



Illuminating the Neighborhood: Parklawn Housing Features ENERGY STAR®

ENERGY STAR®
Residential
Light Fixture
Showcase

by Ian L. Todreas, The Cadmus Group, Inc.

Milwaukee, WI—Covering nine square blocks in Milwaukee's urban center and home to 380 moderate- and low-income families, the Parklawn Housing Development is emerging as a super energy-efficient model for similar developments nationwide.



In 1999, the Housing Authority of the City of Milwaukee (HACM) began renovating Parklawn with a HOPE VI grant from the United States Department of Housing and Urban Development (HUD).

Because of its immediate impact on safety, cleanliness, and energy costs, refurbishing the lighting in and around the residential units was one of HACM's top priorities.

Before the renovations, light levels were low; fixtures were not centrally located; fixture shades were fragile; and the light bulbs were inefficient incandescents or flickering fluorescents. In living rooms, for example, residents were provided only one fixture on an inside wall, which in some units emitted only 10 to 20-foot candles of light (the Illuminating Engineering Society of North America [IESNA] recommends 30 to 50-foot candles for casual reading). In the laundry rooms, which were lit by 60-watt incandescent fixtures, light levels were 5 to 16-foot candles, significantly lower than the IESNA-recommended level.

The poor lighting forced residents to improvise in ways that were not always safe or cost effective. For example, they supplemented existing lighting with halogen torchieres and ran extension cords from room to room. The hot-burning halogen torchieres, in particular, posed a fire hazard. Inefficient halogen and

incandescent bulbs also drove up the Authority's electric bill.

HACM's lighting strategy was designed to give residents state-of-the-art lighting that would not only solve these problems, but also cut energy costs for the Authority and, ultimately, for the residents. The key to HACM's success was ENERGY STAR® residential light fixtures.

High Standards for Fixtures

HACM's energy team wanted fixtures that were attractive, energy efficient, affordable, yet durable. Team members subjected samples to a battery of tests, including kicking samples around the office (literally) to test their durability. They also mounted fixtures in model units to gauge the quality and amount of light they produced under actual conditions, where daylight, wall color, floor coverings, and furnishings affect how light fixtures illuminate a room.



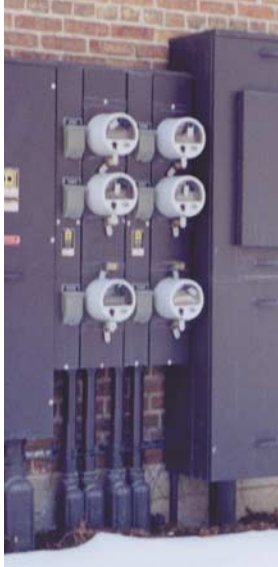
Manufactured by Teron Lighting, Inc., this ENERGY STAR labeled bedroom ceiling fixture contains a General Electric 2D CFL. The same bulb fits into the hallway and living room fixtures, greatly simplifying procurement, installation, and stocking.

Ultimately, HACM selected ENERGY STAR residential light fixtures. HACM replaced incandescent fixtures throughout the units with ENERGY STAR labeled fixtures, which deliver much more light using less wattage. A high-output compact fluorescent lamp (CFL) radiates the same amount of light as a 150-watt incandescent bulb, while consuming only 32 watts. As with all ENERGY STAR labeled fixtures, the CFLs are guaranteed to last 6,000 hours, but should last about 10,000 hours (or 10 years) in average household use.



Illuminating the Neighborhood:

(Continued)



Residents pay their own electric bills, which makes energy efficient technologies, such as the ENERGY STAR residential light fixtures, even more attractive.

Parklawn maintenance personnel have been impressed with ENERGY STAR labeled fixtures. Out of over a thousand fixtures installed, only one lamp failed and needed to be replaced.

HACM also repositioned many fixtures in the units to increase light levels. Simply moving fixtures to the center of a room vastly improved the amount of light and how it was distributed.

Simplifying Operations and Maintenance

By installing fixtures that use one type of CFL, HACM saves money by purchasing in bulk and stocking only one style. Maintenance is greatly simplified and reduced, and the pin-based lamp won't fit fixtures that do not bear the ENERGY STAR label, so they are less likely to be stolen. When a bulb burns out, residents simply pop it out and replace it.

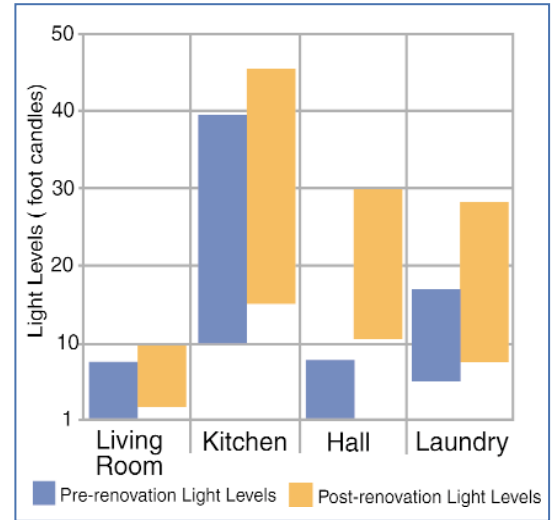
Although the workings of the fixtures are identical, HACM selected different fixture shades to create appropriate atmospheres in different rooms. For example, the bedroom ceiling fixture covers are frosted, crystal-cut hemispheres, more elegant than the clear version in the hallways. The laundry room's white globe diffuses light to every corner of the room and onto all surfaces—essential for inspecting clothes before and after washing and drying.

An important part of the Parklawn restoration project was installing electric meters at each unit and transferring responsibility for paying the electric bill to residents. With this new system, the energy efficiency aspect of the fixtures is even more important.

The Results Are In

The ENERGY STAR labeled fixtures have been welcomed warmly in their new homes. They have substantially increased light levels throughout the units (see chart). Residents are thrilled to have the brighter lights, which make cooking, cleaning, reading—virtually every daily household activity—much easier.

HACM is going beyond lighting improvements to make Parklawn a showcase of energy-efficient building design. ENERGY STAR labeled refrigerators will be installed in the renovated units. These refrigerators use 30-percent less



electricity than standard models and 39 percent less than the models previously used by HACM. The 20 single-family homes to be built on the site of the old apartment buildings will bear the ENERGY STAR label. The houses will exceed state and national building standards for insulation, well-sealed duct systems, high-efficiency heating and air conditioning, and energy efficient windows.

For More Information

If you would like to know more about ENERGY STAR residential light fixtures, call the toll free hotline at 1-888-STAR-YES (1-888-782-7937); visit www.energystar.gov, or contact:

Ian L. Todreas
ENERGY STAR Residential Light Fixtures
The Cadmus Group, Inc.
135 Beaver Street
Waltham, MA 02452
(781) 434-2500
itodreas@cadmusgroup.com

For more information about Parklawn Housing Development, contact: Steve Falek, Housing Authority of the City of Milwaukee, (414) 286-5681.

For more information concerning energy strategies being utilized by HACM, contact: Glen Radford, (414) 286-8230.