



Vancouver, Canada

## CASE STUDY

# ROYAL CENTER

### CHALLENGE

Royal Centre in downtown Vancouver, BC provides a variety of services within their complex: food courts, retail, shopping, parking, offices, and the Western RBC headquarters. In total there were 40 floors that had dimly lit and uneven lighting, including underground parking and emergency stairwells which were contributing to high costs with their need to be on 24/7. Inefficient lighting was contributing to tenant frustration, high lighting bills, and ongoing maintenance and repair costs.

### PROJECT SUMMARY

- Provided 90% savings in underground parking
- Replaced 64W with 10-15W sensor solution
- 10 year warranty and 20 year life expectancy
- Improved tenant satisfaction and wellness

### SOLUTION

Radiance Energy replaced the existing lights with an improved LED solution throughout the entire RBC Royal Centre. All 40 floors of office space now have an improved, healthier work environment, as the 64W bulbs were replaced with a 10-15W sensor solution that is flicker-free.

The 24/7 lighting required in the emergency stairwells, hallways, boiler, and maintenance rooms are receiving massive cost savings with the improved and efficient LED solution. Underground parking, previously using 410W bulbs, were replaced with a custom solution of 42W - providing over 90% in energy cost savings while improving lighting output by over 50%.





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## CASE STUDY

# HOTEL GEORGIA

### CHALLENGE

Named the #1 hotel in Canada (2019), Hotel Georgia was looking to increase guest satisfaction, improve aesthetics, and generate energy cost-savings through a sustainable solution enabled by LED lighting. Areas throughout the entire hotel were requiring an updated lighting solution: Guest suites, hallways, dining rooms, bars, nightclubs, banquet halls, pool and spa, lobby's, valet area, building exterior, and even maintenance and boiler rooms were all requiring a new, evenly-lit LED retrofit solution.

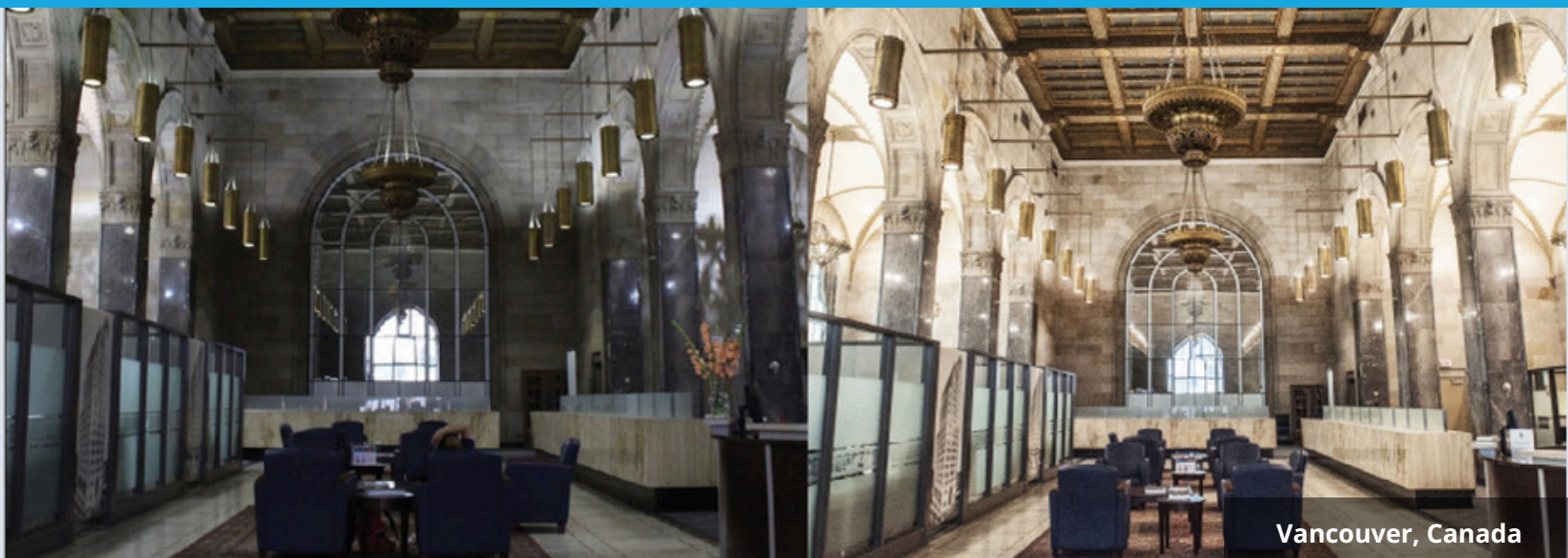
### PROJECT SUMMARY

- Aesthetically pleasing, superior lighting environment
- 82% savings in energy costs
- 78% energy usage reduction
- 10 year savings of over \$1.3 million

### SOLUTION

Radiance Energy was selected to improve all areas of Hotel Georgia, and provided significant cost-savings of 82% with the new and improved lighting solution. As guest experience is the utmost importance, Radiance Energy ensured work was carried out during undistruptive hours, completing the lighting retrofit of each guest suite alongside housekeeping, and lobby areas during overnight/early morning hours. Radiance Energy LED lighting solution also reduced the total lighting kWh from 1,200,742 to 263,519 - providing a 78% reduction in lighting energy usage.





Vancouver, Canada

## CASE STUDY

# ROYAL BANK BUILDING

Radiance Energy is pleased to have delivered a custom set of solutions in response to the LED retrofit of this landmark building in the heart of Vancouver.

## CHALLENGE

The challenge was to update the aging lighting with the best new technology available, but without changing the historic charm of this heritage building. The former lighting was difficult to access, expensive to maintain and the fluorescent ballasts were buzzing so loudly that it distracted customers and employees.

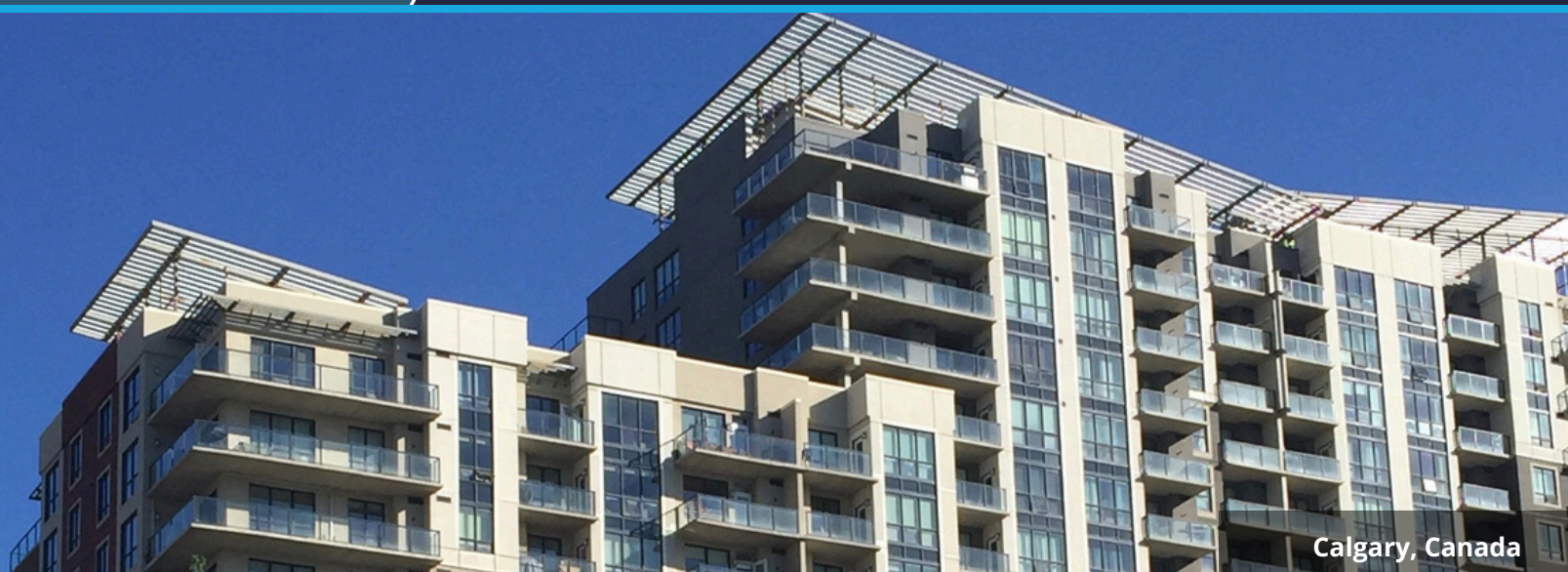
## PROJECT SUMMARY

- Over 74% savings in energy costs
- 10yr true warranty and 20yr life expectancy
- 100% reduction in ongoing maintenance costs
- Increased light output

## SOLUTION

The retrofit was achieved with carefully selected colour temperature ranges of LED fixtures that maintained the traditional design, while reducing the energy costs by 74% and eliminating 100% of the ongoing maintenance costs.





Calgary, Canada

## CASE STUDY

# WESTCORP

*A winner of Canada's Best Managed Companies Award Westcorp is characterized by its focus on customer relationships as the foundation for growth. Westcorp's London at Heritage Station is Calgary's largest and most talked about luxury condominium community. It has a large heated underground parkade, consisting of 2000 parking stalls.*

## CHALLENGE

Westcorp's parkade had 1,700 T5 and T8 fluorescent fixtures which required constant changing of burnt out bulbs and ballast replacements. They wanted to reduce their expenses on energy and maintenance.

## SOLUTION

Westcorp was midway through installing new T5 lamp fixtures on site when Radiance Energy approached them with a better solution. Radiance Energy replaced all fluorescent fixtures with their intelligent LED system, achieving 85% energy savings and greatly reducing maintenance costs. Westcorp capitalized on Radiance's "no upfront costs lease program" to achieve immediate energy savings.



## PROJECT SUMMARY

- Reduced GHG emissions by 1,300 tons per year
- Drastically reduced maintenance costs
- Over \$100,000 saved per year
- Increased light output



Vancouver, Canada

## CASE STUDY

# REAL ESTATE BOARD OF GREATER VANCOUVER

*Real Estate Board of Greater Vancouver represents over 11,000 Real Estate professionals, from Whistler to Maple Ridge and Tsawwassen. The REBGV identified the lighting system in their three-level underground parking garage as needing improvement.*

## CHALLENGE

As part of a long-standing initiative to promote sustainability and social responsibility, the Real Estate Board of Greater Vancouver (REBGV) was looking to reduce the carbon footprint of its headquarters. They turned to Radiance Energy for an LED lighting solution.

*"I envision a day when every building will be using Radiance Energy's technology"*

Bob Wallace, CEO  
Real Estate Board of Greater Vancouver

## SOLUTION

Radiance Energy conducted an advanced simulation which showed the number of fixtures could be reduced by more than 50% while improving light levels. Metal halide and T8 fluorescent lights were replaced by LED high brightness lamps. Employees with fluorescent light sensitivity reduced migraines from 3 per month to zero.

## PROJECT SUMMARY

- Luminaires replaced: 120
- LED luminaires installed: 52
- Projected LED lifespan: 10+ yrs
- Initial energy savings: \$9,111/yr
- Over \$14,000/yr maintenance savings
- CO2 emission reductions: 89.5 tons/yr
- Project payback: 2.6 years
- IRR: 39% & ROI: 319%

