



# Library of Congress Books Significant Energy Savings

Our solution reduced greenhouse gasses by 957 metric tons annually, equivalent to 201 cars.



## Asset Facts

Date Built	1975
Square Feet	216,500
Asset Type	Warehouse

## Project Facts

Annual Energy Savings	1,387,718 kWh
Annual Savings	\$142,963
Gross Investment	\$462,134
Rebates	\$109,837
Rebates as % of Total Project Cost	48.6
Net Investment	\$237,547
Net Payback	1.66 years

**ROI 60.2%**

## Challenge

The Library of Congress Annex is a 216,500 ft<sup>2</sup> warehouse and storage facility located in Landover, Maryland, just outside of Washington, DC. GreenGen assessed the facility and identified areas to improve the overall energy efficiency of the building, targeting interior and exterior lighting, mechanical, and controls systems.

- The existing rooftop units (RTUs) were operated on a binary on/off system, resulting in excessive use at times when building demand is less than full output
- The primary source of lighting throughout the interior and exterior spaces in the facility were high-pressure sodium (HPS) high-bay and area fixtures
- The interior fixtures are not controlled for space usage, but rather are often on in the frequently vacant storage aisles.

## Our Solution

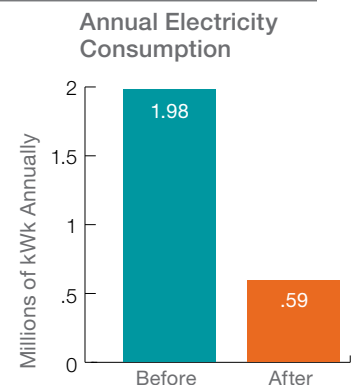
This solutions package was awarded an *MEA EmPOWER MD* grant of \$135,000 from the state of Maryland for energy savings projects resulting in total building electricity reduction of 20% or more.

GreenGen coordinated all rebate capture activities with the local utility and the state of Maryland to secure funding for nearly 50% of the total project cost.

- Installed controllers on the 14 RTUs, enabling power and output modulation with building demand
- Replaced interior 100 W HPS high-bay fixtures with 53 W LED fixtures
- Installed occupancy-based controls on the aisle and high-bay fixtures to limit runtimes to periods when the storage aisles are actually in use
- Retrofitted exterior HPS fixtures with LED fixtures to reduce wattage by about 70%.

## Energy Savings – 70%

- 70% reduction total building electricity use
- Aisle occupancy lighting controls reduced fixture runtimes by 50%
- RTU conversion resulted in 44% reduction in unit electricity use
- Overall fixture wattage reduced by over 60%.



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