



West Vancouver, Canada

CASE STUDY

WEST VANCOUVER SCHOOLS

West Vancouver Schools, also known as School District 45 West Vancouver, is a school district in British Columbia with 17 Schools and 3 Administrative buildings. It is north of Vancouver and includes the Municipality of West Vancouver, the community of Lions Bay and Bowen Island.

CHALLENGE

The West Vancouver School District SD45 was constantly replacing their fluorescent lighting and energy costs were high. Teachers were even turning off and dimming lights as students complained about the classroom lighting. Radiance Energy conducted a detailed energy audit and analysis for 20 schools and buildings in their district. Radiance identified lighting and energy improvements and worked diligently with their management in realizing immediate energy savings while delivering the healthiest quality of light for their students and staff.

SOLUTION

Radiance Energy replaced high-flicker and high maintenance T8 and T12 tubes with high-efficient, ultra-low flicker LED tubes, downlights and area lighting. Immediately after the install, staff reported seeing a positive response from their students.

PROJECT SUMMARY

- 80% lighting energy cost savings after the first year
- Est. energy savings of 2 million kilowatt hours
- Significant reduction in flicker from 40% to < 3%
- Optimal learning environment for students & staff



ENERGY COSTS & SAVINGS ANALYSIS

For a comparable project that was completed at West Vancouver School District, we were able to save 80% in combined energy costs alone before maintenance for the entire district. Results from their hydro bill records as seen below:

SCHOOL ID	BC Hydro Bill YR 2017	BC Hydro Bill YR 2018 <small>*Radiance LED</small>	SAVINGS	% CHANGE	LIGHTING COSTS YR 2017 <small>* 65% of Total Bill = Lights</small>	% CHANGE of LIGHTING COSTS
3	\$ 53,066.89	\$ 24,122.32	\$ 28,944.57	55%	\$ 34,493.48	84%
10	\$ 59,061.88	\$ 23,473.75	\$ 35,588.13	60%	\$ 38,390.22	93%
15	\$ 127,799.79	\$ 59,224.57	\$ 68,575.22	54%	\$ 83,069.86	83%
19	\$ 27,126.10	\$ 16,555.58	\$ 10,570.52	39%	\$ 17,631.97	60%
20	\$ 15,583.88	\$ 6,742.65	\$ 8,841.23	57%	\$ 10,129.52	87%
25	\$ 9,553.51	\$ 5,202.38	\$ 4,351.13	46%	\$ 6,209.78	70%
30	\$ 11,678.38	\$ 6,354.68	\$ 5,323.70	46%	\$ 7,590.95	70%
35	\$ 3,751.54	\$ 2,102.93	\$ 1,648.61	44%	\$ 2,438.50	68%
40	\$ 8,721.52	\$ 3,985.62	\$ 4,735.90	54%	\$ 5,668.99	84%
45	\$ 14,759.20	\$ 6,084.09	\$ 8,675.11	59%	\$ 9,593.48	90%
55	\$ 10,684.48	\$ 6,807.24	\$ 3,877.24	36%	\$ 6,944.91	56%
60	\$ 14,811.35	\$ 8,090.89	\$ 6,720.46	45%	\$ 9,627.38	70%
62	\$ 14,391.63	\$ 8,832.67	\$ 5,558.96	39%	\$ 9,354.56	59%
65	\$ 15,509.79	\$ 7,316.08	\$ 8,193.71	53%	\$ 10,081.36	81%
70	\$ 10,155.08	\$ 3,828.02	\$ 6,327.06	62%	\$ 6,600.80	96%
75	\$ 18,195.85	\$ 8,639.75	\$ 9,556.10	53%	\$ 11,827.30	81%
80	\$ 8,861.53	\$ 3,680.44	\$ 5,181.09	58%	\$ 5,759.99	90%
95	\$ 11,933.25	\$ 6,840.37	\$ 5,092.88	43%	\$ 7,756.61	66%
TOTAL	\$ 435,645.65	\$ 207,884.03	\$ 227,761.62	52%	\$ 283,169.67	80%

SASKATOON PUBLIC SCHOOL DIVISION

Saskatoon, Canada

CASE STUDY

SASKATOON PUBLIC SCHOOLS

Saskatoon Public Schools or Saskatoon S.D. No. 13 is the largest school division in Saskatchewan serving 28,924 students as of September 2024. Saskatoon Public Schools operates 47 elementary schools, one alliance school, and 10 secondary schools in Saskatoon.

CHALLENGE

The SD13 was constantly replacing their fluorescent lighting and energy costs were high. Teachers were even turning off and dimming lights as students complained about the classroom lighting. Radiance Energy conducted a detailed energy audit and analysis for schools and buildings in their district. Radiance identified lighting and energy improvements and worked diligently with their management in realizing immediate energy savings while delivering the healthiest quality of light for their students and staff.

SOLUTION

Radiance Energy replaced high-flicker and high maintenance T8 and T12 tubes with high-efficient, ultra-low flicker LED tubes, downlights and area lighting.

PROJECT SUMMARY

- 76% lighting energy cost savings after the first year
- Significant reduction in flicker to < 3%
- Optimal learning environment for students & staff





CASE STUDY

SURREY SCHOOL DISTRICT

School District 36 Surrey, the largest in BC, serves 80,208 students across Surrey, White Rock, and Barnston Island. Established in 1906, it operates 124 schools and is Surrey's largest employer with 12,540 staff.

CHALLENGE

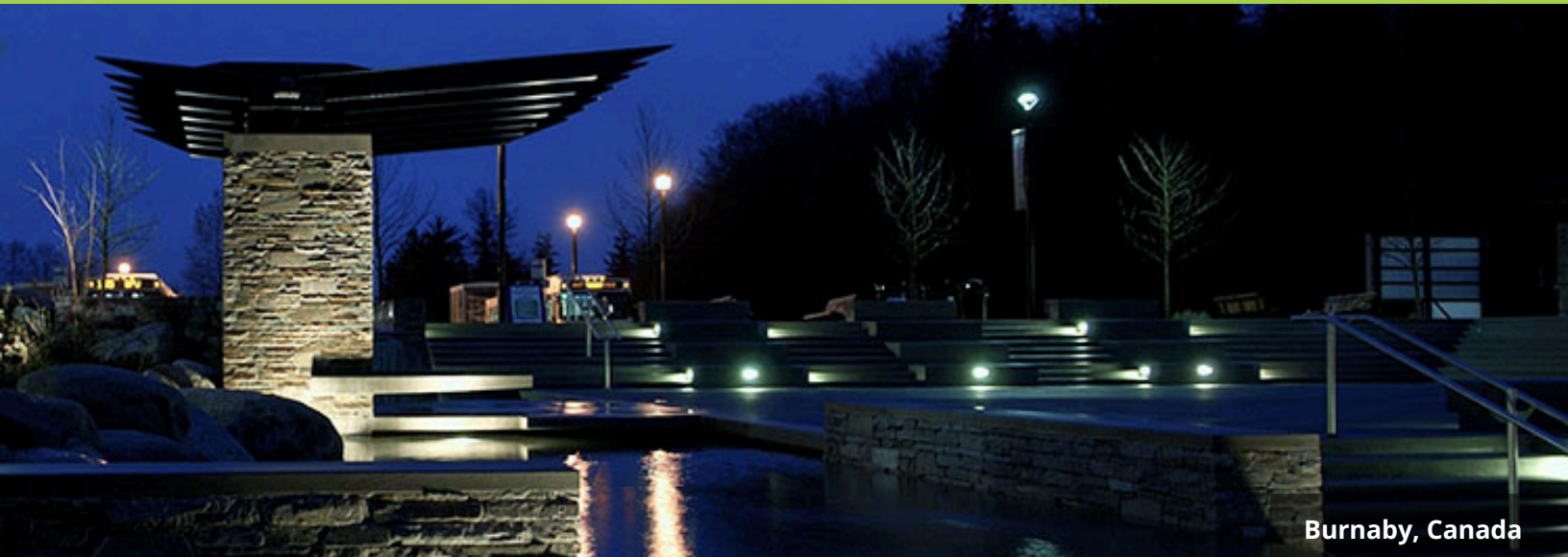
Despite being a well-maintained educational facility, the schools outdated lighting system resulted in high energy consumption and increased operational costs. Frequent maintenance requirements further strained resources, while inconsistent lighting levels affected visibility and learning environments. The school needed a cost-effective and minimally disruptive upgrade to modernize its lighting infrastructure.

SOLUTION

Radiance Energy conducted a comprehensive lighting audit and proposed a modern LED lighting retrofit. The project involved the installation of energy-efficient LED fixtures, which provided significant cost savings while improving light output. Network lighting controls were integrated to enhance energy management, ensuring optimized usage. Additionally, outdated lighting systems were properly recycled and disposed of, contributing to environmental sustainability. With a comprehensive 5/10-year warranty, the upgrade ensures long-term maintenance-free operation.

PROJECT SUMMARY

This LED upgrade aligns with Surrey School District's sustainability objectives, delivering significant cost savings while enhancing the learning environment. The successful implementation of this project further solidifies Radiance Energy's commitment to delivering intelligent and sustainable solutions.



Burnaby, Canada

CASE STUDY

SIMON FRASER UNIVERSITY (SFU)

Simon Fraser University (SFU) sought to enhance outdoor lighting across its Burnaby campus to improve visibility, safety, and energy efficiency. The existing lighting infrastructure was outdated, resulting in high energy consumption, increased maintenance costs, and suboptimal illumination for parking lots and sports fields.

PROJECT SUMMARY

- **Energy & Cost Savings** – The LED upgrade significantly reduces power consumption, lowers operational costs, and minimizes maintenance needs.
- **Enhanced Safety & Visibility** – Brighter, more uniform lighting improves security and visibility across parking lots and outdoor areas.
- **Environmental Impact** – The project supports SFU's sustainability goals by reducing energy use and lowering the university's carbon footprint.

CHALLENGE

SFU's outdated lighting systems posed multiple issues, including excessive energy use, frequent maintenance requirements, and inadequate illumination in key outdoor spaces. The university required a durable and cost-effective solution to modernize its lighting while maintaining environmental sustainability.

SOLUTION

Radiance Energy proposed an advanced LED lighting upgrade featuring high-performance LED Flood Lights with Mounting Arms and Pole Tops. These lights provide superior brightness, longevity, and resilience against harsh weather conditions. The upgrade included:

- **Flood Lights (FL5-1004T5-3):** High-efficiency area lighting with 0-10V dimming, 4000K-5000K CCT, and 125 LPW efficiency.
- **Pole Top Fixtures (PT3-S5GS-3):** Designed to enhance visibility while reducing energy consumption.
- **Cost-effective solutions** ensuring long-term savings.