

Energy Efficient Lighting Retrofit Strategies

A complete lighting system audit has been performed for the NIACC Campus and Student Housing facilities. From this study, 6,211 light fixtures and 15,322 light bulbs were evaluated for replacement, utilizing new energy efficient lighting technologies. Each potential lighting upgrade was then evaluated for project cost, applicable utility rebate incentives, amount of energy reduced, annual utility savings, and project cost payback.

Conserving energy not only lowers our financial responsibility, but also protects our environment by reducing fossil fuels burning and resultant air emissions, which cause global warming, acid rain, and smog.

By implementing the lighting retrofit projects we will capture the following benefits:

Economic Benefits:

- Annual Utility savings of \$32,932.00.
- Utility rebate incentive award of \$15,601.00.
- Electrical consumption reduced by 329,404 kWh per year.
- Initial investment of \$69,019.00 recovered in 2.35 years.

Environmental Benefits: (annual)

- Greenhouse gas reduction (in pounds of CO₂) worth 444,978 lbs. or **204 Metric Tons.**
- Acid Rain emission reduction of 2,471 lbs. (SO_x).
- Smog emission reductions of 1,186 lbs of (NO_x).
- Barrels of oil not consumed 474.
- Cars off the road 44.
- Gallons of gas not consumed 23,195.
- Acres of pine trees reducing carbon 169.6.