
## Project Summary

New Brunswick Public Schools, located in Middlesex County, New Jersey, is a comprehensive, community public school district serving students from kindergarten through 12th grade. In an effort to reduce energy usage, the district converted 10 locations fully to energy efficient LED lighting and chose over 30,000 of RVLT's Generation 3 LED tube lights. A significant energy efficiency rebate from New Jersey's SmartStart Building Program increased the benefits of the LED lighting retrofit.

**End User:** New Brunswick Public Schools, New Brunswick, NJ

**Application:** Classrooms and gyms for 10 locations

**Products:**
- RVLT LED tubes, fixtures, and high bays

**Benefits:**
- Over 50% reduction in lighting costs
- Overall annual cost savings of approximately 25%
- Immediate savings from LED lighting helped schools allocate additional funds where needed
- Achieved lighting standards required by school system at much lower cost
- Elimination of fluorescent ballasts delivered ongoing maintenance cost reductions

## Project Overview

Back in 2013, New Brunswick Public Schools began to consider a lighting upgrade after a consultant's study indicated a lighting upgrade would meet the "go forward" criteria defined as "medium payback" at between 5-10 years. An LED lighting retrofit provided the solution. New Brunswick chose Johnson Controls (JCI), a global diversified technology and industrial leader serving customers in more than 150 countries, as their energy contractor. They manage all aspects of sustainability projects, are experts in schools, and have implemented solid state lighting technology with prior projects.

JCI chose to partner with Tri-State LED, located in Greenwich, CT, a division of Revolution Lighting Technologies (NASDQ: RVLT), to upgrade the New Brunswick school system to LED. Tri-State LED provided detailed audits, samples, financial models, and onsite services to support Johnson Controls and their affiliates. Because JCI was involved in several sustainability

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projects for New Brunswick, other than the lighting upgrades, they needed a dependable contractor, experienced with all electrical components, to include LED lighting, so they chose Facility Solutions Group, (FSG).

Total energy and maintenance savings to the district is estimated at $3.5 million over 10 years. The New Brunswick project is a wonderful example of teamwork and success.

*"This project will make our schools more energy efficient, eco-friendly and better for our students to learn and grow," said Richard Kaplan, Superintendent of New Brunswick Public Schools.*

*New Brunswick Mayor Jim Cahill stated, "This innovative project will upgrade the school district's energy systems without any impact to our taxpayers and will reduce our carbon footprint immensely. Our school community embraces change, and I congratulate Superintendent Kaplan and the Board of Education for taking on this remarkable task."*

## Cost Analysis

### Annual LED Life-Cycle Cost Analysis

| Existing Fixture | Number Fixtures | Energy Use (kWh) | Cost/Unit | Total Cost |
|---|---|---|---|---|
| 2' T8 Fluorescents | 627 | 73,612.82 | $ 0.13 | $ 9,569.67 |
| 3' T8 Fluorescents | 18 | 1,931.29 | $ 0.13 | $ 251.07 |
| 4' T8 Fluorescents | 12,704 | 2,276,431.94 | $ 0.13 | $ 295,936.15 |
| MH 175W Lamps | 12 | 11,300.40 | $ 0.13 | $ 1,469.05 |
| MH 250W Lamps | 234 | 34,343.59 | $ 0.13 | $ 4,464.67 |
| MH 400W Lamps | 46 | 251,457.65 | $ 0.13 | $ 32,689.49 |
| **Total Costs for Period** | | | | **$ 344,380.10** |

| RVLT Fixture | Number Lamps | Energy Use (kWh) | Cost/Unit | Total Cost |
|---|---|---|---|---|
| 2' 9W G3 Tubes | 1591 | 32,820.39 | $ 0.13 | $ ,266.65 |
| 3' 12W G2 Tubes | 36 | 927.02 | $ 0.13 | $ 120.51 |
| 4' 15W G3 Tubes | 29,933 | 980,426.73 | $ 0.13 | $127,455.47 |
| HP 22W Bulbs | 12 | 1,156.32 | $ 0.13 | $ 150.32 |
| HP 200W 5000K 120° High Bays | 46 | 110,568.83 | $ 0.13 | $ 14,373.95 |
| **Total Costs for Period** | | | | **$159,559.80** |

| Savings | Savings |
|---|---|
| Energy Savings | $217,192.00 |
| Maintenance Savings (materials only, est.) | $123,002.00 |
| **Total Savings LED Fixtures** | **$340,194.00** |

Visit www.rvlti.com for more information.

*Numbers are calculated at the time of installation and may not reflect current upgrades to lighting fixture components.*