



Cutting energy costs in half with upgrades to heating and hot water system

Case Study

Sector:
Small Commercial

Company:
Colonie Animal Hospital

Location:
Colonie, NY

Energy Savings:

- 4,200 kWh annually
- Eliminated the use of 1,900 gallons of No. 2 fuel oil annually
- Heating bills lowered by 45%

Background

Colonie Animal Hospital provides full-service animal care. The 4,000-square-foot, two-story masonry and wood framed building is located in Colonie, NY along Route 5.

According to Stuart Schwartz, the animal hospital's business manager, annual energy costs were \$7,740 for fuel oil and \$5,873 for electricity. They wanted to bring a natural gas line across Route 5 in order to replace their oil-fired heating equipment. They needed an energy assessment to start the process and get technical and financial assistance.

Energy Assessment

The objective of the energy assessment was to identify and analyze opportunities to improve the operation of the building and lower energy costs while improving efficiency and converting to natural gas.

During the on-site assessment, lighting, heating equipment, heating distribution, insulation levels, and domestic hot water systems were evaluated. Fuel consumption and electrical data were analyzed. Because of extensive washing of dog blankets, laundry operation was analyzed, too. The energy assessment indicated that the heating and hot water upgrades would provide the most impact on energy efficiency. The hot water boiler had an efficiency of 67% and was producing soot. The oil-fired hot water tank ran excessively and an oil-fired hot air furnace was overdue for replacement. The cooling equipment was in good condition but needed evaporator coil cleaning.



“Participating in NYSERDA’s energy program has been a great success for our animal hospital.”

— *Stuart Schwartz, Business Manager, Colonie Animal Hospital*

Recommendations

Upgrades along with energy conservation measures included:

- Replace the oil-fired boiler and hot water heater with a natural gas 96% efficient combination unit.
- Eliminate the oil-fired, forced hot air furnace and adapt the cooling coil to new 92% AFUE furnace.
- Clean all hot water fan coil units and AC evaporator coils.
- Replace washing machine with CEE qualified unit.
- Replace the electric clothes dryer with a natural gas unit.
- Remove incandescent light bulbs and install CFLs.
- Install lighting occupancy sensors in exam rooms and clean all first floor lighting lenses.

Results

implementing all of the recommended changes would decrease electric consumption at the animal hospital by approximately 4,200 kWh per year and eliminate the use of 1,900 gallons of No. 2 fuel oil per year. As a result of converting from oil to natural gas, the animal hospital would use just under 2,300 therms of natural gas.

“Participating in NYSERDA’s energy program has been a great success for our animal hospital,” said Mr. Schwartz. He estimated that the improvements reduce their heating bill by at least 45%. In addition, installing an energy-efficient commercial washing machine and replacing the electric dryer with a natural gas dryer helped reduce their electric bill.



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