56% ENERGY REDUCTION

for The Gund Company at Fergus, Ontario

Lumen Solutions upgraded The Gund Company's Fergus facility by replacing an aging first-generation LED retrofit with new high-efficiency LED fixtures and fixture-mounted occupancy sensors throughout the plant and office areas.

FIRST-YEAR TOTAL SAVINGS	GOVERNMENT REBATE	ANNUAL KWH REDUCTION	PAYBACK PERIOD
$26,607 (Includes $15,900 Energy, $9,351 Maintenance, and $1,357 HVAC Savings)	**$36,052**	**88,777**	**3.4 Years**

THE CHALLENGE

In certain manufacturing zones at The Gund Company Fergus facility, dust-generating processes created an environment that required sealed, vapour-tight fixtures to protect electrical components and maintain safety.

About six years earlier, Gund had converted most of its Fergus fixtures to a first-generation "Type A" (Ballast Compatible) LED tube retrofit, supplied by a vendor that has since gone out of business. The upgrade cut electricity use at the time, but the original fluorescent ballasts stayed in place, so ballast failures kept recurring. Many fixture sockets throughout the plant had begun to rot out. In the office areas, the acrylic lenses on the retrofitted troffers were prone to falling out, a safety concern raised directly by facility staff. Light levels measured only 150 to 250 lux (13.9 to 23 fc) across the plant, below what the facility's operations required.

With the existing sockets and lenses in this condition, re-retrofitting the fixtures a second time was not viable.

Metric	Result
First-Year Total Savings	**$26,607**
Government Rebate	**$36,052**
Net Project Cost	**$90,692.15**
Annual kWh Reduction	**88,777**
Simple Payback Period	**3.4 years**
Return on Investment	**39.34%**
Net Present Value	**$127,873.99**
Internal Rate of Return	**29.60%**

THE SOLUTION

Lumen Solutions proposed a full fixture replacement instead of another retrofit:

- Replaced 344 existing fixtures with 343 new LED fixtures, including linear high bays, flat panels, linear strips, wraps, and wall packs, each backed by a 10-year warranty.
- Replaced all remaining fluorescent lighting with high-efficiency LED fixtures in preparation for Canada's fluorescent lamp ban. All fluorescent tubes and associated components were responsibly recycled through a government-certified recycling facility.
- Installed new perimeter wall packs with photocells, so exterior lighting turns on at dusk and off at sunrise.
- Selected fixtures rated for the facility's dust-generating processes, including vapour-tight fixtures where required.
- Installed fixture-mounted occupancy sensors throughout the plant and office areas. As the facility operates extended hours, the sensors automatically dim or switch off lighting in unoccupied spaces, helping maximize energy savings without affecting operations.
- Installed linear strip task lighting with integrated microwave sensors in an optimized layout for maximum efficiency and customization, depending on the worker or task.
- Sequenced installation in the high-traffic production areas over weekends to minimize disruption to Gund's operational schedule.

THE RESULTS

The upgrade reduced the facility's annual lighting energy consumption from 157,966 kWh to 69,189 kWh, a savings of 88,777 kWh (56%), while significantly improving lighting quality throughout the plant. The new fixtures also eliminated recurring maintenance issues and provided the flexibility to achieve light levels well above the 150–250 lux measured before the project.

Moving from the "Type A" tube retrofit to full fixture replacement also eliminated the recurring ballast and socket failures, along with the falling-lens safety issue in the office areas.

ABOUT THE GUND COMPANY

The Gund Company operates a manufacturing facility in Fergus, Ontario.

LUMEN SOLUTIONS
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