



GEISINGER HEALTH
SYSTEM

LED RETROFIT CASE STUDY



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info@a1energy.net | (717) 898-8021 | www.a1energy.net



LED RETROFIT CASE STUDY

Geisinger Health System



Geisinger Health System is one of the largest healthcare networks in Pennsylvania that leverages Act 129 to implement energy projects that lower energy consumption and operating costs for each facility, as well as improve air quality for the local community.

Objectives:

- Improve energy efficiency
- Lower operating costs
- Improve air quality and thus health

Challenge

The average health care facility operates at a cost of \$4-6/sq ft. Hospitals need to balance energy usage with patient comfort, 24/7 operations, large equipment loads, and regulations. With low profit margins, hospitals often operate at a loss, frequently sacrificing investment opportunities into life-saving equipment. Energy savings contribute directly to hospitals bottom line, placing hospitals in a position to allocate additional resources to life-saving equipment and patient care.

Solution

We started with an LED lighting retrofit project to help Geisinger facilities take the easiest first step toward energy optimization. Lighting projects are low risk and have a short payback period. Using Act 129 rebates also help to reduce the payback period. Geisinger was then able to leverage the cost savings from the lighting retrofit for additional energy projects.

The outcomes helped to reduce operating costs and improve health for the community.

"Geisinger believes in a triple bottom line when it comes to energy savings. Triple bottom line revolves around people, planet, and profit. Each time an energy project is completed we take the energy saved and relate it to health impacts.

We use an energy impact calculator which uses regional generation power for your particular area and puts the kWh saved to actual dollars, using EPA data. We are able to show real impacts to patient health while showing dollars saved from health care expenses. This calculator will also produce environmental impacts associated with the kWh reduction. Energy projects savings go directly to the bottom line profit, which can then be invested into lifesaving equipment.

We believe that by reducing energy we are able to improve the air quality of the communities we serve, which in turn improves the health of our patients. By reducing the pollution created by the power plants, we are able to improve the environment. Finally by completing an energy project, the savings from the project will go directly to bottom line profit and used to purchase other life saving equipment."

Michael W. Gerrity
Energy Manager,
Geisinger Health Systems



Facilities Included in Retrofit

Geisinger Kistler Clinic
Geisinger LEMED
Geisinger Wyoming Valley Orthopedics Clinic
Geisinger Lewistown Clinic
Geisinger Gray's Woods Perimeter Lighting



ENERGY OUTCOMES

Geisinger has leveraged many energy projects under Act 129. On average, the payback period for such projects has been 3-4 years, with a return on investment of 25.33%.

The health system spans across Pennsylvania and New Jersey and is widely successful at leveraging energy reduction measures to improve operating expenses in both states. While the average health facility operates at roughly \$4-6/sq ft., Geisinger operates at \$1.19/sq ft. as a result of multiple energy projects. Cost competitive ability allows Geisinger to refocus their budget on securing new medical technologies and updating equipment to offer better health care.

316,053 kWh

Energy savings

2,150

Lamps replaced

\$15,786

Rebates & incentives

