

Energy Audit – Health Care Samaritan Hospital Troy, New York

Program

NYSERDA FlexTech Feasibility Study and follow-up services directly with the customer

Scope of Services

- FlexTech Feasibility Study
- Infrastructure & Physical Needs Assessment

Level of Involvement

Prime Contractor

Facility Size

370,000 sq. ft

Facility Type

Acute Care Hospital

Project Results

- Replace chiller plant
- Install summer boiler
- Upgrade lighting
- Upgrade building management system

Project Savings

Electric Demand: 398 kW

Electric Consumption: 810,969 kWh

Thermal: 765,750 Therms

Energy Cost Savings: \$484,498

Samaritan Hospital occupies multiple buildings with approximately 370,000 square feet of conditioned space on a 12-acre campus located adjacent to the Rensselaer Polytechnic Institute, in Troy, New York. The original building was constructed in 1912 with additions constructed in 1913, 1924, 1927, 1930, 1956, 1963, 1969 and 1981. The majority of the buildings are of heavy masonry construction.

The facility is equipped with a central boiler and chiller plant that contains three boilers that generate steam at 125 PSIG and supply all the wings of the Hospital. Since it is a high pressure steam plant, it is staffed by at least one individual around the clock. At this pressure, the steam is approximately 345°F. Three chillers, two single-stage absorption units installed in 1972, and a 500-ton centrifugal unit, installed in 1995, provide



**1957 Keeler Boiler rated
at 20,000 lbs/hr**

approximately 70% of the site's cooling needs. The remaining cooling capacity is provided by a mix of DX and window units.

We identified 22 energy conservation measures for implementation as follows:

1. Wet Storage Boiler
2. Repair Leaking Steam Traps
3. Repair Steam Leaks
4. Heat Recovery on Boiler Blow Down
5. EMS Control of Admin & Women's Health
6. Chiller for Linear Accelerator
7. Insulate Steam System
8. Patient Tower Stairway Lighting
9. Economizer on Boiler #3
10. Insulate Chilled Water Piping in Endoscopy
11. VFD on Centrifugal Chiller
12. Return Air for AC4 and AC10
13. Replace Keeler Boiler
14. Replace Pharmacy Chiller w/ Chilled Water
15. Heat Recovery Runaround Loop
16. Steam Control Valve Children's Center
17. Replace Chiller Plant
18. Central Air for Healthy Kids
19. Building Wide Upgrade BMS
20. Central Air for Turning Point
21. Replace Lighting in Children's Center
22. Install Chilled Water Coil in Radiology and Administration AHUs