

Build-out or tenant improvement offers great opportunities to improve the energy efficiency of your space. A few simple decisions can help to reduce your occupancy costs and ensure a healthy environment for your employees.

Consider This

Two tenants with similar operating characteristics lease 100,000 square feet of office space. Each organization employs 500 people and the office space will include the following:

Computers	Monitors	Printers	Copiers	Light Fixtures	Refrigerators	Thermostats
500	500	50	20	500 2-lamp T8 fixtures	3	10

Let's Get Down to the Numbers

At an estimated cost of \$30 per square foot, a tenant could be looking at approximately \$3,000,000 in upfront capital costs to build-out the new office space. Based on the office equipment, lighting, kitchen appliances, and HVAC system, the tenant can expect to pay an estimated \$192,960 in energy expenses annually. This equates to \$964,800 over the five-year lease term.

Now let's revisit our two tenants who are planning their office space build-outs. The table below displays the estimated cost and associated annual energy spend of the two office spaces.

Tenant	Estimated Cost of Build-Out	Estimated Annual Energy Spend	5 Year Lease Term + Energy Spend	5 Year Lease Term Savings
Tenant 1	\$3,000,000	\$192,960	\$3,964,800	\$0
Tenant 2	\$3,005,900	\$159,880	\$3,805,300	\$160,500

Here's the Difference

At the suggestion of its broker during lease negotiations, one tenant insists on implementing the following energy saving measures:

- ▶ Transition to a day-cleaning schedule to reduce the evening and weekend energy consumption
- ▶ Install LED troffer fixtures instead of fluorescent T8 lamps
- ▶ Select ENERGY STAR certified office equipment

Based on the ENERGY STAR equipment calculators, this build out will cost this tenant an estimated \$5,900** more than its counterpart. However, the ENERGY STAR certified equipment and high-performance lighting package will reduce energy use by 17% and save more than \$33,000 per year in energy costs. That is a simple payback of just over 2 months!

Energy Efficient Office Package Cost and Savings

Upgrade	Incremental Cost	Energy Savings (kWh)	Electricity Cost Savings	Percent Savings	Simple Payback	Lease Term Cost Savings
Daytime Cleaning	\$0	120,600	\$15,437	8%	Immediate	\$77,184
Programmable Thermostat	\$1,000	75,375	\$9,648	10% of HVAC Energy	2 months	\$48,240
LED Lights	\$4,900	32,505	\$4,161	22%	1.2 years	\$15,905
ENERGY STAR Computers	\$0	22,762	\$2,911	42%	Immediate	\$14,555
ENERGY STAR Monitors	\$0	3,823	\$489	15%	Immediate	\$2,445
ENERGY STAR Printers	\$0	2,346	\$300	26%	Immediate	\$1,500
ENERGY STAR Copiers	\$0	939	\$120	26%	Immediate	\$600
ENERGY STAR Refrigerators	\$0	105	\$13	10%	Immediate	\$67
Total:	\$5,900	258,455	\$33,079	17%	2 months	\$160,496

The Bottom Line

Over the five-year term of the lease, the energy efficient office package saves the tenant almost \$160,500 - lowering operating costs by more than \$0.33 per square foot per year!

Improving building energy performance doesn't have to be limited to base building systems and common areas. As a tenant, you are able to make simple, cost effective upgrades to improve the energy efficiency of the space you occupy and capitalize on high return on investment opportunities to save energy and reduce operating expenses. These upgrades not only save money annually on utility bills, they also position your organization as a leader in energy efficiency.

For more information on how you can achieve these savings in your space, contact your property manager or leasing agent. If you are interested in additional guidance, resources, or potential recognition for your green leasing efforts, visit www.GreenLeaseLeaders.com today!

**Calculations are based off of ENERGY STAR [Equipment upgrade calculators](#) and use the national average electricity cost of \$0.128/kWh. Lighting calculations assume a typical build-out with 32-watt T8 lighting with no controls and 9.5 operating hours per day. The energy efficient build-out accounts for the incremental cost of installing 15-watt LED troffer lighting and 9.5 operating hours per day instead of installing T8 fixtures. If T8 fixtures are already in place and the local utility offers rebates or incentives, tenants should consider replacing 32-watt T8 lighting with Tube LEDs (TLEDs) or an LED retrofit kit. Energy expenses were developed using the national average EUI for office buildings and 9.5 operating hours per day. All office equipment prior to the upgrade is assumed to be non-ENERGY STAR certified.