SUSTAINABILITY - LIGHTING THE WAY TO ENERGY SAVINGS

300 watt Old lights replaced by

104 watt Efficient lights

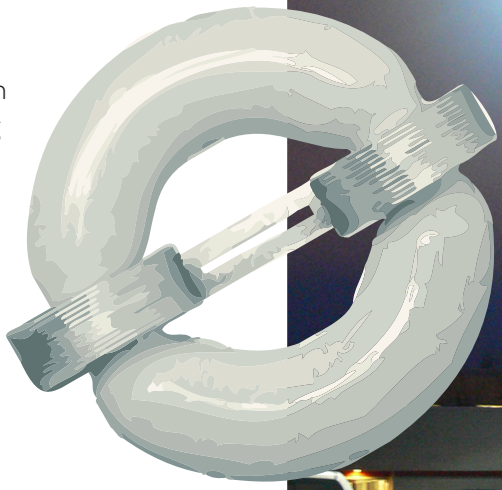
65% Energy Savings!

UAA Social Science Building room 118 was recently upgraded to a new efficient lighting system.

UAA Tests New Outdoor Lighting Technology to Conserve Energy

Outdoor Lighting

Using lighting controls and testing new street lamps, UAA is reducing its energy consumption and carbon footprint. During Fall 2008, UAA tested new lighting technology and upgraded to LED (light emitting diode) street lamps through a partnership with the Municipality. UAA will also test a new technology during Winter 2008-09 – an induction lamp. UAA's efforts to reduce energy use through lighting upgrades are part of its standard operating procedures, and timers and photocell technology have been integrated into the UAA outdoor lighting plan for years. All uphold UAA's Energy Policy.



Lighting Controls - Street Lamps

Nearly all of UAA's outdoor lights integrate photocell technology to analyze the amount of daylight available and the amount of light the fixture needs to produce. Along with photocell sensors, UAA also uses timers. After 11 pm, half of the campus lights are scheduled to turn off, and when more lighting is needed for snowplowing, the contractors are able to push one button to turn additional lamps on for a limited time.

UAA Lake Building LED's

UAA
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SUSTAINABILITY - LIGHTING THE WAY TO ENERGY SAVINGS

LED Street Lamps and Signs
UAA is currently testing seven new LED street lamps in the University Lake Building parking lot, and will test 12-104 watt fixtures in the Central Parking Garage too. These will replace the 300-watt high pressure sodium (HPS) fixtures. These 104-watt LEDs have an energy savings of 65%! Every hour these 19 lamps are in full use, UAA saves 3,724 watts and 37¢ (at $0.10/kWh), while reducing carbon dioxide emissions by 5.24 pounds. LED lamps are dimmable and they last much longer than the HPS lamps. They also require less maintenance and create less waste - saving $$$!

If this outdoor LED lighting test is successful, UAA will switch the entire Central Parking Garage to LED lights. An additional benefit could include reducing the 10,000 battery bank back-up at the Garage, which needs to be replaced every 10 years. Reducing the size of the battery bank will save significant amounts of money and reduce the amount of hazardous waste UAA generates.

UAA has been using LED technology for years in its Seawolf sign and the Alaska Flag display. Before using LEDs, the Seawolf sign used three circuits of power to light 750 seven-watt lamps. After switching to LEDs, the Seawolf sign now uses only one circuit of power and energy consumption dropped from approximately 4,800 to 1,800 watts for a 60% energy savings! For every hour the sign is turned on, UAA saves approximately 3,000 watts, 4.23 pounds of CO2, and 30¢. The Alaska Flag display savings are comparable to the Seawolf sign savings.

Induction Lamps
While UAA is testing LED lamps, it is also testing another technology, an induction lamp. The 80-watt conical induction luminaire will replace a 175-watt high intensity discharge (HID) lamp. Similar to LED lamps, the induction lamp boasts a 100,000 hour life and comes with a ten-year full lamp and ballast warranty. The induction lamp could also create indirect savings due to its reduced costs for maintenance and waste disposal.

Individual Responsibility
You too can change your outdoor lamps to work with photocell sensors and timers. You might also consider making the switch to LED lamps. If you're not the owner of your building, talk to your landlord and let him or her know the benefits of changing to energy-efficient lighting.

"LEDs and other energy efficient lighting UAA uses provides better lighting at significantly reduced utility costs to our campus."

– Chris Turletes, Associate Vice Chancellor Facilities and Campus Services –

Key Players
UAA Facilities

UAA Sustainability
UAA is committed to teaching sustainable practices through classrooms, research and community service. UAA leads by example, advancing sustainability in daily operations and long-term planning, and coordinating efforts with the communities we serve. To learn more about UAA's efforts, visit www.uaa.alaska.edu/sustainability.

Green Star
Green Star's Internship Program assisted UAA in developing this series of case studies. Green Star is a local non-profit dedicated to assisting, certifying and recognizing businesses committed to resource efficiency and environmental leadership. To learn more about Green Star, visit www.greenstarinc.org.

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