

EECBG Case Study #4

Lighting Retrofit



southeast michigan regional
energy office



Commercial Lighting Retrofit



Municipality:	City of Lathrup Village, MI
Population:	4,064
Governance:	City Manager
Grant Allocation:	\$ 50,000

Lessons Learned

- Audits Provide a Roadmap for Retrofits
- Updated lighting can provide better lighting at a lower energy and maintenance costs

The Takeaway

Commercial lighting retrofits often provide a reliable energy and cost payback in buildings that have not been updated to newer technologies.

A professional lighting audit can help building owners understand the potential energy savings, lighting quality upgrades, and other options for improving their lighting systems including relamping, retrofits, delamping, and the use of sensors.

Scope of Work

Lathrup Village is completing a comprehensive lighting upgrade of the city hall, including:

- Retrofitting light fixtures from T12 to T8 fluorescents
- Delamping (reducing the number of lamps needed in a fixture)
- Replacing incandescent light bulbs with compact fluorescent light bulbs (CFL)
- Replacing existing exit signs with light emitting diode (LED) exit signs.
- Occupancy and Daylight sensors that automatically turn off lights in unused areas.

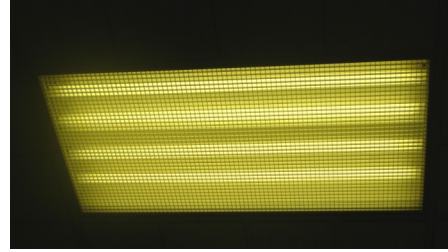


Existing lighting at Lathrup Village City Hall

Project Results

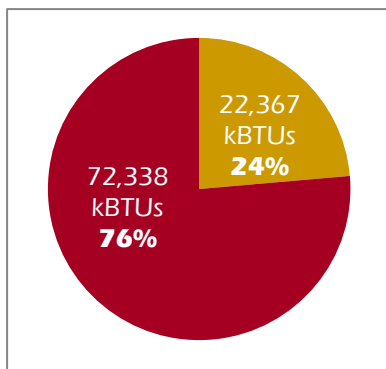
Expected results of the project include:

- Lower energy use from lighting
- Lower cost for lighting city hall (payback time about 6 years)
- Better lighting quality
- More productive working space
- Lower maintenance costs (fewer instances of need to change lamps)
- Improved citizen satisfaction



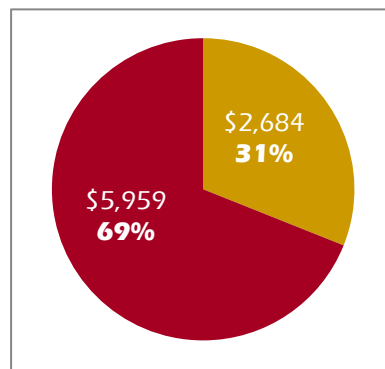
Outdated, inefficient T12 lighting at Lathrup Village City Hall

Estimated Annual Energy Savings



- Savings from Lighting
- Continued Energy Use

Estimated Annual Cost Savings



- Savings from Lighting
- Continued Energy Cost

Challenges Overcome

- Lack of capacity to apply for grants and to do grant paperwork
- Lack of knowledge on the measures to be pursued to get the most value.
- No in-house ability to assess energy needs

Further Resources

WARM Training Center
<http://www.warmtraining.org/>
Southeast Michigan Regional Energy Office
<http://www.regionalenergyoffice.org/>

Lighting.Com
<http://www.lighting.com/>
Illuminating Engineering Society
<http://www.iesna.org/>
Lighting Resource Center
<http://www.lrc.rpi.edu/programs/nlpip/index.asp>