



# ADG Eco & Energy Advisement Group

U.S. DEPARTMENT OF  
**ENERGY**

Energy Efficiency &  
Renewable Energy

## Building Technologies Program

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Architectural Detail Group, Inc  
*a collaborative group enhancing*  
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## U.S. Department of Energy – Energy Efficiency and Renewable Energy

### Building Technologies Program

#### Implementing Spectrally Enhanced Lighting Solutions

Pre-retrofit lamps (the left bank of lights in the photo) have a correlated color temperature (CCT) of 3500 kelvin (K) and color rendering index (CRI) of 75. The spectrally enhanced lighting (the right bank of lights in the photo) has a CCT of 5000K and CRI of 82. The higher brightness of these lamps offsets the reduced lumen output. As a result, the lighting appears the same or brighter, using less energy.

On this page, you will learn more about specific lighting solutions and find links to additional information regarding the design method for [spectrally enhanced lighting](#) (SEL) and the resulting energy savings.

SEL is market-ready, simple to implement, and can currently be employed in buildings as a cost effective way to get quick energy savings. It is non-proprietary, requires no fancy controls or gadgets, and the energy savings are significant. In addition, SEL is low risk. There are no known negatives to installing this type of lighting in commercial buildings.

Appropriate lamps are available through many major lamp manufacturers and are generally no more expensive than traditional lamps. The predominant light source used in commercial applications is fluorescent lighting; the lamps and ballasts used dictate the



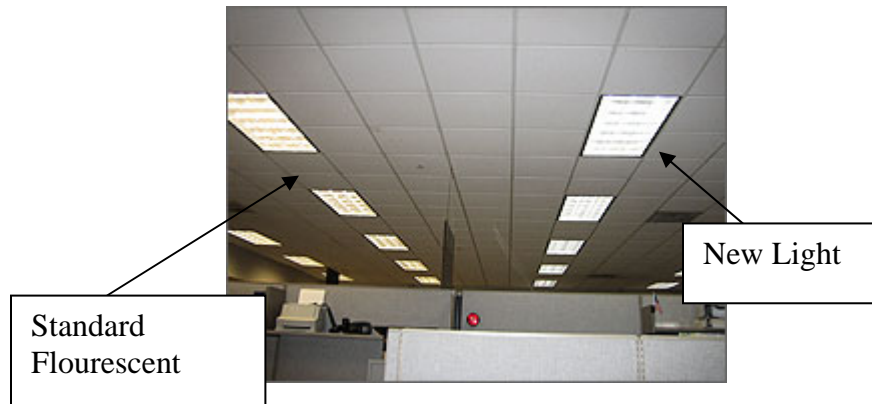
ASK ABOUT  
ENERGY STAR

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A number of forward-thinking companies have adopted SEL strategies as standard for all new construction and retrofits, including:

- Pacific Gas & Electric Company
- San Diego Unified School District
- Cities of San Diego and Oakland
- Counties of Napa and San Mateo
- Port Hueneme Military Base

efficiency of fluorescent lighting systems. Using higher color temperature fluorescent lighting and new high-efficiency ballasts can achieve energy savings of 20-40% compared to traditional fluorescent lighting systems, according to results of the DOE study, Spectrally Enhanced Lighting Program Implementation for Energy Savings, Field Evaluation (August 2006) ([PDF 4.1 MB](#)). These savings can be achieved by simple lamp/ballast retrofits..



[http://www1.eere.energy.gov/buildings/sel\\_implementing\\_solutions.html](http://www1.eere.energy.gov/buildings/sel_implementing_solutions.html)

[Building Technologies Program Home](#) | [EERE Home](#) | [U.S. Department of Energy](#) | [USA.gov](#)

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Discover more about the design method for SEL and how much you can save by viewing the following:

[Design Method](#)

[Potential Energy Savings](#) < See our report on [Induction](#) vs.LED

[Potential Payback](#)

### ADG Eco Lighting Products' Authorized Resellers

have a complete line of Induction Products and other

**Sustainable lighting that will accommodate a strong payback.**

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