



Saving Energy in Michigan's Schools Lansing Community College

Project cuts lighting costs 27% and saves \$33,000 annually

Fluorescent Lighting Upgrade

In 1996, Lansing Community College (LCC) decided to upgrade its lighting systems to save energy and money. As a result, lighting upgrades were made in the Arts & Sciences and Gannon Voc-Tech buildings and are achieving energy cost savings of more than \$33,000 per year.



Improved Quality

According to Paul Engstrom, LCC's physical plant supervisor, quality of lighting in the buildings was greatly improved with the upgrades. "Both students and teachers have praised the higher quality light," he said. "Some areas were actually over lit after the retrofit and we were able to delamp fixtures, resulting in additional, unexpected savings."

The Lighting Retrofit

The upgrades were installed during semester breaks in order not to interrupt class schedules. "Classes were not at all disturbed by the installation," said Paul. Existing 40-watt lamps with magnetic ballasts were replaced with energy efficient, 32-watt T8 lamps and electronic ballasts, and fixtures were partially delamped in areas which were over lit. The new lights reduced energy use by 27%.

Other Benefits

LCC realized a number of benefits from its relighting project. For example:

- The buildings' cooling requirements were reduced by lowering the heat load
- Better distribution of light improved occupancy comfort
- Reduced energy use resulted in a corresponding reduction in the generation of CO₂, NO_x, and SO₂.

Project Cost

Total cost for the lighting upgrade was \$147,303. With annual electrical energy savings of \$33,000, the lighting project will pay for itself in 4.46 years.

Funding

A federal grant program funded by the U.S. Department of Energy assisted LCC in funding the engineering analyses of the Arts & Sciences and Gannon Voc-Tech buildings. The engineering analyses identified the lighting upgrades as a method to cut energy costs and save LCC valuable operating dollars. Although this program is no longer available, the Michigan Department of Consumer & Industry Services, Energy Office (EO) has developed a low-cost financing program to allow all public schools in Michigan to obtain financing for energy improvements.

Feel free to contact us if you have any ideas for case studies or other questions :

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