

CASE STUDY: A LIGHTING AUDIT

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This case study is great because it points out how something as common as a simple electrical repair can turn into a significant cost saving and environmental benefit at the same time. David Phipps, golf course Superintendent at Stone Creek Golf Club, followed through on a suggestion from an electrician to have a lighting audit done by the local utility company. What he discovered is nothing short of a remarkable savings in energy costs for a very small investment. We have all heard of the benefits of turning off lights when not in use, but this case study shows how we can do so much more to save money and reduce our carbon footprint.

When was the last time you thought about a lighting audit or an energy audit for your facility? I have looked into our energy audit's recommendations that would lead to larger savings only to find that some of the prescribed actions were challenging. Some of the recommendations for larger savings were only possible in areas that would become dysfunctional.

While that may still be the case for some of the recommendations, like avoiding demand charges by only irrigating between 10 p.m. and 5 a.m., people have found ways to get around some of the inconveniences. Think about the possibility of using a single timer to control golf car charging to avoid the demand charges. You could always leave three to five cars off the timer for emergency charging during the day. What about the same thing for the electric vehicles in your maintenance facility? More and more electric vehicles and equipment are being used in golf maintenance and we should be proactive in planning for the battery charging process.

That's just one possibility. That's just one avenue for change. After all, David Phipps started with one broken light fixture and look where that journey took him.

As David Phipps observes, in today's economy, local businesses are doing everything they can to control overhead and use dollars wisely. Smart businesses

are finding that doing more with less helps them keep costs in check and maintain customers without sacrificing service. Stone Creek Golf Club has done exactly that with its upgrade to high performance lighting.

With help from Energy Trust of Oregon, Stone Creek learned that a lighting improvement program is an easy first step in saving energy to control costs and results can be seen quickly often with a

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Thankfully, lighting technologies have advanced over the last several years with new fixtures that improve light quality and light efficiency. Stone Creek found that its existing fixtures were inefficient, outdated, and consumed too much energy. They replaced the older lamps with high performance fixtures, which produce more light and better light - making it easier for employees to do their job - and use less energy and cost less to operate. Controls were added to fixtures in several buildings to ensure that lights were on only when needed and off when spaces were unoccupied, generating further savings. Read Dave's article for a thorough outline of all the work Stone Creek did to

improve the efficiency of the lighting throughout its golf course property.

In addition to saving money on utility bills, there are other compelling reasons to think about upgrading lighting right now. New federal standards have been enacted that will put an end to the manufacture of linear fluorescent lamps including T12 and first generation T8s (along with other linear fluorescent lamps) that do not meet specific lumens per watt requirements on

July 14, 2012. The newer technology creates better light with less heat, which also reduces air conditioning cooling loads to provide additional energy savings. This type of lighting requires little to no maintenance for up to 30,000 to 35,000 hours of operation. And T8 tubes last up to twice as long as T12s, reducing maintenance costs associated with bulb changes. The new standards will go a long way toward producing continued energy savings and help reduce controllable operating costs without compromising lighting quality.

Right now is timely for all businesses to consider the transition from T12 to T8 technology to take advantage of any local incentives or promotions - such as those offered here in Oregon by Energy Trust - and before any supply and demand issues hit the market.

Stone Creek's investment in high performance lighting is consistent with their track record of making improvements in operations that are good for the environment and good for the club. The club has done a remarkable job of implementing an environmental program that addresses wildlife and habitat management, and water conservation and water quality issues. Thanks to a willingness to look for creative solutions, they can now add energy efficiency to their list of accomplishments.

(Editor's Note: This "Green Links" case study was hosted by Roger Stewart, CGCS, TPC-Twin Cities. If you have similar success stories, please send them to Mark Johnson, GCSAA's senior manager of environmental programs at mjohnson@gcsaa.org.)