

## **EmPOWER Maryland by Building and Rehabilitating Energy Efficient Affordable Housing**

The Maryland Energy Administration (MEA) and the Department of Housing and Community Development (DHCD) are working together to create the Maryland Energy Efficient Affordable Housing Development (MEAD) Grant Pilot Program. As part of the program, MEA has given a grant of \$250,000 to DHCD to provide smaller grants to participating members of its network of builders and contractors to enable them to build and remodel 75-100 Maryland homes so that they are 15-25 percent more energy efficient than an equivalent, standard house. New homes will meet the ENERGY STAR Qualified New Home specifications while existing homes will meet an efficiency standard developed by a newly created MEAD Committee on a project-specific basis.

Families with low incomes spend a significant portion of their monthly earnings on utility bills. The Maryland Department of Housing and Community Development (DHCD) has several programs available to enable low-income families to purchase affordable homes, however, once in these homes these families can rarely afford their high energy bills. The MEAD Grant will seek to lower the monthly energy bills of low-income families living in higher-performance homes so they can afford not just to buy, but to live in their home.

### **Facts:**

- A typical Maryland home uses approximately 14,000 kWh and 1000 therms of natural gas annually which equates to almost \$3,000 in energy costs. By making homes more energy efficient and reducing families' energy consumption by 15-25 percent, Maryland families can save \$450 to \$750 a year. For low income families, this can make a big difference!
- Improved homes will reduce CO<sub>2</sub> by 4,700 to 8,000 lbs per year per house. This is equivalent to taking ½ to ¾ of a car off the road for every improved home every year.

### **Success Stories:**

- A similar energy efficient affordable housing grant program in Illinois has produced savings to families in existing homes of \$525 a year and savings of \$345 to families in new homes.
- MEA sponsored a project to help Struever Bros. Eccles & Rouse build three new, energy efficient, affordable townhomes in the Middle River area of Baltimore County. The new townhomes are projected to save \$533 annually in energy costs due to energy efficiency upgrades.

## **EmPOWER Maryland by Improving the Energy Efficiency of Existing Homes**

To EmPOWER Maryland Homeowners, the Maryland Energy Administration will sponsor Maryland's Home Performance with ENERGY STAR Pilot Program. The program offers a comprehensive, whole-house approach to improving energy efficiency and comfort at home,

while helping to protect the environment. It is designed after U.S. EPA and U.S. DOE's national Home Performance with ENERGY STAR program. While the program is starting as a pilot in Montgomery and Prince George's Counties, it has plans to expand state wide.

MEA will train remodelers and other contractors to evaluate homes using state-of-the-art equipment and recommend comprehensive improvements that will yield the highest energy savings at the lowest cost. The homeowners will be presented with the results of the audit and may then pick and choose which measures they would like the contractor to perform. A vigorous quality assurance program will ensure that participating contractors maintain high standards for quality.

**Common energy upgrades include:**

- Sealing air leaks in the walls, attic and ducts
- Adding insulation
- Upgrading to energy efficient heating and cooling equipment
- Upgrading to ENERGY STAR lighting and appliances

**Benefits:**

- Homeowners in New York who got a home performance retrofit averaged a 20 percent reduction in energy bills.
- With 20 percent savings, Maryland homeowners would save \$600 a year (at current electric and natural gas prices).
- 6,350 lbs of CO<sub>2</sub> would be saved per home, the equivalent of taking ½ a car off the road every year.

**EmPOWER Maryland by Promoting Energy Efficient Lighting**

**Save Energy - Join the Change a Light, Change the World Campaign**

Governor O'Malley will kick off an effort on October 3, 2007 to lead Maryland colleges, schools, businesses, state agencies, and utilities to promote the Change a Light, Change the World Campaign. The Maryland Energy Administration will coordinate the effort to encourage the use of energy efficient lighting to reduce monthly energy costs to Maryland citizens. The program will be based on the U.S. DOE/EPA-sponsored ENERGY STAR Change a Light, Change the World Campaign which encourages consumers to change at least one incandescent light bulb to a compact fluorescent light bulb (CFL). The Maryland campaign will encourage citizens to go beyond that goal and change four light bulbs.

If every Maryland home changed four incandescent light bulbs to energy efficient light bulbs, residential electricity consumption would decrease by two percent and equate to savings of \$81 million.

**Lighting Fun Facts**

- Switching to CFLs not only reduces the amount of energy consumed to light a home, but also reduces the amount of energy used to cool it because of the much lower temperatures the CFL reaches.
- CFLs use 25 to 33 percent of the energy of a typical incandescent light bulb.

- If all the households in Maryland changed just one light bulb to a CFL,
  - It would save enough energy to light all the homes in Annapolis for 1,210 days or over three years!
  - It would reduce household electrical bills by \$8.9 million a year.
  - It would be like removing 15,000 cars from the road, or a line of cars end-to-end stretching from Baltimore to Washington, DC.

### **Interesting Background Info**

An incandescent light bulb contains a tungsten filament that literally burns at around 4000°F and can make the exterior of the bulb reach upwards of 300°F. Ninety percent of the energy the light bulb is consuming (usually between 60 – 100 watts) is used to heat the filament to such a high temperature. Only 10 percent of the energy is used to generate light. However, if you switch the incandescent to a new compact fluorescent light bulb (CFL), it will only consume between 13 – 20 watts and reaches just 105°F. Reducing the energy used for lighting and cooling your home or business will save you money on your utility bill.

### **EmPOWER Maryland by Lightening Low-Income Citizens' Electricity Bills**

The Maryland Energy Administration (MEA) will give 100,000 compact fluorescent light bulbs (CFLs) to the Department of Human Resources and its Office of Home Energy Programs. Local DHR Social Service Offices will distribute the CFLs to low-income families signing up for benefits throughout the state.

MEA will also provide eight CFLs to the Department of Housing and Community Development Weatherization Program for installation in each of the 1,300 homes in the program throughout the state. This effort would save each weatherization program homeowner almost \$60 per year.

### **Lighting Fun Facts**

- CFLs use 66 to 75 percent less energy than a typical incandescent light bulb.
- A typical Maryland home spends \$250 or 11 percent of their energy bill on lighting in one year. By replacing 25 percent of the lights in high-use areas with compact fluorescent light bulbs, a homeowner can save about \$125 or 50 percent on their annual, lighting energy costs.
- Using one CFL instead of an incandescent four hours a day can save \$15 a year. If all the households in Maryland changed just four high-use incandescent bulbs to CFLs, residential electricity consumption in Maryland would decrease by 2% and equate to savings of \$81,000,000 a year.

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