Case Study

**FlexTech Consultant:** L&S Energy Services

**Location:** Canton, NY

**Sector:** Industrial

**Building Square Footage:** 39,000 sq.ft.

**Annual Cost Savings:** $15,350

**Annual Energy Savings:** 54,307 kWh

**Annual Gas Savings:** 9,398 Therms

**Background**

The Poulin Grain plant produces pellet feed for local farm animals. Their two pellet mills produce up to 6 tons of product per hour. The mills are powered by a natural gas steam boiler and the pellets are cooled by a large exhaust system. Poulin Grain noticed their natural gas costs rising, while their production totals were declining, so they commissioned L&S Energy Services to complete an energy study through NYSERDA's FlexTech Program, focusing on process improvements in the plant.

Poulin Grain invested $4,443 into a FlexTech energy study with L&S Energy Services to discover opportunities that could save them $15,350 in utility expenses each year. By implementing the energy efficiency upgrades recommended by L&S, Poulin Grain could:

- **Reduce annual utility costs by 13%**
- **Reduce costs associated with equipment operation and maintenance**
- **Completely payback money invested in recommended upgrades within 7 years.**

**Taking Action**

L&S observed the boiler was left in operation during the off-season, wasn’t meeting load requirements, and associated piping systems weren’t insulated. To identify the most effective system improvements, L&S conducted a technical and economic analysis considering install and maintenance costs, energy savings, cost savings, and simple payback.
### Energy Savings Summary

<table>
<thead>
<tr>
<th>Measure Description</th>
<th>Electric Savings (kWh)</th>
<th>Gas Savings (Therms)</th>
<th>Annual Cost Savings</th>
</tr>
</thead>
<tbody>
<tr>
<td>LED Lighting Upgrades</td>
<td>33,706</td>
<td>-</td>
<td>$3,481</td>
</tr>
<tr>
<td>Pipe Insulation for Steam Distribution</td>
<td>-</td>
<td>4,912</td>
<td>$4,268</td>
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<tr>
<td>Boiler Controls</td>
<td>-</td>
<td>978</td>
<td>$850</td>
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<tr>
<td>Boiler Feedwater Economizer</td>
<td>-</td>
<td>3,508</td>
<td>$3,048</td>
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<tr>
<td>Variable Frequency Drives for Grain Mixer</td>
<td>20,601</td>
<td>-</td>
<td>$3,703</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>54,307</strong></td>
<td><strong>9,398</strong></td>
<td><strong>$15,350</strong></td>
</tr>
</tbody>
</table>

**Achieving Results**

As a conclusion to the energy study, L&S provided Poulin Grain with a report including recommendations to improve operations and reduce costs justified by technical and feasibility analyses. L&S identified opportunities to optimize building systems and production processes, with a focus on boiler operations. Among other suggestions, boiler controls, an economizer, and pipe insulation were recommended to improve process efficiency of the boiler and steam distribution.

The information and recommendations L&S provided allowed to Poulin Grain to make informed decisions that will result in the greatest energy and cost savings specific to their facility.

**NYSERDA Flexible Technical Assistance Program**

Completing an energy study of a building can help identify and evaluate opportunities to reduce energy costs and incorporate clean energy into a company’s capital planning. Through the FlexTech Program, NYSERDA shares the cost to produce an objective, site-specific, and targeted study on how best to implement clean energy and/or energy efficiency technologies. A NYSERDA-approved FlexTech Consultant will work with businesses to complete the energy study and provide expert, objective and customized technical services to inform clean energy management and investment decisions.

**Discover how to reduce energy costs and incorporate clean energy with NYSERDA.**

Visit [nyserda.ny.gov/FlexTech](http://nyserda.ny.gov/FlexTech)

**Contact L&S Energy Services for your energy needs.**

Visit [LS-Energy.com](http://LS-Energy.com)

Call **518-383-9405**

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*L&S staff have more than 150 years of combined experience providing energy services to thousands of facilities since 1976.*