



National Center for Healthy Housing

To: Healthy Homes Proponents
From: Rebecca Morley, National Center for Healthy Housing
Date: February 13, 2009
Re: Energy Efficiency and Healthy Homes

If we are to provide energy-efficient, healthy and affordable homes for families, we will need unprecedented collaboration among the agencies managing the funds being distributed to communities under the American Recovery and Reinvestment Act. With regard to working with energy efficiency programs, there are several ways that healthy homes proponents can help:

- 1) Arrange for meetings between state and local health, housing, and energy agency staff to develop joint plans for job training, job placement, and the integration of funding for housing rehabilitation, public health programs, and weatherization.
- 2) Encourage State Energy Agencies and local community action agencies to incorporate healthy homes into their energy assessment and repair/construction protocols (see attachment A for a list of recommended upgrades).
- 3) Support your state Weatherization Assistance Program (see attachment B for more information about this program) by offering to identify and refer homes that are eligible for weatherization or to provide your agency's services.

Call to Action

Healthy Housing proponents can take the following steps to ensure that health and safety are included in all weatherization activities.

- 1) Identify your state weatherization director:
http://apps1.eere.energy.gov/weatherization/state_contacts.cfm
- 2) Ask what health and safety activities are already being carried out in conjunction with weatherization in your state.
- 3) Encourage the state weatherization director to include the health and safety items listed in Attachment A in their weatherization audits and scopes of work.

Please contact me at rmorley@nchh.org if you have any questions about this opportunity or need assistance. If you are operating a Weatherization Assistance Program in your state, please consider incorporating healthy and green features. It will help protect families from preventable disease and injuries, reduce their operating expenses, and create and protect jobs.

Attachment A – Upgrades to be Included in Weatherization

We must ensure that our residential energy retrofits do not result in worsened indoor air quality or decreased durability. At a minimum, all of the mandatory items listed below should be incorporated to ensure that energy retrofits do not inadvertently harming the families they seek to benefit.

Highly Recommended	Mandatory
Keep it Safe	
<ul style="list-style-type: none"> ➤ Install new lights as needed for hallways, walkways, stairways to mitigate fall hazards. ➤ Set hot water temperature heaters at 120 degrees F to prevent scalds. ➤ Install grab rails in showers and banisters as needed for homes occupied by elderly residents. 	<ul style="list-style-type: none"> ➤ Install carbon monoxide and smoke alarms.
Keep it Dry	
<ul style="list-style-type: none"> ➤ Insulate water pipes and/or ductwork as needed to prevent condensation and mold problems. 	<ul style="list-style-type: none"> ➤ Eliminate standing water problems. ➤ Repair interior and exterior water leaks and poorly managed rainwater.
Keep it Ventilated	
<ul style="list-style-type: none"> ➤ Ensure that all clothes dryers exhaust to the outside. 	<ul style="list-style-type: none"> ➤ Do not make the house tighter if unvented combustion appliances are present or if atmospherically vented combustion appliances are in the conditioned space. Either replace such appliances with direct or power-vented equipment or certify (after weatherization is completed) that negative pressures greater than 3 Pa cannot be created in the combustion appliance zones. ➤ Install kitchen and bath fans that exhaust to the exterior and ensure that sufficient makeup air is provided to prevent combustion by-product spillage whenever new exhaust ventilation is installed.
Avoid Contaminants	
<ul style="list-style-type: none"> ➤ Air seal attached garages to prevent entry of volatile substances and CO into living areas. ➤ Where new wood products are used, specify that such products comply with the California Air Resources Board's formaldehyde standards to reduce cancer risks. ➤ Replace old lead-contaminated windows with new energy efficient lead-free windows. Old single-pane windows are associated with lead poisoning. 	<ul style="list-style-type: none"> ➤ Use lead-safe weatherization practices and conduct lead dust clearance testing. ➤ Test for radon pre and post work to ensure that energy measures have not trapped radon.
Keep it Clean	
<ul style="list-style-type: none"> ➤ If carpets are deteriorated or are present in wet areas such as bathrooms, kitchens, and basements, remove them and replace with hard, smooth and cleanable surfaces to prevent mold, pests, and other biological contaminants. ➤ Install walk-off mats to reduce the track-in of contaminants. 	
Keep it Pest Free	
	<ul style="list-style-type: none"> ➤ Patch all exterior holes using materials that are resistant to pests (e.g. copper mesh or caulk). Seal all exterior pipe penetrations.

Attachment B - Background on the Weatherization Program

The Department of Energy's (DOE) Weatherization Assistance Program (WAP) is charged with reducing the energy bills of low-income Americans. A priority is placed on providing assistance to families with children, the elderly, the disabled, high residential energy users, and households with a high energy burden. The average expenditure limit per home, which is set by DOE is currently just over \$3,000 (although the stimulus bill would increase this cap to \$5,000). The current income requirements is 120% of poverty, although the stimulus bill proposes to increase this to 200% of poverty.

Approximately 100,000 homes are weatherized annually. DOE distributes funds on a formula basis to six DOE regional offices: Boston, Philadelphia, Atlanta, Chicago, Denver and Seattle. The regional offices invite states to apply for grants. The States submit applications for funding, hold a public hearing to explain how they will use the allocated funds, distribute the funds to local agencies and monitor the local agencies. Approximately 900 local agencies (subgrantees) within the Weatherization network perform the weatherization services within their communities. The majority of subgrantees are Community Action Agencies and they often administer a number of federally funded programs concurrently.

While the main mission of the WAP is energy efficiency, the program recognizes that its workers see a wide variety of health and safety problems within client's homes. The DOE guidance includes a provision that energy-related health and safety hazards associated with weatherization activities may be remedied or prevented with DOE funds. Each state must have a health and safety plan, which sets the health and safety expenditure limit for their subgrantees. In addition, the states may budget health and safety costs as a separate budget cost category. This is significant because if health and safety costs are not a separate cost category and are included in the program operations category, these costs are then included in the calculation of average cost per home and must be cost-justified in the audit of the home.

According to the Health and Safety grant guidance (Weatherization Program Notice: 02-5) issued by DOE, *“Before beginning work on the residence, the agency must take into consideration the health concerns of each occupant, the condition of the dwelling, and the possible effect of work to be performed on any particular health or medical condition of the occupants.”*

Lead paint hazard control is included in the health and safety category. The cost of preventing the generation of lead-based paint dust and residues that may result from weatherization work is an allowable cost when the work is associated with installing energy-efficiency measures. All WAP contractors are required to complete the one-day lead-safe weatherization training. Following a 2006 NCHH study, which found that weatherization activities could generate significant lead hazards, DOE began requiring clearance dust testing following weatherization work. It is unclear how many local agencies have implemented this policy. In addition, WAPs will have to comply with the new EPA Renovation, Repair and Painting rule beginning in April 2010.

In the late 1990s, the DOE Weatherization Assistance Program strove to become more integrated with other energy efficiency and housing programs. DOE wanted to attract support for the program by adapting it to include a broader range of energy efficiency measures. Weatherization Plus, a strategic plan for the evolution of the WAP was written in 1999 by the Weatherization Millennium Committee. The Millennium Committee was made up of representatives from across the Weatherization Network. Their focus for Weatherization Plus was to expand the WAP beyond heating and cooling energy conservation to whole-house energy usage and whole-community efforts. A Millennium Implementation Planning Committee developed action plans for implementation when resources became available. Unfortunately, when the Presidential administration changed in 2000 the focus became producing the specified number of units with the dollars allocated rather than expanding the focus of the program. It is hoped that, with the significant increase in funding, that the WAP will return to long range planning and implementing the ideas from Weatherization Plus. The expansion of focus is the perfect time to incorporate health into weatherization work.