Memorandum

DATE: March 17, 2021

REPLY TO: EE-5W

ATTN OF: Revised Approval of Guam’s Priority List for Site-Built Single Family, Manufactured, and Small Multifamily Housing for the Weatherization Assistance Program

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

EFFECTIVE: 3/4/2020

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 Guam’s energy auditing procedures expires on the dates noted below in Table 1.

As with previous audit procedure approvals, Guam 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, Guam 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, Guam’s energy audit procedures are approved as follows:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Building Type</th>
<th>Comments</th>
<th>Expiration Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Priority List</td>
<td>Site-Built Housing (SBH) (1-4 Units)</td>
<td>See Attachment 1 and Table 2</td>
<td>3/4/2025</td>
</tr>
<tr>
<td>Priority List</td>
<td>Manufactured Housing (MH)</td>
<td>See Attachment 1 and Table 2</td>
<td>3/4/2025</td>
</tr>
<tr>
<td>Priority List</td>
<td>Small Multifamily (SMF) (5-24 Units)</td>
<td>See Attachment 1 and Table 2 Buildings must be 3 stories or less with no existing heating/cooling units except window A/C units</td>
<td>3/4/2025</td>
</tr>
<tr>
<td>N/A</td>
<td>Large Multifamily (LMF) (25+ Units)</td>
<td>Guam has no LMF audit approval. All other MF projects must be approved specifically by DOE.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
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 Guam’s program in addition to those allowed by 10 CFR 440 Appendix A:

<table>
<thead>
<tr>
<th>Item</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refrigerators</td>
<td>Approved 5/25/2017</td>
</tr>
<tr>
<td>Heat Pump Water Heaters</td>
<td>Approved 5/25/2017</td>
</tr>
<tr>
<td>Light Emitting Diode (LED) Lighting</td>
<td>Approved 5/25/2017</td>
</tr>
<tr>
<td>Compact Fluorescent (CFL) Lighting</td>
<td>Approved 5/25/2017</td>
</tr>
<tr>
<td>Low-Flow Aerators/Showerheads</td>
<td>Approved 5/25/2017</td>
</tr>
</tbody>
</table>

This approval of Guam’s 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 – Guam’s DOE-Approved Priority List
Attachment 1 - Guam’s DOE-Approved Priority List

Single Family, Manufactured, and Small Multifamily Housing – 3/4/2020

1. Low-Flow Showerheads & Faucet Aerators

2. LEDs & CFLs
   Replace incandescent bulbs used more than one to two hours per day with LED or CFL 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 LED/CFL’s in fixtures controlled by dimmer switches; outdoor bulbs in exposed outdoor fixtures; enclosed globes; appropriate orientation (base upright/downwards).

<table>
<thead>
<tr>
<th>Existing Incandescent Wattage to Replace</th>
<th>New LED Lamp Wattage</th>
<th>Maximum Cost per Lamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 – 75 W</td>
<td>5 – 13 W</td>
<td>$ 10</td>
</tr>
<tr>
<td>75 – 100 W</td>
<td>13 – 20 W</td>
<td>$ 15</td>
</tr>
<tr>
<td>150W +</td>
<td>20 – 25 W</td>
<td>$ 20</td>
</tr>
</tbody>
</table>

*Existing CFLs cannot be replaced with LED lamps.

3. Heat Pump Water Heater
   a. Household must have a minimum of 3 occupants
   b. Replace only electric resistance water heaters
   c. New units must have an Energy Factor (EF) of 3.0 or higher
   d. Cost is limited to $1,850

4. Small Room Air Conditioner (10-15,000 Btu/h cooling capacity) Replacement
   a. Replacement units must be the same size, or smaller, as existing
   b. Existing units with an EER of 9.8 (11.2 SEER) or less are eligible for replacement
   c. New units must have a minimum EER of 12 (13.7 SEER)
   d. Minimum usage must be at least 8 hours per day
   e. Cost is limited to $650

5. Very Small Room Air Conditioner (6-9,999 Btu/h cooling capacity) Replacement
   a. Replacement units must be the same size, or smaller, as existing
   b. Existing units with an EER of 9.7 (11.1 SEER) or less are eligible for replacement
   c. New units must have a minimum EER of 12 (13.7 SEER)
   d. Minimum usage must be at least 8 hours per day
   e. Cost is limited to $500
6. Refrigerator Replacement
Replace refrigerator with energy-efficient model if testing shows annual consumption is high enough to justify measure cost. Estimate annual electricity consumption by metering or locate usage in a database. When metering, a minimum 2-hour test shall be done. If the existing refrigerator uses more electricity than the minimum use threshold below, it can be replaced with a new unit.

<table>
<thead>
<tr>
<th>Refrigerator Size</th>
<th>Minimum kWh / 2 Hour (if metering)</th>
<th>Minimum Annual kWh to Qualify for Replacement (if using database) [kWh/yr]</th>
<th>Maximum Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 cu. ft. or less</td>
<td>.18</td>
<td>788</td>
<td>$700</td>
</tr>
<tr>
<td>16 - 19 cu. ft.</td>
<td>.20</td>
<td>876</td>
<td>$900</td>
</tr>
<tr>
<td>20 - 24 cu. ft.</td>
<td>.22</td>
<td>964</td>
<td>$1,100</td>
</tr>
<tr>
<td>25 cu. ft. or larger</td>
<td>.28</td>
<td>1,266</td>
<td>$1,600</td>
</tr>
</tbody>
</table>

**Existing Refrigerator and Freezer Testing**

kWh Guidelines for Replacement: In order to meet the daily minimum guidelines for replacement, the kWh’s must reach the Minimum kWh/2 Hour listed above by the end of two hours of metering.

If the unit is cooling to a temperature that is too low (wasteful), you may adjust the temperature. Set freezer temperature between 0 degrees and 5 degrees and refrigerator temperature between 38 degrees and 40 degrees.

If the client uses more than one refrigerator and all qualify to be replaced, encourage the client to allow for the removal of both refrigerators. The new refrigerators can be larger than the replaced refrigerators so long as it accommodates the household’s needs and can physically fit in the home. Always attempt to reduce the number of refrigeration units (refrigerators and freezers) in the home. The Energy Auditor/Educator must show the customer a picture of the new refrigerator, measure to ensure the new refrigerator will fit in the client’s home, and have the client sign off on the audit form.

Cost must include purchase, delivery and installation of the new refrigerator, and removal and environmentally responsible de-manufacturing of the old unit.

Replacement should be determined by using Energy Star guides and formulas designed for Guam that takes into consideration ambient temperatures.

Best practices for testing refrigerators include:
• If you interrupt a compressor cycle, wait 8 minutes before plugging it back in
• If door is closed and you still have wattage showing on the meter, perhaps the door switch is broken or the anti-sweat heater is running
• The usual running range (compressor on) is 200-400 Watts. Newer refrigerators draw about 150 Watts
• Watch for defrost periods (~400 Watts)
• Unplug a refrigerator to clean the coils
• Adjust the meter reading for ambient room temperatures (procedure to follow)
• Record the temperature inside the fresh food compartment and the freezer compartment
  a. New units cannot have through-the-door water/ice service
  b. Required to meter at least 10% of units
  c. Replaced refrigerators must be recycled and refrigerant reclaimed

7. Mini-Split Air Conditioner Replacement
   a. Replacement units must be the same size, or smaller, as existing
   b. Existing units with an EER of 10.1 (11.5 SEER) or lower are eligible for replacement
   c. New units must have a minimum EER of 13.4 (15.3 SEER)
   d. Minimum usage must be at least 8 hours per day
   e. Cost is limited to
      i. $1,000 for units with 9,000 Btu/h cooling capacity
      ii. $1,250 for units with 12,000 Btu/h cooling capacity