

Advanced Precision Engineering

Business
Manufacturing Facility

Town
Ipswich

Project
Compressor Replacement

Total Project Cost
\$95,100.39

Annual Cost Savings
\$23,448

Annual Electric Savings
113,274 kWh

Annual Demand Savings
20.17 kW

Simple Payback (Before Incentives)
4.06 years



Project Overview

Advanced Precision Engineering, Inc. (APE), located in Ipswich, Mass., is a supplier of complex machined parts, assemblies, and kits to the aerospace, military, automation, and semi-conductor industries. APE used two 30 horsepower air compressors for their manufacturing process. They worked with D.R. Guilbeult Compressor, LLC to replace the air compressors with one 75 horsepower variable speed compressor and install efficient auxiliary equipment including a receiver tank, wet tank, cycling refrigerated dryer, and efficient drains on equipment.

Technical Analysis

Advanced Precision Engineering, Inc. provided the Ipswich Electric Light Department the project scope, technical specifications, and project costs. Energy savings analyses were completed to evaluate total annual energy and cost savings for installing the high efficiency compressor equipment over baseline equipment.

Measure	Electric Savings (kWh)	Demand Reduction (kW)	Cost Savings
High Efficiency Air Compressor	79,607	14.18	\$16,479
Cycling Refrigerated Dryer	12,445	2.22	\$2,576
Zero-Loss Condensate Drain	21,222	3.78	\$4,393

Incentive Calculation

Ipswich Electric Light Department's GO program is designed to offer incentives up to 50% of the project's costs with an incentive cap of \$10,000. The incentive payment cannot reduce the project below a one-year payback. Based upon the project's cost and the program's guidelines, IELD was able to offer an incentive of \$10,000. Advanced Precision Engineering implemented their project in February 2019.