



# TAX CREDIT HOUSING MANAGEMENT INSIDER

A LEGAL COMPLIANCE GUIDE FOR THE LOW-INCOME HOUSING TAX CREDIT COMMUNITY

## How to Encourage Residents to Reduce Energy and Water Consumption

Many state housing finance agencies are adding energy assessment and conservation measures to their Qualified Allocation Plans (QAPs) that encourage owners and managers to take steps to reduce their site's energy and water usage and to engage and educate residents in making the site a greener, more sustainable place to live.

Some energy assessment and conservation measures can require significant capital improvements and upgrade of your site's infrastructure, and take years to pay for in savings and increased revenue. Many new sites are building in these measures during construction to comply with their housing finance agencies' QAPs and to get other financing, zoning, and green design incentives. But for existing sites, you'll get the most bang for your buck by focusing on reducing residents' energy and water consumption before taking more expensive measures, such as conducting a comprehensive energy audit, installing solar panels, or replacing HVAC systems.

No matter how energy efficient a site's infrastructure and equipment is, residents make most of the day-to-day decisions about water and energy use. So focusing on ways to reduce their usage will have the most impact, says Rory McIlmoil, energy policy director for Appalachian Voices in Boone, N.C.

Reducing energy and water usage is the one of the few major expenses that managers can substantially impact to reduce their site's operating costs, says Bomee Jung, deputy director at Enterprise Community Partners, Inc. in New York City.

Plus, if your utility allowance is too high and you want to try to lower it, taking measures now to reduce your water and energy usage is the first step to getting the data you'll need later to request a change in utility allowance calculation method to one that more accu-

rately reflects consumption at energy-efficient sites. The key is finding which measures can be paid for quickly with the savings and increased rental income you'll be able to collect from residents.

Taking a few low-cost conservation measures will have a big effect on your site's total energy and water usage and help lessen the blow of any sudden increase in energy costs. We'll describe six easy fixes you can take inside residents' units or on site equipment that control residents' usage. And we'll give you ways you can educate and engage residents to do their part in conserving energy at your site.

### SIX EASY FIXES YOU CAN MAKE NOW

Here are six easy energy conservation fixes you can make inside residents' units that will reduce energy consumption at your site. Making simple improvements like these can reduce energy and water costs by at least 15 percent, without having to spend large amounts of money on capital improvement or dipping into reserves, says Jung.

#### Fix #1: Seal Air Leaks

Air leaks can waste a lot of money as heat or cool air leaves the room. The quickest energy- and money-saving fix you can make is to seal off any areas where air can leak out, says Michael Harris, sustainable projects coordinator at Foundation Communities in Austin, Texas.

- Caulk all windows, plumbing, and furnace penetrations;
- Weather-strip doors; and
- Install storm windows and storm doors on exterior unit doors.

## Fix #2: Insulate and Adjust Water Heaters

Wrap water heaters in insulation blankets to hold in heat. According to the American Council for an Energy-Efficient Economy ([www.accee.org](http://www.accee.org)), the amount you'll reduce your energy consumption will pay for the cost of insulation within a year or less. Also, reduce water temperatures to 110 to 120 degrees.

## Fix #3: Clean and Service HVAC Equipment

Clean or replace all building furnace, heat pump, and air conditioning system filters monthly. If units have their own air conditioners, keep outside air conditioning units clean and free of debris and change indoor unit filters regularly.

## Fix #4: Upgrade to Energy Star for Major Appliances

Replace broken or aging appliances with Energy Star appliances. Appliances carrying an Energy Star rating use about 20 to 30 percent less energy and water than other appliances meeting minimum government standards and must meet strict energy-efficiency criteria set by the U.S. Environmental Protection Agency and the U.S. Department of Energy. Switching to Energy Star appliances can cut energy bills by as much as 30 percent, or more than \$450 per year per household. They don't cost more than non-Energy Star products, and your energy cost savings will pay for the appliance within a year, says McIlmoil.

## Fix #5: Inspect and Adjust Refrigerators

Refrigerators use a lot of energy and run constantly. So it's important that you keep them running as efficiently as possible. First check the age: If the refrigerator is over 10 years old, consider replacing it with an Energy Star-rated refrigerator. (Note: Do this for all appliances you provide for residents). Also, make sure the refrigerator door seal is airtight by closing the door over a piece of paper and pulling it out. If it pulls out easily, replace the seals. Finally, adjust the refrigerator temperature to 36 to 39 degrees and the freezer temperature to 0 to 5 degrees.

## Fix #6: Make Water-Saving Repairs

Repair leaks in faucets and toilets immediately. According to Appalachian Electric Cooperative, one drop per second can add up to 165 gallons per month. Install sink aerators and low-flow showerheads to reduce the amount of water flow to 1.5 gallons per minute for kitchen

faucets and showerheads, 1.0 gallon for bathroom faucets. Install toilet tank flappers to reduce water flow in toilets. The payback to your site for the cost of these items is almost immediate in terms of water savings.

## Encourage Residents to Do Their Part

Educating and engaging residents to participate in energy conservation techniques is the most important key to conserving energy at your site, says McIlmoil. Because most of the easy fixes happen inside the residents' units, it's important to get them motivated to take steps to conserve energy. That motivation is easier to tap into when the residents pay for their own utilities, says McIlmoil. But even when the site bears the cost of electricity, gas, or water, many residents do respond well when the choices and changes you propose cost them little in time, money, or effort to implement.

Here are steps that you can encourage residents to take to help reduce energy and water consumption in their units:

**Replace bulbs.** Replace burned-out incandescent bulbs with compact fluorescent light bulbs (CFLs) or with lower wattage incandescent bulbs. CFLs use 75 percent less energy and last 10 times longer.

**Turn off lights and unplug appliances and electronics to avoid plug loads.** Encourage residents to turn off lights when leaving rooms and to unplug unused appliances and electronics or plug them into a power strip and switch off the power strip when not in use. Many appliances that use electricity, such as computers, DVD players, TVs, stereos, toasters, and coffee makers have a "plug load," meaning the cost of keeping the appliance plugged in, says Harris. The average resident spends \$100 per year on plug loads.

**Program thermostat settings to lower energy use.** If the unit has its own thermostat, give residents a demonstration of how to program their thermostat and instructions on ideal settings for heating and cooling during the day and night. According to the Alliance to Save Energy, for each degree you lower your thermostat, you save 5 percent on your heating bill.

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**Editor's Note:** If management controls the temperature inside units, keep your site's temperature settings warmer in the summer, cooler in the winter, by setting the thermostat furthest from a heat source to the minimum (or maximum in summer) allowed by local law for day and night settings.

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**Use window coverings to help control temperature.** Tell residents how using window coverings can help them

control the temperature in their units. In the winter, open shades or drapes in the day to use sunlight to help warm the unit, and close them in the evening. Do the opposite in warm summer months.

**Use major appliances efficiently.** Post instructions in laundry rooms or next to in-unit laundry machines encouraging residents to wash with full loads. This can save up to 50 gallons of water per household per week. Use a cold-water rinse cycle, clean lint filters, and dry multiple loads in short sequence to use the heat from the previous load, rather than waiting between loads. Give tips for dishwasher use, such as running the dishwasher only when full, which can save up to 1,000 gallons of water per month, and for oven use, such as using the oven light to check on items roasting in the oven before opening the oven unnecessarily. If the appliances are Energy Star appliances, be sure to give residents Energy Star's "best practices" for use, amount of detergent, cleaning, and other instructions ([www.energystar.gov](http://www.energystar.gov)).

**Reduce water usage.** Give residents tips for reducing water usage, such as scraping food from plates instead of rinsing them, taking shorter showers, and turning off the water while brushing their teeth and washing hands and dishes. Turning off the tap can save 20 to 30 gallons of water per person per week, says Harris. For a family of four, this adds up to over 6,000 gallons per year.

**Recycle and reduce waste.** Encourage recycling by providing each unit with a recycling container and instructions for sorting and bringing recycling to common area

recycling bins. Be sure to post these recycling instructions in the recycling area. If your site has a compost program, encourage residents to compost their food waste. If not, consider starting a compost program at your site, says Erica Slaymaker, environmental sustainability coordinator at Project H.O.M.E. in Philadelphia.

**Notify management of problems.** Tell residents to notify management immediately of any leaky faucets or toilets or drafts in rooms. Harris offers a good tip for residents to check their toilet for leaks: Place several drops of food coloring into the toilet tank. Leave the toilet alone for 30 minutes. Check if the water in the toilet bowl is tinted with food coloring. If so, the toilet has a leak and the resident should notify management immediately.

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**Practical Pointer:** Resident education is a continual process, so look for opportunities to educate and engage residents by posting information around the site, including conservation tips in newsletters, and holding workshops with representatives from local utilities or energy consultants, says Slaymaker.

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#### **Insider Sources**

**Michael Harris:** Sustainable Projects Coordinator, Foundation Communities, 3036 S. 1st St., Austin, TX 78704; [www.Foundcom.org](http://www.Foundcom.org).

**Bomee Jung, MCP BPI-MFBA:** Deputy Director, New York Office, Enterprise Community Partners, Inc., One Whitehall Street, 11th fl., New York, NY 10004; [www.enterprisecommunity.org](http://www.enterprisecommunity.org).

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