



# ARIZONA WEATHERIZATION ASSISTANCE PROGRAM

## ZONE 4 & 5 (PRESCOTT, FLAGSTAFF) PRIORITY LIST

The following is the State approved Single Family Home, Frame Housing and Mobile Home Priority List for Zone 4 & 5 (Prescott, Flagstaff), which was approved by DOE in September of 2011. If the sub grantee chooses not to follow the priority list or the home they are working on is above or below the acceptable range + or – 50 percent of the square footage of the assumption, a new computer energy model will be run to generate a new priority list for that home. See “A computer audit is required if:” section for more details on when it will be necessary for a computer audit to be performed.

### Arizona Block Housing Priority List Zones 4 & 5 (Prescott, Flagstaff)

#### Assumptions for Block Houses:

Pre and Post blower door = 2000 CFM @ 50 Pa

Uninsulated block walls U-value = 0.371

1000 Square Feet

15% Glazing

Single Pane, aluminum Windows U = 1.13 SHGC = 0.70

#### 1. Air Sealing

Primary Heating Type	Maximum Cost of 100 CFM50 Reduction (\$)
Propane	\$125
Gas	\$70
Electric Heat Pump	\$70

#### 2. Attic insulation to R-38

- a. If R-19 or less existing

#### 3. CFLs

- a. If existing lighting is incandescent bulb in use for 2 hours per day or more
- b. Limit of 8 CFLs per client



# ARIZONA WEATHERIZATION ASSISTANCE PROGRAM

## ZONE 4 & 5 (PRESCOTT, FLAGSTAFF) PRIORITY LIST

### 4. Duct Sealing and Insulation

Primary Heating Type	Maximum Cost of 100 CFM50 Reduction in duct leakage (\$)
Natural Gas and Propane with AC	\$425
Electric Heat Pump	\$425

### 5. Install heat pump water heater

- a. If there is an existing electric water heater
- b. Cost not to exceed \$1900
- c. Existing System  $EF \leq 0.90$
- d.  $EF \geq 2.4$
- e. Dwelling must not contain an electric resistance furnace if water heater is to be put into conditioned space
- f. 4 or more residents

### 6. Refrigerator Replacement

Annual kWh/yr Existing Unit	Annual kWh/yr of New Refrigerator		
	400 kWh/yr	500 kWh/yr	600 kWh/yr
800	\$525	\$393	\$262
850	\$590	\$459	\$328
900	\$656	\$525	\$393
950	\$722	\$590	\$459
1000	\$787	\$656	\$525
1100	\$919	\$787	\$656
1200+	\$1,050	\$919	\$787

### 7. Install low-e storm windows on East, West and North facing windows.

- a. If existing windows are single pane, aluminum windows
- b. Emissivity  $< +0.22$
- c. Cost of storm windows not to exceed \$15.00/ square foot



# ARIZONA WEATHERIZATION ASSISTANCE PROGRAM

## ZONE 4 & 5 (PRESCOTT, FLAGSTAFF) PRIORITY LIST

### Arizona Frame Housing Priority List Zones 4 and 5 (Prescott, Flagstaff)

**Assumptions for Frame Built Houses:**

- 1500 Square Feet
- No attic insulation
- No wall insulation (uninsulated 2X4 stud wall)
- Windows starting at U=0.90 SHGC = 0.65
- Windows are 15% of wall surface area
- Pre and Post blower door = 2000 CFM @ 50 Pa

1. Air Sealing

Primary Heating Type	Maximum Cost of 100 CFM50 Reduction (\$)
Propane	\$120
Gas	\$70
Electric Heat Pump	\$70

2. Attic Insulation to R-38

- a. If R-19 or less in attic

3. Dense Pack Side Wall Insulation

- a. Not to exceed \$2.50 per square foot

4. CFLs

- a. If existing lighting is incandescent bulb in use for 2 hours per day or more
- b. Limit of 8 CFLs per client

5. Duct Sealing and Insulation

Primary Heating Type	Maximum Cost of 100 CFM50 Reduction in duct leakage (\$)
Natural Gas and Propane with AC	\$425
Electric Heat Pump	\$425



# ARIZONA WEATHERIZATION ASSISTANCE PROGRAM

## ZONE 4 & 5 (PRESCOTT, FLAGSTAFF) PRIORITY LIST

6. Install heat pump water heater
  - a. If there is an existing electric water heater
  - b. Cost not to exceed \$1900
  - c. Existing System  $EF \leq 0.90$
  - d.  $EF \geq 2.4$
  - e. Dwelling must not contain an electric resistance furnace if water heater is to be put into conditioned space
  - f. 4 or more residents

### 7. Refrigerator Replacement

Annual kWh/yr Existing Unit	Annual kWh/yr of New Refrigerator		
	400 kWh/yr	500 kWh/yr	600 kWh/yr
800	\$525	\$393	\$262
850	\$590	\$459	\$328
900	\$656	\$525	\$393
950	\$722	\$590	\$459
1000	\$787	\$656	\$525
1100	\$919	\$787	\$656
1200+	\$1,050	\$919	\$787

8. Install low-e storm windows on East, West and North facing windows.
  - a. If existing windows are single pane, aluminum windows
  - b. Emissivity  $< +0.22$
  - c. Cost of storm windows not to exceed \$15.00/ square foot



# ARIZONA WEATHERIZATION ASSISTANCE PROGRAM

## ZONE 4 & 5 (PRESCOTT, FLAGSTAFF) PRIORITY LIST

### Arizona Mobile Home Priority List Zone 4 & 5 (Prescott, Flagstaff)

**Mobile Home Assumptions:**

Gas Price: \$1.19/Therm (From Southwest Gas Website)

Electricity Price: \$0.11/kWh (EIA)

Propane Price: \$2.60/gal.

Existing Aluminum Window: U = 1.13 SHGC = 0.80

Replacement Window: U = 0.30 SHGC = 0.30

Existing Component Insulation:

Ceiling Insulation: 1 inch of fiberglass (assembly R = 4.6)

Alternate Ceiling Configuration: Assumes R-19 has been added to roof through rehab

Belly Insulation: Wings: 1 inch rigid board

Center Cavity: 1 inch fiberglass

Walls: 2 inches of fiberglass batt, degraded (assembly R= 7.4)

1. Air Sealing

Primary Heating Type	Maximum Cost of 100 CFM50 Reduction (\$)
Natural Gas and Propane with CAC	\$70
Electric Heat Pump	\$70

2. Duct Sealing and Insulation

Primary Heating Type	Maximum Cost of 100 CFM50 Reduction in duct leakage (\$)
Natural Gas and Propane with CAC	\$425
Electric Heat Pump	\$425

3. Mobile Home Roof Insulation

a. If less than R-19

b. Cool roof coating or sealant shall only be done in conjunction with roof insulation

4. Mobile Home Belly Insulation

5. CFLs



# ARIZONA WEATHERIZATION ASSISTANCE PROGRAM

## ZONE 4 & 5 (PRESCOTT, FLAGSTAFF) PRIORITY LIST

- a. If existing lights are incandescent and on 2 hours or more a day
  - b. Limit of 8 CFLs per client
6. Install heat pump water heater
- a. If there is an existing electric water heater
  - b. Cost not to exceed \$1700
  - c. EF  $\geq$  2.4
  - d. Dwelling must not contain an electric resistance furnace if water heater is to be put into conditioned space
  - e. 4 or more residents

7. Refrigerator Replacement

Annual kWh/yr Existing Unit	Annual kWh/yr of New Refrigerator		
	400 kWh/yr	500 kWh/yr	600 kWh/yr
800	\$525	\$393	\$262
850	\$590	\$459	\$328
900	\$656	\$525	\$393
950	\$722	\$590	\$459
1000	\$787	\$656	\$525
1100	\$919	\$787	\$656
1200+	\$1,050	\$919	\$787

8. Install low-e storm windows on the East, West and North facing windows.
- a. If existing windows are single pane, aluminum windows
  - b. Emissivity  $\leq$  0.22
  - c. Cost of storm windows not to exceed \$15.00/ square foot

**A site specific computer energy model is required if:**

- There are potential cost-effective energy upgrades to the house that are not listed on the priority list
- The home being weatherized does not meet the assumptions square footage + or - 50 percent.
- There are not sufficient funds to complete all the measures; including energy related health and safety measures and other energy related repairs
- Energy related incidental repairs of more than \$100 are included with the energy upgrades
- Fuel swapping as a cost effective measure, see below