

CASE STUDY: Kuakini Medical Center



TOTAL IMPACT (AS OF OCTOBER 2016)

TOTAL INVESTMENT

\$5.8 MILLION

TOTAL SAVINGS

\$2.5 MILLION

TOTAL CO₂ SAVINGS

6,000 TONS

PROJECT OVERVIEW

LOCATION

Honolulu, Hawaii

ENERGY SERVICES COMPANY PARTNER

Energy Industries

ENERGY SAVINGS INSURANCE POLICY

Energi Insurance Services

EFFICIENCY UPGRADES

- New chiller plant
- Lighting upgrades
- Energy management system (EMS)
- New steam boilers
- Air-handling unit VFDs
- New booster pumps and fire pumps

PROJECT INVESTMENT

\$5.8 Million

ANNUAL SAVINGS

- **\$1,200,000** in utility expense
- **3.8 million** in kilowatt-hours
- **10,000** therms of natural gas
- **3,000** tons of CO₂

THE OPPORTUNITY

Kuakini Medical Center wanted to employ an innovative approach to upgrade its facility, reduce energy consumption, and save money. Metrus partnered with Kuakini to develop and finance the first health care efficiency project of its kind in Hawaii, using an Efficiency Services Agreement (ESA).

THE CHALLENGE

Kuakini required an efficiency financing solution for the installation of critical new equipment that would remove down-time risk and provide system redundancy for safety. By partnering with Metrus—who paid for 100% of the project design and implementation—Kuakini avoided upfront costs and received the immediate economic, operational and environmental benefits of a multi-benefit efficiency upgrade with minimal disruption to hospital operations.

THE SOLUTION

Metrus worked with Energy Industries and Energi to fully design and develop a comprehensive energy-saving facility upgrade program for Kuakini. Kuakini was able to quickly implement key facility improvements, which allowed the hospital to maximize efficiency, sustainability and patient comfort without using its own capital or taking on new debt.

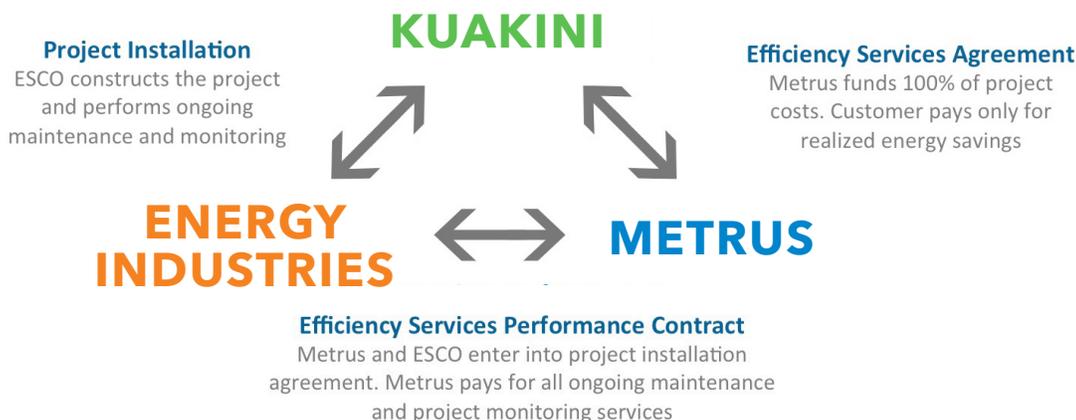
SUCCESS

The project began operation in September 2014 and is generating \$1.2 million in annual savings. The Kuakini project is delivering significant economic and environmental value to the hospital and was completed on time and on budget. Further, the realized savings understate the positive impact of this project for Kuakini since there are operational savings that are a direct result of upgrading equipment, incorporating energy management systems and optimization.

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PROJECT SUMMARY

Metrus and Energy Industries worked with Kuakini Medical Center to develop a comprehensive energy-saving program that implemented efficiency measures and equipment upgrades critical to the operation of the 250-bed acute care hospital. Bringing in Metrus enabled Kuakini to immediately benefit from the financial, operational and environmental benefits of energy efficiency while conserving capital for its core operations. Under the ESA, payments to Metrus are an operating expense—just like a regular utility bill—except based on realized energy savings. Energy Industries implemented the efficiency upgrades and provides ongoing maintenance of the equipment over the ESA term. Metrus engaged Energi, a specialized insurance company, to provide an energy savings warranty policy to help mitigate performance risk on the project and provide independent verification of energy savings calculations. As a result of the project upgrades, the hospital is seeing close to a 25% reduction in its total utility bill and creating a more comfortable environment for its patients. Metrus continues to work with Kuakini and Energy Industries to ensure that energy savings are delivered and that new energy efficiency measures that emerge over time are incorporated into this project.



The Kuakini project continues to be a tremendous success. To date, the project has saved 7.8 million kWh of electricity and 22,000 therms of natural gas resulting in 6,000 tons of avoided CO₂ emissions. This is equivalent to eliminating the electricity use of 560 homes each year and removing 1,120 vehicles from the road.

“Metrus handles the financial and technical issues of making our hospital more energy efficient, and allows us to stay focused on what we do best: providing high-quality patient care.”

Quin Ogawa, Chief Financial Officer at Kuakini Health System, 2015

THE ROAD TO ENERGY EFFICIENCY WITH METRUS

