



## All important first impressions - Commercial lighting LED upgrades

January 27, 2014 - Green Buildings

First impressions stick and lighting can make a difference. Entering a building either with older lighting or with updated LED lighting will make a first impression that will characterize the building. A lobby with dated lighting - lamps that are out or don't match - a negative, while that same lobby with updated LED lighting - a positive. Because today's LED lighting options are ultra-energy efficient, positive first impressions can come with excellent paybacks.

Buildings with older lighting installations that include florescent T 12s are excellent upgrade candidates. However, it doesn't stop there. Because LED lighting options are ultra efficient, paybacks are "compelling" even when retrofitting recent lighting installations. And by "compelling" we're talking in terms of two year paybacks or less. Additionally, there are LED retro-fit financing programs available along with Con Ed and NYSERDA incentives. Bottom line - a LED retro-fit can be structured with no out of pocket dollars and a positive cash flow. The other good news - LED lamps look great.

A snapshot of the fluorescent landscape:

\* T 12s 48 Watts: Annual operating cost - 4,680 hours @ 16 cents = \$29.95 (no longer in production)

\* T 8s 32 Watts: Annual Operating cost - 4,680 hours @ 16 cents = \$24.69 (5,000 - 8,000 hour life span)

\* T 5s 54 Watts: Annual Operating Cost - 4,680 hours @ 16 cents = \$40.44 (5,000 - 8,000 hour life span)

\* LED 14 Watts: Annual Operating Cost - 4,680 hours @ 16 Cents = \$10.86 (70,000 hour life span)

This example is calculated on a 5 day week/18 hours per day. The LED calculations are based on the Phillips LED Instafit.

While LED lamps are more expensive than T 8 fluorescents (10 times more expensive to be exact), once the two-year break even is reached, the savings going forward is significant because of the ultra-low LED energy consumption and the long life of the lamps.

Another hidden advantage is electrical load reduction. Many buildings with newer tenancies are finding that new tenants require more electrical service than previous tenants. As a result, buildings often face an expensive problem - the need to increase overall building electrical service. LED retrofits provide a cost effective solution with their lower electrical loads. Lower lighting loads offset the higher load requirements of new tenancies and help avoid the significant costs associated with increasing overall building electrical service. Faster than the speed of light - LED to the rescue.

George Crawford is a principal at NYG Green Partners, New York, N.Y.