



# Water and Lighting Upgrades Cut Costs and Boost Efficiency at Senior Home

Annualized energy savings are equivalent to 94 metric tons of greenhouse gases reduced or 20 cars removed from the road.



## Asset Facts

Date Built	1999
Square Feet	56,176
Number of Rooms	79 rooms
Asset Type	Assisted Living

## Project Facts

Annual Energy Savings	136,696 kWh
Annual Energy Reduction (%)	16
Annual Savings	\$19,343
Gross Investment	\$61,071
Rebates	\$7,786
Rebates as % of Total Project Cost	12.7
Net Investment	\$53,286
Net Payback	2.7 years

**ROI 36%**

## Challenge

This 56,000 ft<sup>2</sup> senior living facility is located in the mid-Atlantic United States. Due to the residents' specific needs, maintaining their comfort was a priority.

- The lighting fixtures in the community and exit signs in the back-of-house were original to the building and are no longer being manufactured
- The faucets throughout the entire building are 2.2 GPM, which met the EPA standard at the time of construction but are now below recommended standards
- The condenser water loop did not have variable frequency drives (VFD).

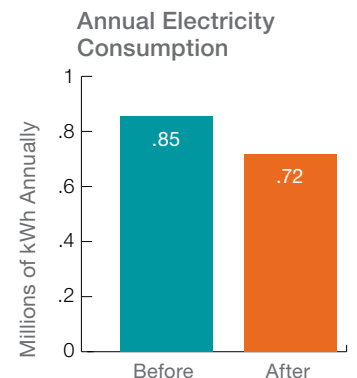
## Our Solution

Green Generation Solutions improved efficiency in the back-of-house areas by installing high efficiency LED fixtures and industrial strip de-lamping kits with occupancy sensors to optimize the lighting system.

- VFDs were installed on the condenser water loop to vary the speed of the motors to match the demands of the building
- GreenGen installed faucet pressure aerators to minimize excess water use. The water flow was reduced from 2.2 GPM to 0.5 GPM, resulting in a measured and verified 11% decrease in facility-wide water consumption
- Controls were installed on the vending machines that work with occupancy sensors, allowing the machine systems to cycle off when not in use
- GreenGen installed light loggers in rooms with new occupancy sensors and measured an average light fixture runtime reduction of 63%
- GreenGen coordinated all rebate capture activities with the state utility to secure funding for nearly 13% of the total project cost.

## Energy Savings – 16%

- The VFDs reduced demand (kWh) by 54% for the condensed water loop motors
- The installed occupancy sensors reduce light fixtures runtimes by an average of 63%
- Overall community water use was reduced by 11%
- Overall, the solution reduced total building consumption by 16%.



**How can we help you?** Please contact Green Generation Solutions at [info@greengenerationsolutions.com](mailto:info@greengenerationsolutions.com) or 301.202.2930