

## Chicago Green Bungalow Initiative

*Chicago, Illinois*

### Estimated Annual Savings

- 56 tons CO<sub>2</sub>
- 37,000 kWh and 4,300 therms of natural gas
- \$900 per home



The Chicago Green Bungalow Initiative was a pilot program sponsored by the City of Chicago to determine whether green building principles could be applied affordably to existing homes. Furthermore, the initiative sought to provide current home owners and design professionals with ideas on how homes can be modernized in a sustainable fashion while remaining true to the original spirit of a home's design.

In order to achieve the above goals, a project architect was hired and a "Green Team" was assembled to renovate four Chicago bungalow-style homes and determine if the benefits of green building, such as improved indoor air quality, energy efficiency, and resource conservation, could be achieved while maintaining this distinctive bungalow style. Toward this end, the builders utilized environmentally preferable products in the renovation and landscaping process, including recycled insulating materials, low-volatile organic compound paints, and water conserving landscape features. The team also made energy efficiency a priority, striving to reduce the operating costs of the homes and make them more affordable to families of moderate income.

Each bungalow was renovated with a different modern lifestyle theme: a handicapped adaptable home, a home office, a young professional loft-style home and a classically restored bungalow. Features included double-paned windows, energy-efficient furnaces and water heaters, and extra insulation, including insulation made of recycled newspapers and phonebooks. Renovation of the homes was completed in June 2002 and all homes were sold and occupied by November of that year.

An energy analysis was conducted in 2004 comparing actual energy use for space heating and cooling and hot water in each of the four green bungalows with estimated energy use of comparable homes undergoing a more "standard rehab" process. Each of the four green bungalows provided energy and money savings, yielding a combined ~37,000 kWh and ~4,300 therms of natural gas energy savings, and preventing 56 tons of CO<sub>2</sub> from being released into the atmosphere annually. Simple payback periods for the additional green features of these homes ranged between 4.6 and 8.1 years. The green bungalows were projected to yield an average savings over \$900 per home for heating, cooling and hot water use in comparison to standard rehab homes.

The City of Chicago Departments of Housing and Environment, U.S. Department of Housing and Urban Development, Neighborhood Housing Services—Chicago Lawn, Neighborhood Housing Services Redevelopment Corporation, Southwest Home Equity Assurance Program, Greater Southwest Development Corporation, Chicago Chapter of the American Institute of Architects, and Historic Chicago Bungalow Association worked together to help guide the Chicago Green Bungalow Initiative.