

OPPORTUNITY

How much energy is used for lighting in U.S. commercial buildings?

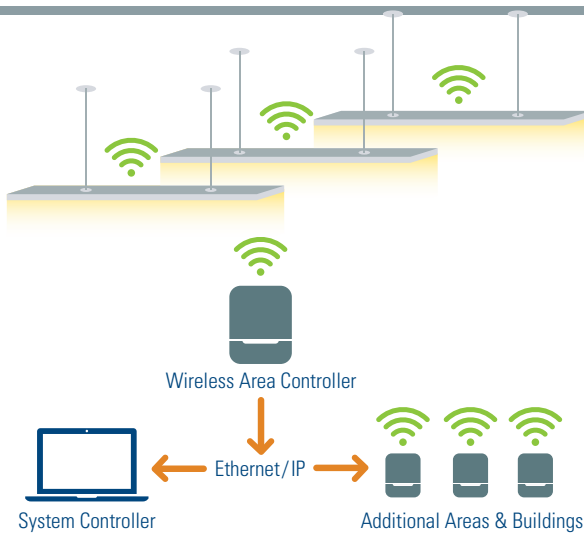
26%
OF ELECTRICITY
GOES TO LIGHTING¹

> 30%
DEMONSTRATED SAVINGS
WITH ADVANCED LIGHTING CONTROLS (ALC)²
Compared to national average EUI of 4.1 kWh/ft²/yr

ONLY 2% OF U.S. COMMERCIAL BUILDINGS IMPLEMENT ALC³

TECHNOLOGY

How do Wireless Advanced Lighting Controls work?



WIRELESS NETWORKING

ENABLES ALC FUNCTIONALITY WITHOUT THE EXPENSE OF INSTALLING DEDICATED CONTROL WIRING

M&V

Where did Measurement and Verification occur?

LAWRENCE BERKELEY NATIONAL LABORATORY assessed wireless advanced lighting controls with new fluorescent lamps and dimmable ballasts at the Moss Federal Building in Sacramento, California, and with LED fixtures at the Appraisers Building in San Francisco.

RESULTS

How did Wireless Advanced Lighting Controls perform in M&V?

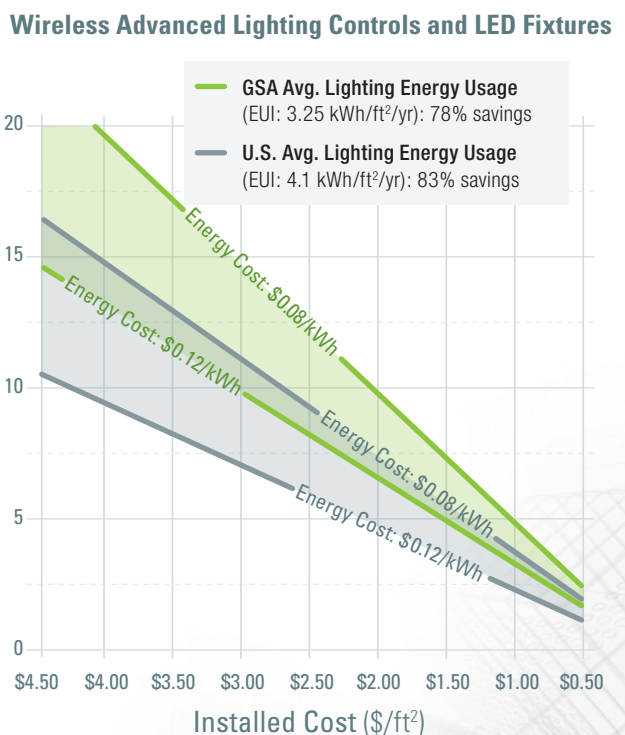
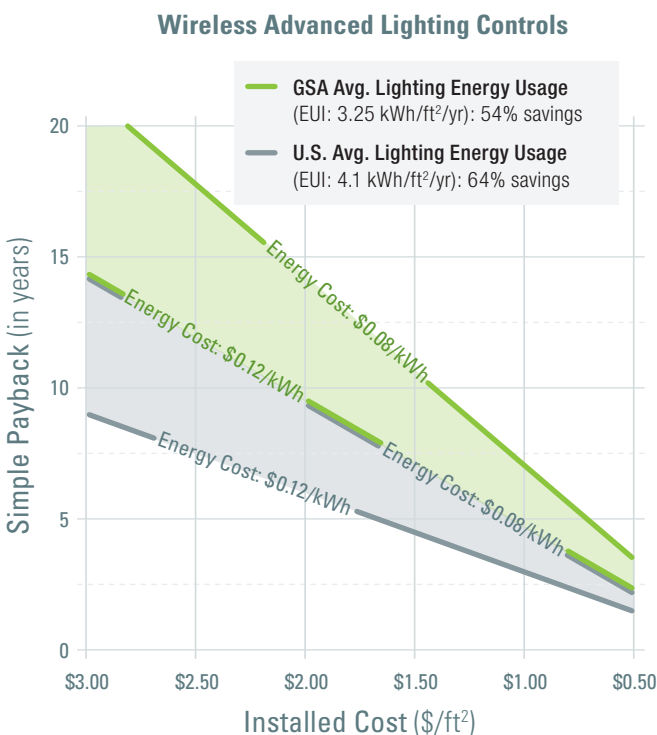
54%
SAVINGS
78% SAVINGS INCLUDING LED⁴
Normalized for GSA

INCREASED FLEXIBILITY
IN LIGHT LEVELS TO SUIT USER PREFERENCES⁵

3-6 yr INCREMENTAL PAYBACK
FOR RENOVATIONS⁶

Payback for Advanced Lighting Controls

Savings are heavily dependent on baseline conditions



DEPLOYMENT

Where does M&V recommend deploying Wireless Advanced Lighting Controls?

INTEGRATE WITH LED FOR RENOVATIONS

Also consider for retrofits, targeting facilities with minimal lighting controls, high lighting energy use (EUI > 3.25 kWh/ft²/yr) and utility rates > \$.10 kWh*

¹Wireless Advanced Lighting Controls Retrofit Demonstration. Francis Rubinstein (LBNL), April 2015, p.7 ²Ibid, p.23 ³Ibid, p.23
⁴Ibid, p.7,39 ⁵Ibid, p.7,39 ⁶Ibid, p.7,39 *Subject to evaluation and approval by GSA-IT and Security