



New Efficiency Options - NEO

Recent advances in lighting technology could reduce your lighting costs by 15-35% annually.



NEO LIGHTING TECH SUMMARY

New Efficiency Options (NEO) promote state-of-the-art lighting technology that can reduce energy demand and cut energy costs significantly enough to generate a short payback period. These improved technologies offer the same or better quality lighting, so customers achieve savings without compromise. NEO provides design assistance and incentives for the following technologies:

- High lumen, extended life T8 lamps and extra efficient electronic ballasts
- Suspended direct/indirect fixtures
- Electronically ballasted metal halides
- Ceramic metal halide fixtures
- Innovative LED lighting

NEO incentives offset the higher upfront costs of these technologies. Customers who choose NEO-eligible products also receive technical assistance that enhances their ability to increase energy efficiency while improving lighting conditions.*

NEO ELIGIBLE TECHNOLOGY

High lumen, extended life T8 lamps and extra efficient ballasts that improve color quality and energy efficiency

Many buildings have already switched from T12 lamps to basic grade T8 lamps for energy savings. However, switching from basic grade T8s with generic electronic ballasts to high lumen, extended life T8s and extra-efficient electronic ballasts can provide significant savings and financial return. These benefits can be as substantial as those achieved when switching from T12s and magnetic ballasts to basic grade T8s and generic electronic ballasts.

The latest T8 lamp technologies provide:

- Greater energy efficiency (similar light output with less energy)
- Better color rendering (CRI >80)
- Longer life compared to basic grade 700 series T8 lamps

To gain the full benefit of the advancements in the T8 fluorescent technology, the use of readily available retrofit kits may be necessary in order to optimize the lamp configuration in each fixture. Extended life T8 lamps and extra efficient ballasts are appropriate for any application where older fluorescent lamps are already used.

Suspended direct/indirect fixtures enhance office environments while using less energy

Suspended direct/indirect fixtures are pendant mounted fixtures that hang in the space that they are intended to light. Unlike recessed troffers that are mounted flush with the surrounding ceiling tiles, suspended indirect fixtures can provide both up light and down light. This creates a more pleasant working environment as light is more evenly distributed in the space. Advantages of suspended indirect fixtures include:

- Lower energy use per lighted square foot
- Better overall quality of light
- Mood enhancement
- Improved productivity

Suspended direct/indirect fixtures are most often utilized in office applications or institutional settings such as schools.



New Efficiency Options-NEO

Pulse-start metal halide lamps with electronic ballasts that offer energy savings and more control

When coupled with electronic ballasts, metal halide lamps offer 20% to 30% more efficient operation, 50% longer service life of lamps, and silent, flicker free operation. Pulse-start metal halide lamps:

- Produce higher light output for a given wattage
- Produce a whiter light
- Enjoy higher lumen maintenance compared to standard probe start metal halide lamps
- Are more energy-efficient and re-strike faster after an outage

Other benefits of electronically ballasted metal halide lamps include over-voltage protection, automatic switch-off of faulty or end-of-life lamps, a reduction in weight and cooler operation. Additionally, many electronic ballasts offer smooth and silent dimming. Electronically ballasted metal halide lamps are generally used in high bay applications such as warehouses and big box retail stores.

Ceramic Metal Halide fixtures that allow for efficiency in accent lighting

Ceramic Metal Halide (CMH) fixtures were introduced to provide a high quality, energy efficient, alternative to incandescent and halogen light sources. CMH lamps represent an attractive alternative to the Halogen Infrared (HIR) Parabolic Aluminized Reflector (PAR) lamps commonly used for accent lighting applications because they have a much longer life and use far less energy. CMH systems use less than half the energy of HIR PAR lamps to produce a similar light output.

In addition to energy savings:

- CMH lamps last three to four times as long as HIR PAR lamps
- CMH lamps offer high CRI (Color Rendering Index) values in the 80-90 range and color temperatures of 3000K or 4100K
- CMH lamps are guaranteed not to color shift more than +/- 200K over the rated lamp life

Ceramic metal halides are most commonly used in upscale retail applications where halogens or another type of PAR lamp is already being used.

Innovative LED lighting that reduces costs, lasts longer and gives better quality light

Recent technology improvements to Light Emitting Diodes (LEDs) have helped make LED lighting a cost effective option in specific applications. LEDs offer a high quality, efficient alternative to the use of fluorescents in refrigerator display case lighting, and are also a great substitute for neon in large commercial channel signs. The use of white LEDs in refrigerator case lighting is:

- Generally preferred by customers
- Improves light distribution
- Reduces maintenance costs over time because LEDs last longer as compared to fluorescent lamps

LEDs offer an advantage over fluorescent lighting in freezer applications both in terms of reduced energy consumption and quality of light. LED case lighting is utilized in supermarkets and other retail settings with refrigerator case lighting.

Getting Started

For more information on NEO and program eligibility, please call **1-866-348-2399**, send an email to the NEO project manager at neo-lighting@pge.com, or go to www.pge.com/NEO.

