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United States Government **Department of Energy**

Memorandum

DATE: July 7, 2021
REPLY TO
ATTN OF: EE-5W

SUBJECT: Approval of the State of Hawaii's Priority List for Site-Built Single Family, Manufactured, and Small Multifamily Housing for the Weatherization Assistance Program

TO: Tawanna Holloway & Brittany Price, Project Officers, Weatherization Assistance Program,
U.S. Department of Energy

EFFECTIVE: 12/19/2021

To ensure that energy audit procedures of sufficient technical rigor are used in the U.S. Department of Energy's (DOE's) Weatherization Assistance Program (WAP), Grantees must submit their energy audit procedures to DOE for approval every five years. DOE approval of Hawaii's energy auditing procedures expires on the dates noted below in Table 1.

As with previous audit procedure approvals, Hawaii requested DOE assistance to review, verify, and approve an updated priority list for Site-Built Single Family, Manufactured, and Small Multifamily housing. To facilitate this review, Hawaii provided measure details, measure costs, fuel prices, and information on building stock. The priority list was reviewed in accordance with WPN 19-4 and was found to comply with §440.21 of the final rule. Based on this review, Hawaii's energy audit procedures are approved as follows:

Table 1 - Audit Approvals

Tool	Building Type	Comments	Expiration Date
Priority List	Site-Built Housing (SBH) (1-4 Units)	See Attachment 1 & Table 2	12/19/2026
Priority List	Manufactured Housing (MH)	See Attachment 1 & Table 2	12/19/2026
Priority List	Small Multifamily (SMF) (5-24 Units)	See Attachment 1 & Table 2 Building must be 3 stories or less with no existing heating/cooling system besides window units	12/19/2026

N/A	Large Multifamily (LMF) (25+ Units)	HI has no Large MF audit approval and must submit to DOE on case-by-case basis	N/A

Per the procedure allowed by 10 CFR 440.21b and set forth in WPN 19-4 the following materials/audit procedures have been approved for use in Hawaii's program in addition to those allowed by 10 CFR 440 Appendix A:

Table 2 - Special Materials/Audit Procedures Approvals	
Item	**Comments**
Refrigerators	Approved 12/19/2016
Heat Pump Water Heaters	Approved 12/19/2016
Solar Domestic Water Heaters	Approved 12/19/2016
Advanced Power Strips	Approved 12/19/2016
Light Emitting Diode (LED) Lighting	Approved 12/19/2016
Compact Fluorescent (CFL) Lighting	Approved 12/19/2016
Low-Flow Aerators/Showerheads	Approved 12/19/2016

This approval of the State of Hawaii energy audit procedures expires on the dates outlined in Table 1 above. As of the effective date of this memo, all previous energy audit or priority list approvals for these housing type(s) are no longer valid. The Grantee must submit its energy audit procedures to DOE for reapproval at least 6 months prior to their expiration date.

Please forward this memorandum to the Grantee agency and answer any questions they may have concerning its contents.

Erica Burrin
Erica Burrin
Program Manager
Weatherization and Intergovernmental Program
Energy Efficiency and Renewable Energy

Attachment 1 – Hawaii's DOE-Approved Priority List

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Hawaii's Weatherization Assistance Program (Oahu and Kauai)
Priority List for Single-Family & Manufactured Homes and Small Multifamily Buildings

1. Low-Flow Showerheads & Faucet Aerators

2. CFL or LED Lighting
Replace incandescent bulbs used more than two hours per day with CFL or LED lamps. Maintain or moderately improve existing lighting levels (lumens), while minimizing wattage. Choose the highest efficacy (lumens per watt) bulbs. Be sure to install bulbs that are suitable replacement bulbs, i.e.: dimmable LEDs in fixtures controlled by dimmer switches; outdoor bulbs in exposed outdoor fixtures; enclosed globes; appropriate orientation (base upright/downwards).

Existing Incandescent Wattage to Replace	**New CFL or LED Lamp Wattage**	**Maximum Cost per Lamp**
40 – 75 W	5 – 13 W	**$ 10**
75 – 100 W	13 – 20 W	**$ 12**
150W +	20 – 25 W	**$ 15**

- Maximum of 15 lamps per household

3. Advanced Power Strip – Tier 2
Tier 2 Advanced Power Strip (APS) devices are primarily designed to address both passive and active standby power in targeted AV and PC environments. Two types of devices are allowed:

- Motion sensing power strips that shut off power to controlled devices when no motion is detected for a set period of time regardless of the level of power draw; and
- IR sensing strips that shut off power to controlled devices when no IR signal is detected for a set period of time regardless of the level of power draw.

Devices must consume less than 1W, have a one-year warranty, provide warranty for connected devices, provide surge protection to 740 joules, be UL 1449 and 1363 listed, be rated for 15 amps, and have a resettable circuit breaker. Master/peripheral load sensing strip must have at least 3 connected device outlets and include adjustable sensitivity. Direct-installed strips must disconnect power to at least 2 controlled devices.

Cost is limited to **$75** to purchase and install. Households shall not receive more than two per home.

http://www.embertec.com/
http://www.tricklestar.com/us/

4. Hybrid Heat Pump Water Heater or Solar Water Heater Installation –

- **Use the DOE-approved Water Heater Savings Calculator** to determine allowable cost and SIRs for replacing the existing system with either a hybrid heat pump water heater or solar water heater. The replacement system showing the highest SIR must be installed.
- The auditor must print the calculated comparison and save a copy in the client file.
- Cost must include all necessary incidental construction (i.e. sheds or platforms), delivery and disposal.
- In the instance where the Water Heater Savings Calculator indicates fuel switching as the most cost-effective for a household, fuel switching shall be allowed.
    1. Heat Pump Water Heater – Electric
        a. HPWH Space Requirements Checklist
        b. Does the room meet the volume requirements of the unit (> 750 ft3)?
        c. Are the ceilings high enough to accommodate the extra height of the HPWH?
        d. Is there adequate space to allow maintenance of the heat pump components?
        e. Can the HPWH be placed in the room such that there is sufficient clearance for airflow around the unit?
        f. Is there enough clearance for removal and cleaning of the air filter?
        g. Is the floor able to support the additional weight of the HPWH?
    2. Solar Water Heaters – Electric or Propane Fueled
        a. Installations must be sized according to "Residential Solar System Sizing Verification", which uses a 20 gal/person standard.
        b. Installations must pass the equivalent of the "Hawaii Energy Efficiency Program's Water Heater System Inspection Check List."

5.Small Room Air Conditioner (6-15,000 Btu/h cooling capacity)Replacement

- Replacement units must be the same size, or smaller, as existing.
- Existing units with an EER of 9.7 or lower are eligible for replacement.
- Minimum usage must be at least 10 hours per day.
- Cost is limited based upon cooling capacity
- New units must have a minimum EER as listed below or ENERGY STAR

Cooling Capacity (Btu/h)	Maximum Installed Cost	Minimum Efficiency of New Unit
6,000	**$350**	11
8,000	**$425**	
10,000	**$500**	10.6
12,000	**$600**	10.5
15,000	**$675**	

6.Very Large Room Air Conditioner (18,000 Btu/h cooling capacity) Replacement

- Replacement units must be the same size, or smaller, as existing.
- Existing units with a maximum EER of 9.8 are eligible for replacement.
- New units must have a minimum EER of 12 or ENERGY STAR
- Minimum usage must be at least 10 hours per day.
- Cost is limited to **$3,500.**

7.Refrigerator Replacement

- New units may not have through-the-door water/ice service.
- Auditor must meter at least 10% of units as a control for actual kWh usage.
- Replaced refrigerators must be recycled and refrigerant reclaimed.
- Existing refrigerators must use at least 825 kWh per year to be considered for replacement.
- Existing refrigerators should be replaced with similar size units
- Cost is limited to **$1,000** per replaced refrigerator