11W T8 LED tubes. Key benefits included:

- 74% energy savings (463,570 kWh annually)
- Annual energy & maintenance cost savings of \$57,117
- Improved visibility and reduced glare for athletes

PROJECT SUMMARY

With a 2.9-year ROI and a cumulative net savings of \$551,717 over 10 years, the facility significantly reduced operational costs while creating a superior lighting experience.





Illinois, Canada

CASE STUDY

CANLAN ROMEOVILLE

Radiance Energy selected for LED retrofit for three ice rinks, main lobby, gallery, and locker rooms.

CHALLENGE

Canlan Romeoville struggled with inefficient lighting and high maintenance costs, which affected both the budget and user experience. A modern solution was required to enhance brightness and minimize operational expenses.

SOLUTION

Radiance Energy introduced a wireless & central control system with LED Eliminator High Bays and flat panel fixtures. The project delivered:

- 77% energy savings (342,040 kWh annually)
- Annual cost savings of \$27,363
- Enhanced lighting uniformity and reduced shadows

PROJECT SUMMARY

The project resulted in a 4.1-year ROI with projected cumulative savings of \$231,573 over 10 years, providing a high-efficiency lighting solution that met Canlan's sustainability and performance goals.





Illinois, Canada

CASE STUDY

CANLAN LAKE BARRINGTON

Radiance Energy selected for LED upgrade for all facility levels, including exterior lighting.

CHALLENGE

Canlan Lake Barrington's facility faced excessive energy consumption and outdated lighting systems. They needed a cost-effective solution that would deliver immediate and long-term savings.

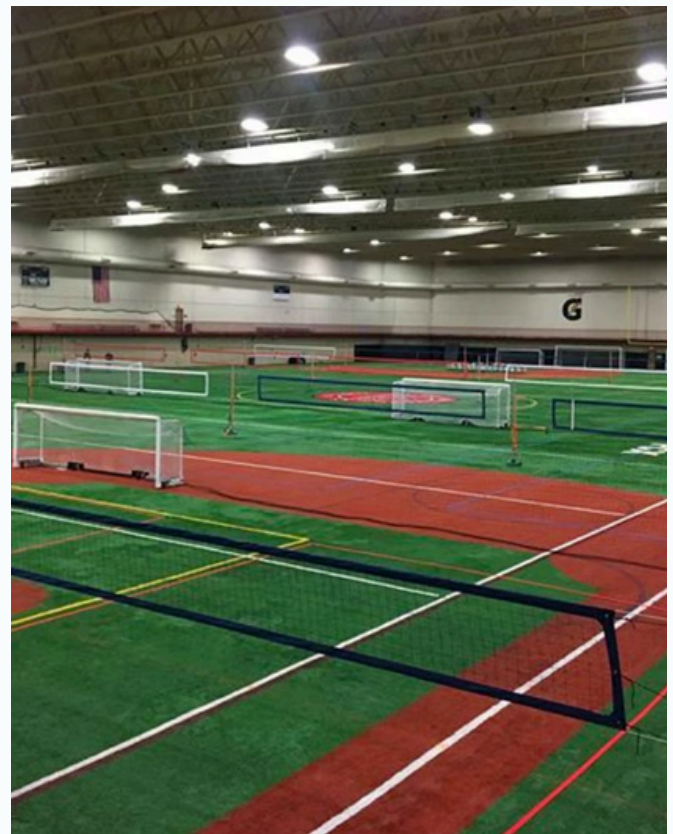
SOLUTION

Radiance Energy implemented a cutting-edge wireless lighting control system combined with high-performance LED fixtures. The upgrade provided:

- 83% energy savings (712,072 kWh annually)
- Annual savings of \$46,285
- Improved lighting aesthetics and energy efficiency

PROJECT SUMMARY

With a 3.8-year ROI, the facility is projected to achieve \$404,029 in cumulative savings over 10 years, making it a model for energy-efficient sports facilities.





Vancouver, Canada

CASE STUDY

PACIFIC NATIONAL EXHIBITION (PNE)

CHALLENGE

Following a massive warehouse fire in early 2022, PNE went to bid for a complete LED upgrade across their facility - including the coliseum (pictured below), offices, livestock barn, sports facilities, playland, and more. The issues identified with the existing lighting include aging lights, the need for suitable lighting for sports and TV filming, as well as unique RGB lighting for a fun amusement park atmosphere. Sensors for risk management to lower insurance and reduce risk were a priority as well.

SOLUTION

Radiance Energy, selected by PNE for the rollout of a complete LED upgrade, successfully installed new LED & RGB lighting across the facility at a no upfront cost.

Throughout the rollout, Radiance Energy provided detailed reports of proposed solutions as well as regular project management progress updates to ensure a headache free process.

In addition to lighting controls such as dimming and colour changing features, Radiance Energy's comprehensive wireless controls, sensors, and back end system provide extensive reporting and monitoring capabilities for smart building automation and controls.

In testing, Radiance is also providing sensors for noise & ammonia levels with the adaptability to meet the needs of complex facilities.

PROJECT SUMMARY

- Special RGB Lights have made news headlines due to their entertainment appeal and special use (as seen in the banner)
- Improved, uniform lighting to suit the needs of each building



Vancouver, Canada

CASE STUDY

VANCOUVER LAWN AND BADMINTON CLUB

Vancouver Lawn Tennis & Badminton Club is a tennis club located at Granville Park in the upmarket neighborhood of Fairview in Vancouver, British Columbia, Canada.

CHALLENGE

Vancouver Lawn Tennis & Badminton Club is home to Vancouver's most passionate racquet sports enthusiasts, offering an extensive range of recreational facilities. The facility had uneven lighting, with an annual lighting maintenance costs of over \$10k annually.

PROJECT SUMMARY

- Saved 70% in energy costs
- Annual savings of over \$15,000+
- 10 year product warranty
- 20 year life expectancy
- \$110,000+ net savings after 7 years

SOLUTION

Radiance Energy proposes industry custom solutions. Our team identified the most efficient performance LED fixtures available, certified exclusively for indirect tennis lighting with a sleek design to match the facility aesthetic of Vancouver Lawn Tennis & Badminton Club. The products installed have a rated life upwards of 100,000 hours with a 10-year warranty. Design was just as important for the bubbles and indoor tennis courts as energy savings and product quality, so the Radiance team ensured a sleek design with even lighting temperatures and output.




Vancouver, Canada

CASE STUDY

PNE LIVESTOCK BARN

CHALLENGE

The Pacific National Exhibition (PNE) livestock barn in Vancouver, BC provides a variety of services within their facility: pony rides, barns, and performance stages. In total there are 22 areas that had dimly lit and uneven lighting, including the barn and exterior lights which were contributing to high costs with their need to be on for many hours of the day. Additionally, not only were the old fluorescent lights unhealthy for the animal's longterm health, the areas that were poorly lit made it hard to see for both workers and customers at their facilities.



SOLUTION

Radiance Energy won the contract based on their expert's solution for high efficiency, flicker-free circadian lights with sensors and controls. The projected savings for their building was 82% in energy and maintenance, 313,919 kWh, and \$292,470 over 10 years.

In addition to energy and maintenance savings, the animals and workers are also benefitting from the new LED lights. With circadian lighting and controls mimicking natural daylight, the animals sleep better, regulate their schedules, and live under healthier lighting environments.

PROJECT SUMMARY

- Provided 82% savings
- \$292,470 lighting and maintenance savings over 10 years
- 3 year payback
- 6 year warranty on product, service, and maintenance
- 20+ year lamp life expectancy
- Improved health and wellness for animals
- Lowering carbon footprint by 79%
- Brighter, and more visually appealing lights



Vancouver, Canada

CASE STUDY

EQUINOX VANCOUVER

CHALLENGE

Equinox West Georgia, a premier fitness facility, sought to enhance its lighting system to improve energy efficiency, reduce operational costs, and provide a superior experience for members. The existing lighting system was outdated, consuming excessive energy and requiring frequent maintenance, leading to high costs and operational inefficiencies.

PROJECT SUMMARY

Radiance Energy upgraded Equinox West Georgia's lighting system, achieving:

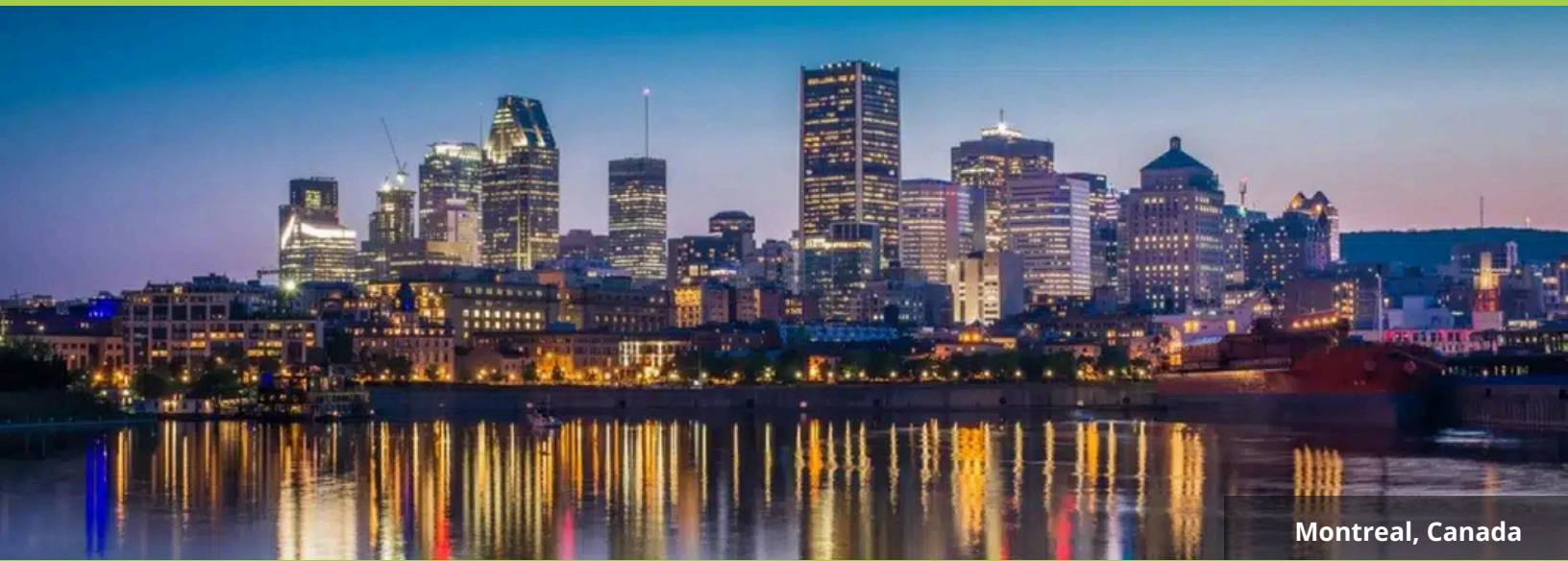
- 64% energy cost reduction
- 380 fixtures upgraded
- \$23,333 annual savings (\$185,163 over 10 years)
- 156,263 kWh saved annually
- Improved visibility & modern ambiance

SOLUTION

In 2021, Radiance Energy conducted a comprehensive lighting audit and designed an optimized LED lighting solution tailored to the facility's needs. The solution included:

- **LED Technology Upgrade:** Replacing traditional fixtures with ultra-low flicker LED lighting.
- **Energy Savings:** Achieving a 68% reduction in lighting costs.
- **Maintenance Reduction:** Virtually eliminating ongoing maintenance expenses.
- **Improved Lighting Quality:** Enhancing visibility with bright, evenly distributed light.
- **No Upfront Cost Program:** Offering a financing option with zero interest to facilitate a seamless transition.




Montreal, Canada

CASE STUDY

CITY OF MONTREAL – GYM (ONTARIO EAST)

The City of Montreal sought to upgrade the lighting system in its Ontario East gym facility. The existing metal halide high bay fixtures were inefficient, consuming excessive energy and requiring frequent maintenance. The city aimed to enhance lighting performance, reduce energy costs, and align with sustainability goals.

CHALLENGE

The gym's outdated lighting system resulted in:

- High energy consumption leading to elevated operational costs.
- Frequent maintenance and replacement of bulbs, increasing expenses.
- Inadequate lighting coverage impacting the facility's usability and safety.

SOLUTION

Radiance Energy proposed a modern LED lighting retrofit with high-efficiency LED Linear High Bay fixtures. The solution included:

- Replacement of 400W Metal Halide High Bay fixtures with 178W LED fixtures.
- A 64.7% reduction in energy consumption.
- Enhanced lighting quality and uniformity for improved visibility and safety.
- Integration of rebate incentives to maximize cost savings.

PROJECT SUMMARY

- 64.7% energy savings and \$27,573 in total savings over ten years.
- Brighter, more uniform lighting enhancing safety and usability.
- Reduced CO2 emissions and long-lasting LED fixtures lowering waste.





Montreal, Canada

CASE STUDY

CITY OF MONTREAL HOCKEY ARENA

The City of Montreal aimed to upgrade the lighting at its hockey arena to improve visibility, reduce operational costs, and enhance energy efficiency. The existing lighting system was outdated, leading to high energy consumption, frequent maintenance, and suboptimal illumination for players and spectators.

CHALLENGE

- High energy consumption with inefficient lighting.
 - Frequent maintenance requirements increasing operational costs.
- Inconsistent lighting levels affecting visibility and game experience.

SOLUTION

Radiance Energy proposed a state-of-the-art LED lighting retrofit, replacing outdated fixtures with high-efficiency LED luminaires designed for sports environments. The solution included:

- Significant energy reduction while maintaining superior brightness.
- Improved uniformity and color accuracy for enhanced visibility.
- Long-lasting LED technology minimizing maintenance costs.
- Potential rebates and incentives for additional cost savings.

PROJECT SUMMARY

- **Energy Savings:** Substantial reduction in power consumption, leading to lower utility costs.
- **Improved Visibility:** Enhanced lighting conditions ensuring a better playing and viewing experience.
- **Cost Efficiency:** Lower maintenance and operational expenses due to LED longevity.
- **Sustainability:** Reduced carbon footprint, aligning with the city's environmental goals.



Vancouver, Canada

CASE STUDY

JERICHO TENNIS CLUB SQUASH COURTS

Jericho Tennis Club sought to upgrade the lighting in its squash courts to improve visibility, reduce energy costs, and minimize maintenance needs. The existing T8 fluorescent lighting was inefficient, consuming excessive energy while requiring frequent replacements. The club aimed to modernize its lighting to create a better playing experience while ensuring long-term cost savings.

CHALLENGE

- High energy consumption with outdated fluorescent lighting.
- Frequent maintenance and replacements leading to increased costs.
- Need for improved lighting quality for enhanced player experience.

SOLUTION

Radiance Energy proposed a high-efficiency LED lighting upgrade with LED 4' T8-2 18W lamps, replacing the existing 32W T8 fluorescent lamps. The solution featured:

- 53.49% reduction in energy consumption.
- Dimming controls for adjustable lighting levels.
- 10-year warranty ensuring long-term reliability.
- Ballast removal included to reduce maintenance requirements.

PROJECT SUMMARY

- Energy Savings: 53.49% reduction, significantly lowering operational costs.
- Cost Efficiency: Estimated \$26,447 savings over ten years with a 5.41-year payback period.
- Enhanced Lighting Quality: Brighter and more uniform illumination improving player experience.
- Sustainability: Reduced energy use and lower environmental impact.



Calgary, Canada

CASE STUDY

CROWFOOT ARENA

Crowfoot Arena sought to modernize its lighting system to enhance the player experience, improve visibility, and lower operational costs. The existing lighting infrastructure was outdated, consuming excessive energy while failing to provide optimal illumination for the ice rink. The arena needed an energy-efficient solution that would also contribute to improved safety and performance.

CHALLENGE

- High energy consumption leading to increased operational costs.
- Flickering lights affecting player visibility and safety.
- Excess heat output from traditional fixtures impacting ice quality.



SOLUTION

Radiance Energy implemented a cutting-edge LED lighting system tailored for sports environments. The upgrade featured:

- 70% reduction in energy usage, saving over 95,000 kWh annually.
- Improved light output by 20%, enhancing visibility for players and spectators.
- Elimination of flickering, providing a safer and more comfortable experience.
- Reduced heat output, lowering the ice plant's operational load.

PROJECT SUMMARY

- Energy Savings: Equivalent to powering 120 homes for a month.
- Enhanced Visibility: Brighter, whiter ice surface with sharper rink markings.
- Cost Efficiency: Reduced maintenance and lower electricity costs.
- Improved Player Experience: Better puck tracking and playing conditions.