State of Washington
2012
Low-Income Home Energy Assistance Program
Weatherization Waiver Request

The State of Washington Department of Commerce (Commerce) is petitioning the United States Department of Health and Human Services (HHS) to waive the maximum percentage limits placed on funds used for weatherization within the Low-Income Home Energy Assistance Program (LIHEAP). Authority to request a waiver appears in the July 6, 1982 Federal Register 47 FR 29472 Part 96 of Title 45 of the Code of Federal Regulations as amended, with final rules published May 1, 1995 in 60 FR 21322.

The statute provides that, after reviewing a grantee's waiver request, HHS may grant a Good Cause Waiver if it determines that the grantee (Commerce):

1. Demonstrates good cause why a waiver should be granted;

2. Provides all required information;

3. Shows adequate concern for timely and meaningful public review and comment; and

4. Proposes weatherization that meets all relevant requirements.

The State of Washington's request for a Good Cause Waiver addresses all four of these criteria. We begin by asking HHS for a transfer of up to 25% of available LIHEAP Energy Assistance Program funds to the Weatherization Assistance Program. Next, we report the number of households served and benefit dollars disbursed during program years 2011 and 2012, as well as documentation in support of a Good Cause Waiver. We then report on weatherization services provided and summarize measureable savings in energy expenditures directly attributable to weatherization services in Washington State. We conclude the waiver summarizing additional factors that support our request.

Percent of Allocation Transferred to Weatherization

45 CFR 96.83(c)(1)

Commerce is requesting a waiver to transfer up to 25% of available LIHEAP Energy Assistance Program funds to the Weatherization Assistance Program, a total of $6.4 million. Approval of this waiver request will increase weatherization funding from 15% to 25%.

HHS approval of the full 25% brings all potential LIHEAP dollars to Washington State, providing an opportunity for agencies to enhance their programs and existing funding. Commerce is committed to maintaining a local option for use of transfer amounts.

Comparison of Households Served and Benefits Received

FY 2011 LIHEAP Regular + Contingency Grant Award

Total Grant Award $75.1 million
Energy Assistance $62.6 million
Households Served 111,157 (actual)

FY 2012 LIHEAP Regular + Contingency Grant Award

Total Grant Award $57.9 million
Energy Assistance $48.3 million
Households Served 86,614 (estimate)

45 CFR 96.83(c)(2)(i)
45 CFR 96.83(c)(3)

Approximately 24,543 fewer households will receive Energy Assistance during the 2012 program year than those served during the 2011 program year.

45 CFR 96.83(c)(2)(ii)
45 CFR 96.83(c)(4)

The aggregate amount of benefits our service population received during program year 2012 is approximately $16.9 million dollars less than benefits received during the 2011 program year.

Support Documentation for Good Cause Waiver

45 CFR 96.83(e)(1)

The State of Washington does not meet the criteria set forth in 45 CFR 96.83(c)(2)(i) and (c)(2)(ii). The following documentation demonstrates good cause why a waiver should be granted to transfer up to 25% of available LIHEAP Energy Assistance Program funds to the Weatherization Assistance Program.

45 CFR 96.83(e)(1)(i)

In reference to 96.83(c)(2)(i) and 96.83(c)(3), Number of Households Served

Commerce estimates 24,543 fewer households will be served by Energy Assistance during the 2012 program year than those served during the 2011 program year. This decrease in the number of households served is in direct correlation to the reduction in the level of federal LIHEAP funds allocated to Washington State in 2012 compared to the 2011 program year. This figure is a conservative estimate based on the most current data available from the Washington State LIHEAP Program data base.

In reference to 96.83(c)(2)(ii) and 96.83(c)(4), Aggregate Benefit Amounts

The aggregate amount of benefits our service population will receive during program year 2012 is approximately $16.9 million dollars less than benefits received during the 2011 program year. This decline in household benefit awards is attributable to the decreased amount of federal LIHEAP funds allocated to Washington State. All other factors that affect household benefit awards, such as benefit levels and calculation methods, remained the same for 2011 and 2012 (data compiled from Washington State LIHEAP Program data base).

Commerce has measurable and quantified data that support our weatherization network's ability to provide cost-effective weatherization services that reduce the energy burden of our most vulnerable households.

45 CFR 96.83(e)(1)(ii)

Income levels for eligible applicants must be at or below 125% of the federal poverty level. LIHEAP benefits range from a $25 minimum to a $1,000 maximum.

45 CFR 96.83(e)(1)(iii)

Program years 2011 and 2012 have identical opening dates. Closing dates for receipt of LIHEAP heating and crisis assistance applications differ by two months; PY 2011 closed August 31, PY 2012 closing date is June 30.

Outreach efforts for heating and crisis assistance are identical for the 2011 and 2012 program years; both following the Washington State Plans as submitted to HHS. Particular emphasis is placed on providing information on all programs funded under the LIHEAP Act to households which contain high home energy burdens; the elderly; individuals with disabilities; families with young children (under six years of age); and persons and families who are subject to communication barriers (non-English speaking persons and persons who do not have easy access to common public news media, such as newspapers, radio, or television). The following outreach activities are conducted to assure eligible households are aware of all LIHEAP assistance available:

- Provide intake service through home visits or by telephone for the physically infirm (i.e. elderly or disabled).
- Place posters/flyers in local and county social service offices, offices of aging, Social Security offices, VA, etc.
- Publish articles in local newspapers or broadcast media announcements.
- Include inserts in energy vendor billings to inform individuals of the availability of all types of LIHEAP assistance.
- Make mass mailing to past recipients of LIHEAP.
- Inform low-income applicants of the availability of all types of LIHEAP assistance at application intake for other low-income programs.

- Execute interagency agreements with other low-income program offices to perform outreach to target groups.

45 CFR 96.83(e)(1)(iv)

Commerce closed the application deadline for heating and crisis assistance two months earlier in 2012 than in 2011.

Weatherization Measures, Cost Effectiveness, and Program Benefits

45 CFR 96.83(c)(2)(iii)
45 CFR 96.83(c)(5)

Home Energy Audit

To be considered a complete weatherized unit, all homes must receive a comprehensive, on-site, home energy audit prior to receiving weatherization services**.** Trained and qualified auditors conduct the audits. Auditors are certified as a Building Analyst 1 by the nationally-recognized Building Performance Institute (BPI).

Commerce's "*house-as-a-system*" approach to comprehensive home energy audits consists of the following elements per home (as applicable):

- If available, review the household energy usage pattern from a 12-month billing history.
- Complete visual assessment of existing conditions and insulation levels – note any health and safety concerns.
- Note fuel types, condition and size of space and water heating equipment – designate primary and secondary heat sources.
- Measure the residence for the volume of the living space and square footage of the building envelope.
- Ask the occupant about building characteristics which may be helpful in developing a work plan (i.e. asking if there are any particularly drafty areas), and assess lifestyle considerations.
- Perform a fan-door test.
- Conduct pressure diagnostic tests of HVAC system and building zones.
- Perform combustion safety tests.
- Conduct client education, noting opportunities to provide low cost base load energy conservation measures. Contractors provide consumer conservation education to all weatherization participants. Curriculum consists of an energy bill review, home energy tour, basic energy conservation tips, and development of a family energy-saving action plan.

Using this information as a basis, a scope of work is developed based on Commerce procedures governing Health and Safety, Air Sealing, Pressure Diagnostics, and Repairs as well as information collected using either a computerized energy audit (TREAT) or a DOE-approved

Priority List of Weatherization Measures. Local agencies are required to review a weatherization-specific scope of work with all clients receiving weatherization services.

TREAT Computerized Energy Audit

The **T**argeted **R**etrofit **E**nergy **A**nalysis **T**ool (TREAT) is the authorized energy audit tool used in the weatherization program, as approved and authorized by the U. S. Department of Energy. It is required for analysis of multifamily buildings and may also be used for single-family houses and mobile homes.

Commerce expects local agencies to calculate and maintain current costs for materials, labor, and fuels to be used in the TREAT auditing process.

Local agencies are responsible for ensuring that all staff performing computerized energy audits acquire and maintain proficiency using TREAT. Commerce provides introductory and advanced TREAT training through the Building Performance Center, Washington's training and technical assistance provider.

Priority List of Weatherization Measures

Commerce created the Priority List of Weatherization Measures using the computerized energy audit on single-family buildings, including a variety of building characteristics and configurations, fuel types, and various climactic regions of the state. The Priority List reflects those measures for which an average savings-to-investment ratio (SIR) of greater than 1.0 was established. Washington has a DOE-approved Priority List for use in the weatherization of single family houses and mobile homes (Exhibit A). Commerce submitted a Priority List for approval by DOE for the weatherization of low-rise multifamily buildings (three stories or less).

Measures not included in the matrix must be justified by using a DOE-approved energy audit tool. Washington has been using TREAT, which must result in at least an SIR of 1.0 or greater, or through special authorization by Commerce. The most cost-effective measures as determined by TREAT or the matrix will ordinarily be installed, subject to funding availability. Any deviation from this measure selection process must have written justification documented in the client file.

Air Sealing and Pressure Work

Applicable cost-effective air sealing is a high-priority service. TREAT can be used to determine air infiltration reduction cost benefits and is used in conjunction with Commerce Blower Door and Air Sealing Procedures and the Duct Pressure Test Procedures.

Cost Effectiveness

The Washington State University Energy Program (WSU) completed an evaluation of the Washington State Low-Income Weatherization Program for the period July 2009 through June 2010 (FY2010). During FY2010 the Weatherization Program received a significant boost in

funding due to the American Recovery and Reinvestment Act (ARRA). Key findings from the FY2010 evaluation include:

- Program expenditures more than doubled in FY2010.
- Production was 2.7 times greater than historical averages in the first half of 2010.
- The average household saved $189 per year in energy costs.
- Other utility, household, and societal benefits were $196 per year per household.
- The average direct unit cost was $4,000 and total program unit cost was $6,070 (this includes all costs)
- The program benefit-cost ratio was estimated to be 1.5

As seen in Table E.1. from the "Washington State Low-Income Weatherization Program Evaluation Report for FY2010", the benefit-cost ratio for the Weatherization Program is 1.5 for the mid-range scenario. Program benefits are 50 percent greater than costs. The benefit-cost ratio ranges from 0.9 to 2.1 for the different scenarios. This suggests that Total Program Benefits exceed Total Program Costs.

Table E.1., Weatherization Program Benefits and Costs (FY2010)

Present Value	Mid	Low	High
Emissions Benefit	$380	$330	$0
Economic Benefit	$1,310	$690	$1,970
Utility Benefit	$340	$80	$680
Participant Benefit	$2,270	$930	$4,660
Total Non-Energy	$4,300	$2,030	$7,310
Energy Benefit	$4,840	$3,620	$5,230
Total Benefit	$9,140	$5,640	$12,540
Total Cost	$6,070	$6,070	$6,070
Benefit-Cost Ratio	1.5	0.9	2.1

Since 2010, the Department of Commerce collects local agency weatherization project data in an online data system. Weatherization agencies use the Weatherization Information Data System (WIDS) to report detailed information about all single and multi-family projects weatherized statewide. WIDS also includes an inspection module that is used to improve the efficiency and effectiveness of Commerce monitoring and inspection activities. These efforts contribute to maintaining and improving program performance and cost-effectiveness.

Program Benefits

Washington's Weatherization Program installed weatherization measures in 18,052 units between July 2009 and December 2011. These installed measures produced energy savings of 178,715 Millions of British Thermal Units (MBTUs) and are estimated to save households $3.4 million per year in energy costs ($189 per unit). These energy savings will accrue each year during the lifetimes of the energy measures.

The Weatherization Program provides "non-energy" benefits as well; these benefits accrue to utilities and ratepayers (mostly due to reductions in delinquent bills), participants (improved comfort, health, property value, etc.), and society (benefits to the economy and emissions reductions). Non-energy benefits are estimated to be $196 per year per household; a total non-energy savings of $3.5 million dollars per year.

Additional Factors Supporting the Waiver Request

The goal of the State's request is to reduce the long term energy and heating bills of low-income families. LIHEAP heating, cooling, and crisis assistance are important and necessary, but the long-term benefits of LIHEAP weatherization assistance reduces the number of delinquent utility payments and the need for energy assistance applications, resulting in fewer service shut-offs and freeing up household income for other needs.

Weatherization measures, including energy-related health and safety measures and repairs, weatherization-related repairs, and the installation of low-cost/no-cost materials, as well as the delivery of consumer conservation education, are preventative and long-term in nature. Weatherization measures reduce energy burden through energy retrofits, eliminate structural hazards (thereby protecting building occupants), and preserve the efficacy of weatherization materials. Installation of low-cost/no-cost materials (for example, compact fluorescent light bulbs, low-flow showerheads, and faucet aerators) and delivery of consumer conservation education provide opportunities for weatherization recipients to take a direct role in learning and implementing energy-efficiency measures and long-term behavior change.

Low-Income Energy Burden

In its 2007 "Washington State Energy Needs Final Report", Applied Public Policy Research Institute for Study and Evaluation (APPRISE) reported that Roger Colton of Fisher, Sheehan, and Colton suggested using 6% of income as the standard for affordable energy burden after researching national shelter costs and energy bills. APPRISE used similar research to define high energy burden as 11% of income.

According to the report, 14% of households in Washington have an income below 125% of the federal poverty level. As shown in Table ll-3, 72% of this population has an energy burden greater than 5%, with 46% of these households spending more than 10% of their income on energy bills. Given Roger Colton's standard for affordable energy burden at 6% of income, 72% of Washington's most vulnerable households are extremely close to or surpass the ability to afford their energy bills.

APPRISE concludes their report by recommending strategies for meeting the needs of low-income households in Washington; among these strategies is continued supplementation of WAP/LIHEAP energy efficiency funding with matching funds from local utility companies. They also recommend coordinating bill payment assistance programs with energy efficiency programs.

Table II-3, Low-Income Energy Burden

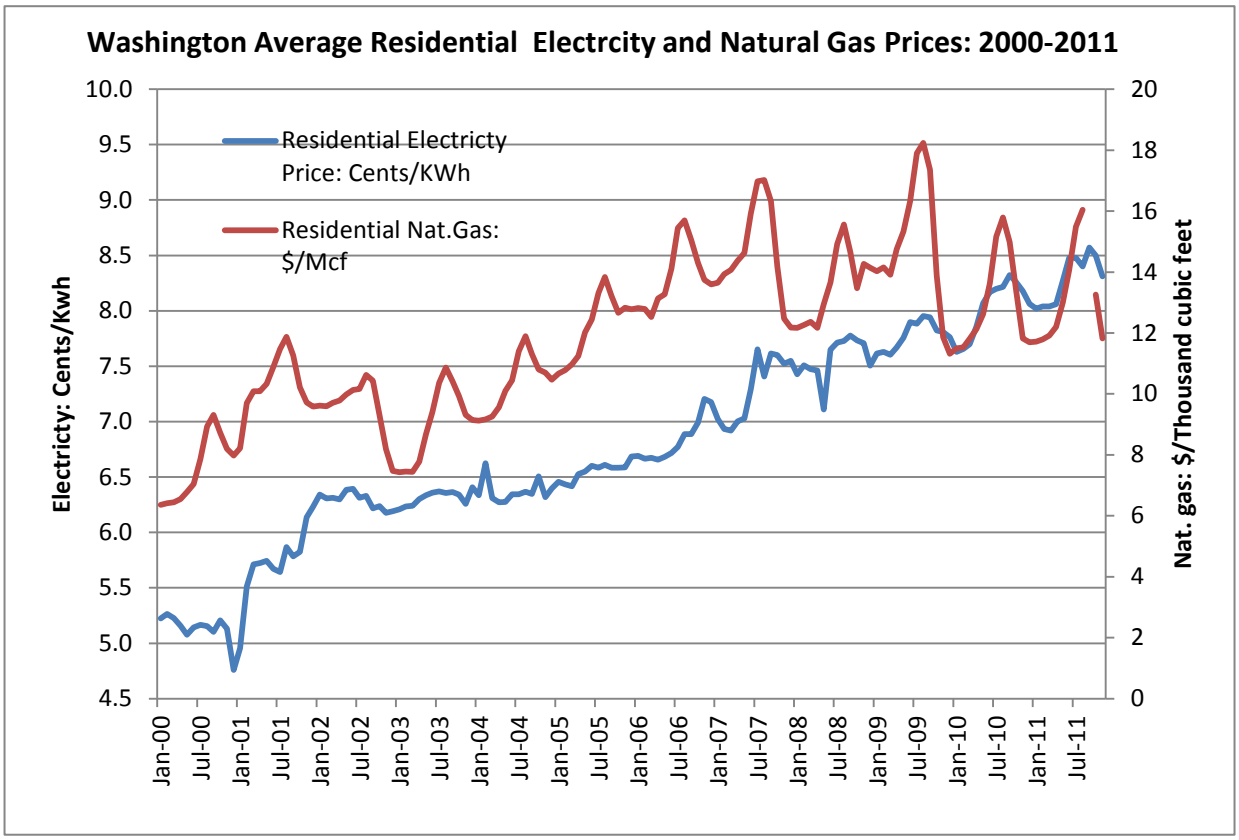
Poverty Group	Energy Burden > 5%		Energy Burden >10%	
	# of Households	% of Households	# of Households	% of Households
≤125%	251,636	72%	158,004	46%
126% - 150%	51,371	52%	14,705	15%

Washington State Fuel Prices

According to Department of Commerce Energy Office, and as illustrated in the graph below, fuel cost increases have been tempered during the past three years by the economic slowdown and national changes in the natural gas market; this will result in a mix of results at the retail level. Wholesale electric rates may be climbing as much as 5%. Retail natural gas rates have declined and are expected to stay low compared to pre-2009 prices.

Natural gas prices have trended downward in response to the gas surplus created by the economic slowdown, new domestic shale gas discoveries, and what is shaping up to be a mild winter. This was captured in natural gas rate adjustments that occurred in 2009 through 2011. One utility recently requested a small upward gas rate adjustment which may indicate that retail price have now stabilized.

Retail electric rates increased in 2011 and will likely be rising slightly this year. Public utilities that are served by the Bonneville Power Administration (BPA) will be implementing rate increases in response to higher wholesale power prices from the Federal agency. As of October 1, 2011, BPA has adopted a 7.8% increase for its average wholesale rate of electricity. This rate increase will ultimately be transferred to end use consumers, though residential retail rates will on average rise less than 7.8%. In addition, BPA and many utilities in Washington sell surplus hydro power to markets outside the state, which enables them to keep rates lower for their Washington state customers. However, the weak economy, abundant snowpack, and low natural gas prices have resulted in lower wholesale market prices. This will require the hydro utilities to compensate for lower wholesale revenue, which may result in higher rates for their retail consumers.

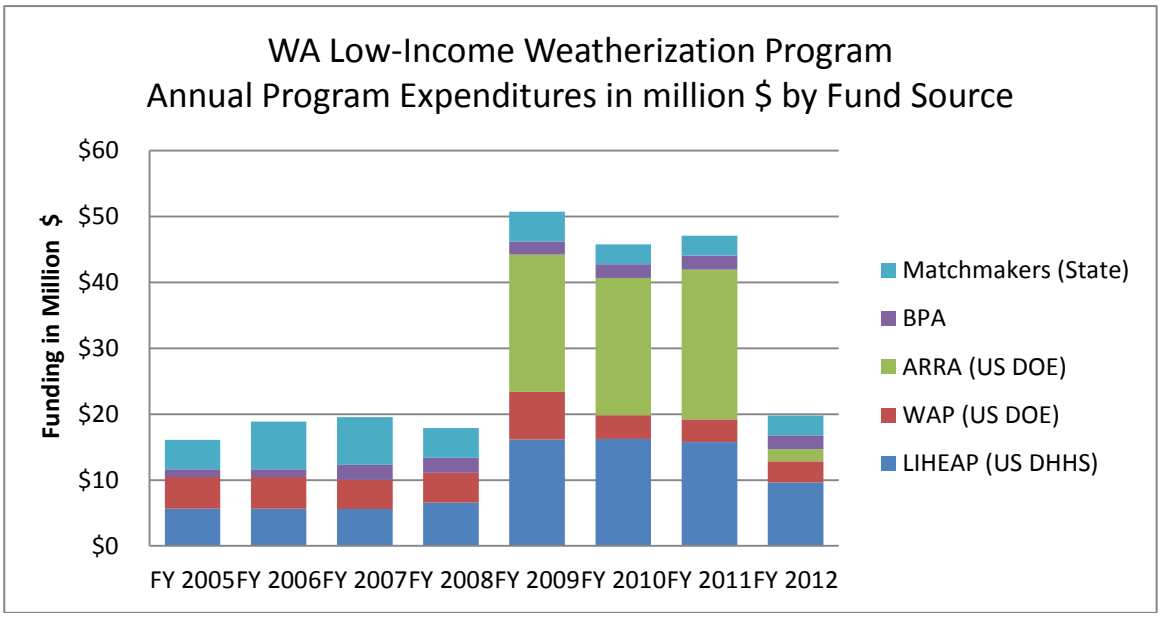


Weatherization Fund Source Reductions

The graph below shows funding trends from 2005 to 2012 for the Washington Low-Income Weatherization Program. In comparison to 2011, 2012 allocations decreased by 39% for LIHEAP Weatherization and 8% for Department of Energy Weatherization Assistance Program (DOE WAP). Washington State Matchmakers funding has dramatically declined during the last 4 biennia: $12 million allocated for 2005-2007, $9 million each for both the 2007-2009 and 2009-2011 biennia, and the largest reduction for 2011-2013 – a $6 million allocation.

Washington State received $59.5 million in regular ARRA funding. The national ARRA program deadline was March 31, 2012. Washington's local agencies completed regular ARRA contracts December 31, 2011, completing 13,402 units - 193% of the original 6,940 production target. DOE approved Commerce's request for a program extension through September 2012 for $6.9 million in Sustainable Energy Resources for Consumers (SERC) ARRA funds. This extension allows Commerce and its sub-grantees to install renewable energy systems and cutting-edge energy efficiency technologies in up to 900 additional units.

Given the completion of regular ARRA and trending reductions in LIHEAP, DOE WAP, and Matchmakers funds, the transfer of additional LIHEAP Weatherization funds is crucial.



PUBLIC REVIEW AND COMMENT

45 CFR 96.83(c)(6)

A public hearing was held in Olympia May 2, 2012. A news release announcing the waiver application and public hearing was sent electronically to the Commerce stakeholder list serve, Washington State news service, and all major television and radio stations and newspapers in Washington. An announcement was placed on the Commerce website. A copy of the waiver and news release were sent to weatherization coordinators, energy assistance coordinators, utility companies, and other interested parties in Washington.

Commerce allowed 6 business days for public inspection and comment. No one testified at the public hearing. Two individuals submitted email comments in favor (Exhibit B). Both support the state's efforts to expand weatherization services; reasons include long-term reduction in energy bills and the environmental and economic benefits of saving energy with solar water heating systems. Weatherization program staff reviewed the comments carefully; due to the supportive nature, no changes were made to the request.

Copies of the comments are included with the waiver application.

Waiver Request

The State of Washington Department of Commerce requests approval of a Good Cause Waiver from the United States Department of Health and Human Services to allow an additional 10% to exceed the 15% maximum transfer allowable for weatherization. Approval of the Waiver will allow Washington State to allocate 25% of its LIHEAP funds for weatherizing the homes of its most vulnerable households.

Exhibit A

Priority List of Weatherization Measures

Insulation Measures

Priority List of Insulation Measures			
Component	**Existing Condition**	**Recommended Measures**	
		Site-Built Homes	**Mobile Homes**
Ducts	Conditioned space	No measure	No measure
	Unconditioned space R-0 (or effective R-0)	Add up to R-19	Add up to R-19
Ceiling	R-0 to R-11	Add up to R-38	Add up to R-38.0 or maximum allowed by cavity
	R-12 to R-19	Add up to R-38	No measure
	Over R-19	No measure	No measure
Exterior Wall	Closed cavity	Fill cavity if empty	Fill cavity if empty
	Open kneewall	R-11 batt or fill cavity	NA
Underfloor/ Foundation	Conditioned R-0	R-11 foundation	R-11 foundation
	Vented R-0 to R-11	Install maximum insulation based on floor joist cavity depth up to R-30	Install maximum insulation based on floor joist cavity depth up to R-30
	Greater than R-11	No measure	No measure

Priority List of Weatherization Measures

Non Insulation Measures

Priority List of Non-Insulation Measures		
Component	**Existing Condition and/or Location**	**Recommended Measures**
Air Sealing	Pre-Wx blower door reading below target air sealing level	No or very limited air sealing Consider mechanical ventilation
	Pre-Wx blower door reading above target air sealing level	Blower-door guided, priority air sealing
Hot Water Temperature	Above or below 120 degrees Fahrenheit	With client approval, adjust water temperature to 120 degrees Fahrenheit
Water Heater Insulation	No water heater insulation jacket is present AND water heater insulation can be added without voiding warranty	Install a minimum R-10 insulated tank wrap in unconditioned spaces
Water Pipes To and From Water Heater	No insulation or less than R-3 insulation on first six feet of water pipes entering and exiting water heater.	Wrap at least the first six feet of the water pipes with a minimum of R-3 insulation, even in conditioned spaces, if access and space makes installation possible
Showerhead	Showerhead that uses more than 2.5 gallons per minute	With client approval, replace with showerhead that uses 2.5 gallons per minute or less
Faucet Aerators	No water-saving faucet aerators	Optional measure to install water-saving faucet aerators
Lighting	Incandescent light bulbs or halogen or incandescent torchiere lamps	With client approval, replace with Energy Star rated compact fluorescent light bulbs or CFL torchiere lamps
Carbon Monoxide Detector	Homes with a combustion appliance such as gas, propane, or oil furnace, water heater, cook stove, or wood stove or with an attached garage.	Install approved carbon monoxide detector