

CASE STUDY

Consulting, Engineering and Installation of Renewable and Energy Efficiency Systems

ECM Motor Upgrade

SITUATION

Thermo Fisher Scientific is a large multinational life science manufacturing and distribution company with facilities located around the world. Thermo Fisher's Fremont CA manufacturing facility produces biopharma products and operates a series of walk-in cooler storage systems associated with both their laboratory and production systems. These cooler systems are mission critical, operate continuously throughout the year, and consume significant energy.

STRATEGY

Groom Energy engineers surveyed these walk-in coolers and determined that their existing fans were powered by 35% efficient shaded pole evaporator motors. Waste heat from these inefficient motors also caused the coolers' compressors to consume more energy in order to maintain the cooler environment. By upgrading the existing fan motors to newer 77% premium efficiency electronically commutated motors (ECM), Thermo Fisher could achieve significant energy savings with no change to the operational characteristics of these critical systems. Groom Energy planned and implemented a turn key retrofit installation for 107 different motors and arranged for financial incentives supporting this upgrade from Thermo Fisher's local utility, the Pacific Gas and Electric Company.

RESULTS

Lifetime Electrical Savings	\$180,443
Annual Electrical Savings	\$18,443
Utility Incentive	\$2,060
Installed Cost	\$30,252
Return on Investment	65%
Pounds of CO2 avoided annually	119,694

