LED RETROFIT CASE STUDY
MI Windows and Doors

MI Windows and Doors (MI) is one of the largest suppliers of windows and doors for new construction, remodeling, and replacement projects with a long history of helping building industry professionals and property owners achieve sustainability goals through its products.

Objectives:
- Improve energy efficiency
- Enhance lighting ambiance

Challenge

As a supplier of ENERGY STAR® qualified windows and doors, MI wanted to address their own on-site lighting efficiency and lighting atmosphere via an LED lighting retrofit project.

MI analyzed many local energy consultants but needed a highly trusted partner who understood their 24-hour operational process could not go offline during the retrofit.

Solution

In December 2017, at MI’s extrusion facility in Millersburg, PA, 481 lights were retrofitted with LEDs. In July 2018, the retrofit of 385 lights at MI Hegins, PA facility was completed. All production areas and small office spaces were updated as well as exterior LEDs at Hegins.

Both LED retrofit projects were carefully scheduled and completed during operational hours without production line disruption and with safety as a priority.
“A1 installed the lights in a short amount of time and caused no interruptions to our 24/7 operations. Their techs were courteous and made safety a priority. “Since the LED installation, the appearance of the facility has dramatically changed as well. People who visit our facilities immediately notice and compliment us on it.”

Jeff Paradise
MI Eastern VP
Manufacturing & Extrusion

An LED Retrofit Initiative, Powered by A1 Energy

According to Paradise, MI decided to pursue a lighting retrofit for both the energy savings and overall lighting ambiance. The company decided to partner with A1 Energy, a turnkey solutions provider, after talking with several satisfied A1 Energy clients.

The project was a collaborative effort between MI, A1 Energy, and electrical contractor R.S. Enterprises. It involved retrofitting MI’s inefficient T12 fluorescent task lights and metal halide (HID) high bays with cost-effective LED lights.

$125,869 ANNUAL SAVINGS
1.6M kWh SAVED
$124,903 TOTAL PPL UTILITY REBATE
SUBSTANTIAL OUTCOMES

The energy and cost savings that MI will experience as a result of the project are substantial.

<table>
<thead>
<tr>
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<th>MI Millersburg LED Project December 2017</th>
<th>MI Hegins LED Project July 2018</th>
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<tbody>
<tr>
<td>kWh Saved</td>
<td>869,754</td>
<td>732,843</td>
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<tr>
<td>Annual Savings</td>
<td>$65,850</td>
<td>$60,019</td>
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<tr>
<td>PPL Utility Rebate</td>
<td>$39,996</td>
<td>$84,907</td>
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<tr>
<td>Project Payback (in Months)</td>
<td>17</td>
<td>12.2</td>
</tr>
<tr>
<td>Internal Rate of Return</td>
<td>67.50%</td>
<td>97.78%</td>
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<tr>
<td>Life Cycle Savings (5 years)</td>
<td>$349,610</td>
<td>$342,214</td>
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$691,824
Total life cycle savings (5 years)

$124,903
Total PPL utility rebate