

Exploring Lighting

to Achieve Business Outcomes



Unlike a typical lighting contractor, Trane enhances project outcomes by helping to deliver comprehensive, holistic solutions that seamlessly integrate with lighting systems. Our consultative approach provides cross-functional, end-to-end building expertise, transforming the way you engage with energy.

Why is lighting critical for energy efficiency?

Rising electricity costs and aging infrastructure are driving businesses to focus on energy efficiency. Regulations like the Energy Independence and Security Act ([EISA](#)) aim to reduce energy use by limiting fluorescent lighting, with some states already banning this technology. Upgrading to energy-efficient LED lighting helps businesses comply with regulations and save on long-term energy costs. Transitioning to LED lighting is a smart move for energy savings.

Financial Benefits of upgrading your lighting solutions



SIGNIFICANT ENERGY SAVINGS

LEDs use up to 50% less energy than fluorescent lights while maintaining the same brightness, leading to lower utility bills and substantial long-term savings. Transitioning to LEDs can provide **3-8% of total building energy savings** ([MECS, 2018](#)).



LONGER LIFESPAN & REDUCED MAINTENANCE COSTS

LEDs last up to 50,000 hours, far surpassing the 10,000 to 15,000 hours of fluorescent lamps. This reduces replacement frequency and maintenance costs, allowing savings to be reinvested in other energy-saving projects like building **decarbonization** ([DOE](#)).



INCENTIVES & REBATES

There are various tax and utility incentives that support energy efficient lighting upgrades in existing buildings across North America ([ENERGY STAR](#)). Trane helps businesses leverage financial incentives to offset the initial infrastructure investment. For more detailed information, you can visit the [ENERGY STAR website](#) or ask your Trane representative and/or tax advisor.



RETURN ON INVESTMENT (ROI)

Investing in LED technology provides immediate and ongoing ROI through reduced operating costs, fewer replacements, and potential incentives. By 2027, widespread LED use in the U.S. could **save electricity equivalent to the annual output of 44 large power plants and over \$30 billion** ([ENERGY STAR](#)).

Sustainability Benefits of upgrading your lighting solutions



LOWER CARBON FOOTPRINT

LEDs help contribute to a reduced carbon footprint by consuming less energy, reducing Scope 2 emissions. The energy savings from switching to LEDs directly translate into fewer greenhouse gas emissions, helping businesses meet their sustainability goals, and comply with regulations.



REDUCED RISK OF ENVIRONMENTAL CONTAMINATION

LEDs do not contain mercury, unlike fluorescent lights. This makes LEDs easier to handle and dispose of, thereby reducing the risk of environmental contamination. Additionally, many components of **LED lighting can be recycled, contributing to a more sustainable and circular economy (NRDC).**



ENHANCED DURABILITY

LEDs are more durable and resistant to shocks, vibrations, and extreme temperatures. Their robust construction ensures longer-term sustainability and helps reduce waste due to fewer replacements.



LOWER HEAT EMISSION

LEDs emit less heat than fluorescent lights, reducing the load on air conditioning systems. This helps lead to additional energy savings and enhances building sustainability.



Trane's commitment to comprehensive lighting solutions.



Smart Lighting Integration

Integrating lighting with building infrastructure improves maintenance and reduces downtime using real-time data and predictive analytics. Trane's LED solutions integrate with Building Automation Systems like Tracer® SC+ or Ensemble®, centralizing systems to achieve up to 35% energy savings and significant efficiencies (DLC, 2023).



Design Flexibility & Aesthetics

Trane's LED solutions are aesthetically flexible, offering various color temperatures, sizes, and designs to enhance your space's architectural appeal. Our solutions modernize your building's look, improve the indoor environment, and increase workforce comfort.



Occupant Well-Being

LEDs reduce flicker, minimizing eye strain, and improving workplace light quality. This enhances indoor environmental quality (IEQ), boosting productivity and employee well-being, and supports broader ESG goals (Vetter, 2019).



Delivering Consistent Excellence Across North America

Trane ensures consistent project results and customer experiences across North America through advanced technology, rigorous quality control, and a network of skilled professionals, delivering the same high level of service and product quality everywhere.

Because today's solutions are built for expandability, you can take a phased approach to any improvements you make to your lighting systems.

Basic TLED Light Solutions	Fluorescent Troffer Retrofit Kit	Flat Panels & Architectural Luminaires
<p>Better Light Quality Higher Color Rendering Index (CRI) values provide more accurate and natural color rendering.</p>	<p>Improved Light Quality Higher CRI values and more consistent, uniform lighting.</p>	<p>Superior Light Quality Excellent CRI values and uniform light distribution, reducing glare and shadows.</p>
<p>Durability More robust and resistant to shock and vibration than fluorescent tubes.</p>	<p>Compatibility Designed to be compatible with existing fluorescent troffer fixtures, simplifying the upgrade process.</p>	<p>Energy Efficiency Highly energy-efficient, often more so than TLEDs and retrofit kits.</p>
<p>Compatibility Fit into existing fluorescent fixtures, making retrofitting easier.</p>	<p>Dimmability & Control Many retrofit kits offer dimmable options and integrate with advanced lighting controls. Optional integrated wired or wireless sensor options with BACnet compatibility.</p>	<p>Aesthetics & Versatility Sleek, modern designs enhance architectural appeal and are available in various sizes, shapes, and styles to fit different needs.</p>
<p>Dimmability Some TLEDs offer 0-10v dimming for greater control over lighting levels.</p>	<p>Enhanced Aesthetics Modernize the appearance of existing fixtures.</p>	<p>Advanced Controls Often come with advanced dimming and control options, including integration with smart building systems. Optional integrated wired or wireless sensor options with BACnet compatibility.</p>
	<p>Improved Reliability Better thermal heatsinking than TLEDs alone.</p>	<p>Customizability Can be tailored to specific design and lighting requirements.</p>

Fund your lighting upgrade with Trane.

As a single-source collaborator, Trane can help you navigate funding, financing, and contracting to help you achieve infrastructure and carbon reduction goals. We support various options to make lighting upgrades more accessible, including:



GRANTS & UTILITY REBATES

Maximize financial support through government programs and utility incentives.



CUSTOMIZED FINANCING & CONTRACTING

Options include Energy Savings Performance Contracting, Cooperative and Group Purchasing, PACE loans, and other financing mechanisms.

We pride ourselves on meeting our customers at any stage of their lighting journey, identifying goals and designing future-ready solutions for today's needs and tomorrow's success. Our team can help you plan and implement a phased lighting upgrade that fits your budget and sustainability goals.



Visit [Trane.com/lighting](https://trane.com/lighting) or reach out to your local Trane expert.

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