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Home energy

\$15

Raters at the Roundtable

Battle of the Walls

Peak Reduction

**Combustion
Appliance Testing**

**Taking the
Lead on Lead**



Rebuilding Together TULSA

In 2008, Rebuilding Together Tulsa (RTT) introduced its Energy Efficiency program that, along with energy efficiency, incorporates broader green housing principles such as water efficiency, and indoor environmental health. This program provided 34 low-income homeowners with energy efficiency modifications, such as installing insulation, sealing air leaks, replacing doors and windows, installing CFLs, and replacing air filters. As a result, these 34 homeowners saved a total of over 80,000 kWh of electricity over the course of a year. This translates into an annual savings of approximately \$188 on each homeowner's electricity bill, and a total of \$6,400 in savings for low-income homeowners in Tulsa. As most RTT clients have an average annual income of \$9,200, this \$188 in utility bill savings represents 2% of their income, a significant savings for low-income families facing difficult financial decisions.

RTT Chief Executive Officer Jennifer Barcus-Schafer says of the program, "We are pleased to offer our clients modest energy efficiency repairs that make an impact on their home, their finances, and their lives." Each homeowner served by RTT receives a homeowner education packet and an analysis of other repairs that may be needed, including water efficiency repairs and repairs that affect indoor environmental health. RTT also has five

certified lead-based paint renovators, to address indoor environmental health issues and ensure compliance with EPA lead regulations (see "Taking the Lead on Lead," p. 44).

RTT is an affiliate of the national affordable-housing nonprofit Rebuilding Together, Inc. This organization works to preserve affordable homeownership and revitalize communities through a network of more than 200 affiliates that provide rehabilitation services and critical repairs to the homes of low-income Americans

at no cost to the homeowner. As economic pressure on low-income families grows, more and more families must choose between vital necessities and essential home repairs and modifications. Rebuilding Together seeks to help these homeowners stay safe and healthy in their own homes.

While the green movement has gained momentum in the past few years, Rebuilding Together affiliates have been utilizing green practices—and

providing green home rehabilitation—since the organization was founded over 20 years ago. Rebuilding Together's Green Housing initiative is a national program that provides education and resources for affiliates to incorporate green housing principles into their core businesses. Rebuilding Together believes that home repair and rehabilitation are inherently green. Through the repairs that Rebuilding Together affiliates make, homeowners save



RTT



RTT



RTT

Volunteer Royce Reed with JPMorgan Chase works on replacing storm windows.

money on utility bills, thrive in healthier and safer home environments, and are better able to afford other essential needs. Rebuilding Together has shown what green home rehabilitation means: a safe and healthy home that is affordable to live in and that improves the residents' quality of life.

RTT Makes One Home More Energy Efficient

The repairs done on the home of Mr. and Mrs. C and their family are a testament to the effectiveness of RTT's green housing work. RTT was able to address the immediate needs of this deserving family while also applying the principles of green building. The couple was at the cusp of retirement in February 2008 when Mr. C was injured on the job. Because of his injuries, Mr. C had to rely on Social Security to support his family, which includes three foster children. Mrs. C became a bus driver to help support her family and ensure that they could keep their foster children, who are siblings, together. Nevertheless, the family could not afford to make necessary repairs to their home. Their windows were in such poor condition that the family had to hang plastic and fabric to keep out the cold air, and the siding was rotting away, letting in air, moisture, and pests. Sadly, RTT notes that many low-income homeowners live in similar conditions, which is one reason why even modest energy



RTT

Volunteer Philip Cape with State Farm repairs window.



New siding installed on Mr. and Mrs. C's home.

efficiency repairs make such a big difference to these homeowners.

RTT secured funding for the project and began by having the family's roof replaced. It considers roof replacement an essential first step, as a roof in disrepair leaks, and leaks cause water damage in the home, leading to mold, rot, and poor indoor air quality. Light-colored shingles were used to reflect the sun and further increase efficiency. After the roof was complete, volunteers from RTT removed all the rotten siding and damaged wood from the exterior of the home and RTT installed Hardiplank with a Tyvek underlayment. RTT also installed three new energy-efficient windows, and two windows were removed and sided over. Attic insulation was blown in (R-30 or R-38), gaps and cracks were caulked, insulation gaskets were installed, new switch plates and plug plates were mounted, and all of the incandescent light bulbs were changed to CFLs. Upon completion of the work, the homeowners commented, "Our house already has a 10°F difference. That insulation helped a bunch." The observed difference was reflected in energy savings on the home's utility bills following the repairs. In total, these repairs saved the family 20% on their electric bills—a savings that will have a significant impact on this family's budget and the environment.

Strong Partnerships Increase Impact

RTT's green housing efforts are supported by a range of partnerships that have made the program a true success, and have enabled RTT to incorporate green-housing principles into more of its work. The organization recently signed a two-year contract with American Electric Power-Public Service Company of Oklahoma



(upper left) Skilled volunteers from All Souls Unitarian Church. (bottom left) Volunteer from Honeywell builds wall where one did not exist. (right) Skilled volunteer from MPW Engineering repairs exterior siding.

(AEP-PSO), the local electric utility, to incorporate energy-efficient repairs for homeowners into its work. This contract will have a value of over \$350,000 in repairs and testing. RTT leverages this funding with the funds it has secured for roof replacement to ensure that the home will be as energy efficient as possible. Through this partnership, each home first receives roof work, if needed; energy-efficient repairs are made after that. The partnering of these two programs has significantly reduced clients' energy usage.


The average household in the United States uses about 8,900 kWh of electricity per year. In the first year of the Energy Efficiency program, the 34 homeowners served by the program saved approximately 2,400 kWh per homeowner. These savings "mean a lot to our homeowners," says Barcus-Schafer. "Many times they have to make the tough choice between basic needs, like food and medication, and paying their high utility bills. These repairs keep the bills manageable for our clients. That is one less thing they need to worry about."

>> For more information:

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To learn more about Rebuilding Together and find an affiliate near you, please visit www.rebuildingtogether.org or call (800)473-4229.

Planning to Save Resources

RTT takes a whole-house approach to green housing by incorporating energy efficiency, water efficiency, indoor environmental health, and homeowner education into its projects. Annually, RTT averages 150 home repairs, and each home receives one or more of these green housing features. RTT strives to meet the needs of each homeowner in a comprehensive way by addressing all of the green repairs at once. Over the past two years, RTT has created a neighborhood approach to better serve whole neighborhoods, increasing the impact of their services on the neighborhood and conserving resources. They then move to other neighborhoods and serve qualifying candidates in that neighborhood. This approach creates a true community impact where improvements to multiple homes in a neighborhood help to revitalize the area. In addition, this approach decreases administrative and project costs and allows RTT to consolidate efforts, resources, and volunteers. RTT seeks to continue to expand and improve its energy efficiency program to help more homeowners live in safe and healthy homes. 

—Amanda Walz

Amanda Walz is the program manager for Green Housing and Government Relations at Rebuilding Together's national headquarters in Washington, D.C.