

# DELTA *Snapshots*

Issue 8 *Exit Signs*

There are over 100 million exit signs installed in buildings in the United States operating 24 hours per day, 365 days per year. According to the U.S. Environmental Protection Agency (EPA), the total annual energy cost for exit signs using 20- to 40-W incandescent lamps is approximately \$1 billion nationwide. Frequent lamp replacement requirements add expense and increase the potential for exit sign failure.

ENERGY STAR®-labeled exit signs are required to operate on 5 W or less per face, and must meet important visibility requirements, including letter size and spacing and luminance contrast.

## *Application Profiles*

As part of the U.S. Postal Service's national effort to save energy, the main branch of the U.S. Post Office in Eugene, Oregon was retrofitted with ENERGY STAR-labeled exit signs.

Existing signs with incandescent and fluorescent lamps were replaced with lower-wattage signs illuminated by red light emitting diodes (LEDs). National procurement of exit signs for U.S. post offices began in 1997; 30,000 signs were installed by mid-1999.

Some building managers and code officials prefer to use green exit signs rather than red. Either color is permitted by the National Fire Protection Association (NFPA) Life Safety Code 101. The photo on the reverse side shows an installation of two green ENERGY STAR-labeled exit signs. The sign in the foreground is one-sided; the sign in the background is two-sided.



*U.S. Post Office, Eugene, Oregon*

## *Objectives*

Use ENERGY STAR-labeled exit signs in order to:

- Reduce electrical load
- Reduce demand for electricity, thus reducing emissions of carbon dioxide, sulfur dioxide, and nitrogen oxides into the atmosphere
- Reduce relamping maintenance costs
- Provide good visibility of signs
- Comply with fire safety and building codes

What is the ENERGY STAR program? The U.S. Environmental Protection Agency and the U.S. Department of Energy have initiated a program to encourage the use of energy-efficient appliances and lighting products. Exit sign manufacturers with products that meet the ENERGY STAR performance criteria can label these products as ENERGY STAR exit signs. See the ENERGY STAR web page for more information.  
[www.energystar.gov](http://www.energystar.gov)

*Green exit signs,  
Lighting Research Center,  
Watervliet, NY*



## **Energy and Maintenance**

The red sign (shown on previous page) contains a row of red LEDs mounted along one side of the interior of the box. According to the manufacturer's data, this sign requires 2 W. For the green signs, a row of green LEDs is mounted along the bottom of both the single- and double- faced signs shown above; the manufacturer's data lists power for the green signs at 1.5 W each. Since LED life is estimated to be much longer than incandescent and fluorescent light sources, the manufacturers of these exit signs warranty their products for 5 years. Long LED life would also keep relamping costs low. (For more information, see "Savings Calculator" at the ENERGY STAR website, [www.energystar.gov](http://www.energystar.gov))

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**Red LED Exit Sign: U.S. Post Office, Eugene, OR**  
**Green LED Exit Signs: Lighting Research Center, Watervliet, NY**  
**Sponsor: U.S. Environmental Protection Agency**

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