

Comprehensive Energy Efficiency Solution Aerospace Manufacturer

The Problem

A large aerospace manufacturer located in California came to Origyn and OUS seeking to reduce the energy consumption at one of their plants. However, they had a very limited budget, yet still had corporate mandates to reduce cost and carbon footprint.

The Solution

Our team reviewed 12 months of utility bills and the facility's listing of mechanical equipment, and ultimately conducted an onsite audit of the facility. From that we were able to design a plan targeting an upgrade to the facility's lighting to LEDs along with improving the power quality coming into the facility.

Our plan included retrofitting the entire plant and office space from the existing T8 fixtures to more efficient LED fixtures. Not only did this make the lighting more energy efficient, but it increased the light levels on the factory floor improving the safety and performance for factory workers.

In addition to the improvement on the lighting, we installed power optimization equipment at each of the 3 switchgear bringing power into the facility. Through this equipment, we were able to bring the voltage across all three phases of power into balance, make use of transient voltage (which is typically lost to ground), and reduce KVAR (power you pay for but can't really use), all of which helped reduce energy consumption and demand across the entire facility's load.

| | Before | After |
|--------------------------------------|-------------|-------------|
| Annual Electricity Consumption (Kwh) | 13,944,534 | 12,515,219 |
| Annual Electricity Cost | \$2,148,706 | \$1,928,463 |

*The results from these improvements proved to be quite impressive from an energy saving perspective. A year after making these efficiency improvements, the manufacturer saw over a **10% reduction** in their energy consumption across their entire operation, **saving over \$200K** and also **eliminating over 1,000 metric tons of CO2**. In addition, they reported less equipment maintenance issues due to the improved power quality and increases in overall facility production.*

No Capital, No Debt..... Just Savings!

This manufacturer was also able to procure these savings without spending any of their own money or having to take on any debt by utilizing our Energy Efficiency-as-a-service program. Origyn and OUS provided all the capital to get the projects installed and commissioned, utilizing a 60 month service term, where we provide service on all installed equipment through the term. This structure not only **saved the customer \$650K in upfront capital expense**, but allowed the manufacturer to keep the expense off their balance sheet and report it as an operating expense.

As you can see, the manufacturer was able to **maintain \$4,160 per month in savings** without spending a penny of their own money, almost a quarter of the overall savings, and **preserved \$650K of their own money**. Those capital savings, along with their energy savings, were later used to grow the facility by expanding their production lines.

| | |
|---------------------------------------|-----------|
| Service Term: | 60 Months |
| Total Monthly Savings: | \$18,353 |
| Monthly EEaaS Payment: | \$14,193 |
| Monthly Savings Retained by Customer: | \$4,160 |
| Customer's Percentage of Savings: | 22.67% |
| Capital Retained by Customer: | \$650,000 |