



APPLIED MEDICAL RESOURCES

APPLICATION

Combined Heat and Power (CHP)

MARKET SECTOR(S)

Manufacturing
(Industrial,
Pharmaceutical)

CLIENT

Applied Medical
Resources

COMMISSIONED

3 Units in 2016,
1 Unit in 2019

EQUIPMENT

Four GT333S

LOCATION

Lake Forest, CA

FUEL

Low Pressure
Natural Gas

HIGH RELIABILITY WITH LOW ENVIRONMENTAL IMPACT

Applied Medical Resources (AMR), is dedicated to providing innovative products that improve patient outcomes and enable the advancement of minimally invasive surgery. Equally committed to improving the affordability and accessibility of high-quality healthcare, AMR proudly delivers technologies that enhance clinical care and satisfy the pressing economic needs of their customers.



As part of their commitment to protecting the environment and the earth's natural resources, AMR identifies and manages current and future environmental sustainability initiatives by tracking their energy use, water consumption, greenhouse gas (GHG) emissions, and waste generation.



Based on its high reliability and low environmental impact, AMR selected the GT333S Flex Turbine® with integrated heat exchangers to provide power and hot water for a combined heat and power (CHP)/cogeneration installation in their Lake Forest, California facility. The units provide enough heat to cool the growing facility using a Therman Absorption Chiller and enough power to sustain operations in cases of grid failure. An added benefit is that the low emission, low sound GT333S is California Air Resources Board (CARB) certified.

The initial cogeneration system utilized in the Lake Forest, CA manufacturing facility, (just one of more than 20 buildings occupied by AMR) generates 5.18 million kilowatt-hours of electricity annually and meets 14% of AMR's total electricity needs. AMR's local utility grid energy consumption per square foot decreased by 37% from 2013 to 2018, despite 57% growth in their manufacturing and office space during the same time period.

The expansion of AMR's manufacturing operations in their Southern California locations resulted in an increase in electricity needs to meet demands. However, through their energy conservation efforts, AMR has offset 30% of their annual electricity consumption by utilizing renewable and high-efficiency energy sources, including the cogeneration system powered by Flex Turbines. As AMR continues to grow, 4 MW of Flex Turbine cogen power has been ordered in 2019 and planned for 2020 installations at other AMR facilities.

RESULTS

Reduced reliance on local utility power, increased factory reliability

Reduced utility bills

Exceeded AMR's original projected payback period by one full year

Meets strict California emissions standards