

# Business Insight Report

Electricity usage has strong seasonal variation, with increases during the summer months, specifically in education and lodging buildings. Water usage has moderate seasonal variation, with higher usage in warmer months. Gas usage has strong seasonal trends, with the highest usage in the colder winter months, specifically in healthcare and residential buildings.

## Generalized Trends:

Electricity and water usage demand peak during the summer, while gas usage demands peak during the winter; air temperature may be a useful predictor for electricity usage.

## Suggestions for improvement:

As health buildings account for the majority of energy usage per square foot, improvements may be of best use in this area. Electricity usage may be reduced by using motion-detection light sensors with LED light bulbs, an energy efficient central HVAC system to provide more efficient cooling as opposed to window units, and double-pane / energy efficient windows. These will help in both the summer and winter months as they will keep cool air in during the summer and warm air in during the winter. Solar panels may also be a feasible option for reducing electricity usage. Water usage may be reduced by using faucet aerators, motion detecting faucets in sinks, and by reducing the level of water pressure and water flow. Gas usage may be reduced by ensuring proper insulation is installed and that there are no gaps or tears within the insulation. Foam insulation may also be a better alternative to use as it expands to more areas. As previously mentioned, an energy efficient central HVAC system can also help to provide more energy efficient heating and cooling.

## Estimated Cost Savings:

By using solar panels, an average house in New York State will save around \$72,400 for 25 years of electricity bills. Energy efficient windows can save up to 12% of energy costs each year. Using LED lights will save an average of \$225/year in energy costs in an average house. An energy efficient HVAC system can save up to 20% on energy usage costs.

## Sources:

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