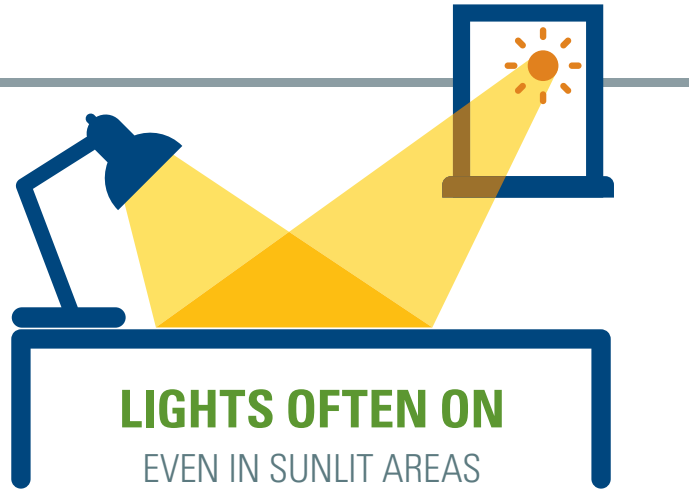


OPPORTUNITY

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

26%
OF
ELECTRICITY
GOES TO
LIGHTING¹



TECHNOLOGY

How do Integrated Daylighting Systems save energy?

**AVAILABLE
NATURAL LIGHT**
OFFSETS USE OF ELECTRIC LIGHT

EFFECTIVE WHERE PERIMETER DEPTH IS TWO TIMES THE MAXIMUM WINDOW HEIGHT

M&V

Where did Measurement and Verification occur?

LAWRENCE BERKELEY NATIONAL LABORATORY measured IDS performance at 5 federal buildings to evaluate incremental savings from daylight harvesting

RESULTS

How did Integrated Daylighting perform in M&V?

27%
AVERAGE
SAVINGS
0.84 KWH/FT²

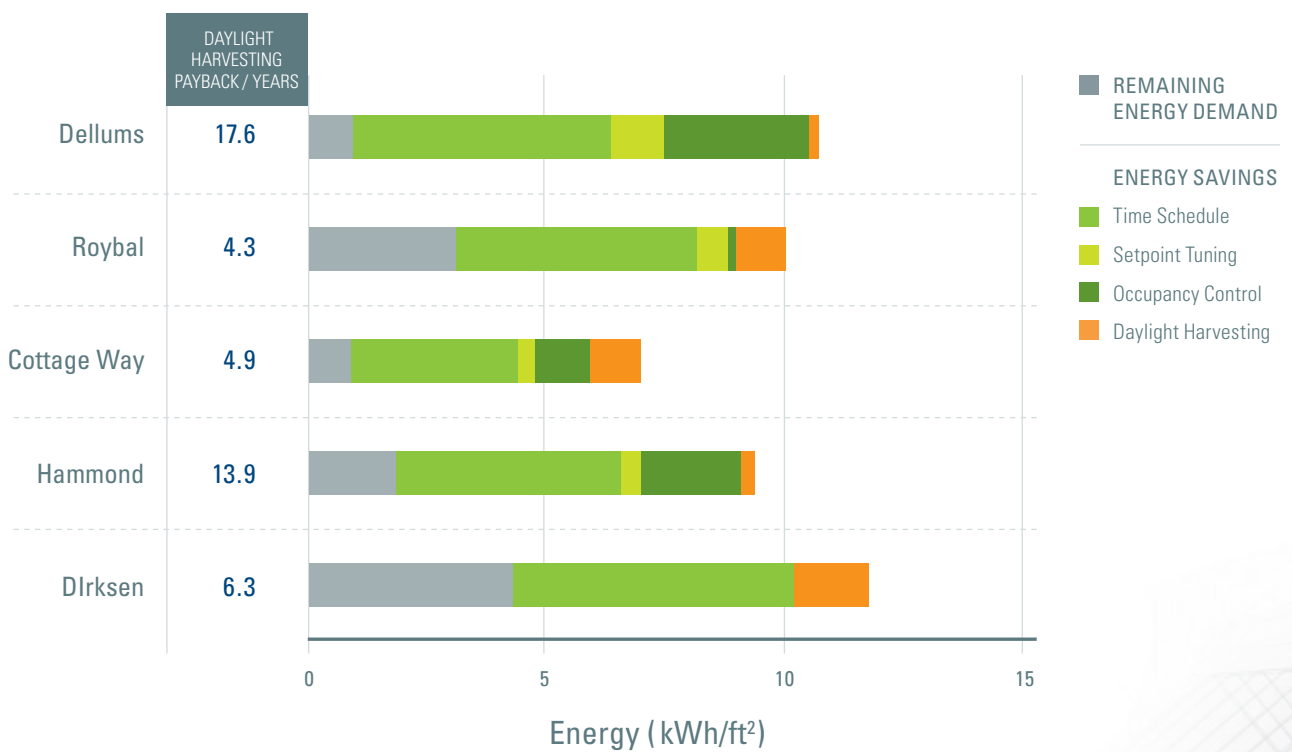
BEST PRACTICES

UNOBSTRUCTED SKY VIEWS, LIMITED SEASONAL VARIATION, WINDOW-TO-WALL RATIO 0.5, VISIBLE TRANSMITTANCE OF 60%³

**< 6
YEARS
PAYBACK**
WITH HIGH OCCUPANCY⁴

Lighting Energy Savings Control Strategies

Increased savings from Occupancy Control leaves little room for savings from Daylight Harvesting



DEPLOYMENT

Where does M&V recommend deploying Integrated Daylighting?

SITES WITH HIGH LIGHTING USE

New construction and retrofits with existing lighting power density greater than 1.1 W/ft² and energy use intensity greater than 3.3 kWh/ft²

Results are for florescent lamps, LED lamps have different performance characteristics

¹Integrated Daylighting Systems. Alastair Robinson, Claudine Custodio, Steven Selkowitz (LBNL), July 2014, p.13 ²Ibid, p.42

³Ibid, p.100 ⁴Ibid, p.7,39