



AEP Ohio HELP Program Assessment Measure Workbook

Assessment Workbook

Assessment Details

Key Inputs	Value
Customer Name	
Assessor Name	
Assessment Date	

Premise Information

Key Inputs	Value	Instruction/Clarification
Year Built		
Square Footage of Residence		
Residence Heating Fuel		Specify natural gas or electric
Heating Type		If natural gas, specify natural gas furnace or natural gas boiler If electric, specify electric resistance, air-source heat pump, ground source heat pump, ductless mini-split heat pump, or electric furnace If other, please specify
Existing Cooling System		Specify air-source heat pump, ductless mini-split heat pump, central air conditioner, N/A (not cooled), or room air conditioner
Existing Water Heating Type		Specify natural gas, electric furnace, heat pump, or other

Measure Workbook – Direct Install Measures

Advanced Smart Tier 2 Power Strip

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Limit 1 per home
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph *Photos should show power strips with all items plugged in, both pre- and post-, to demonstrate that it is high use		

ENERGY STAR LED Bulbs

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Limit 18 per home
Wattage of Installed LED			
Wattage of Replaced Specialty Lamp			This is the existing lamp wattage prior to replacement
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Measure Workbook – Direct Install Measures

LED Outdoor Flood Lights

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Limit 3 per home
Wattage of Installed LED			
Wattage of Replaced Lamp			
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Low Flow Aerator

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Limit 3 per home
Flow Rate of Existing Aerator (GPM)			Must be ≥ 2.2 GPM
Number of Faucets in the Household			Use 3.5 if unknown
Number of People in the Household			Use 2.51 if unknown
Flow Rate of Low Flow Aerator (GPM)			Required: must be ≤ 1.5 GPM
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Measure Workbook – Direct Install Measures

Low Flow Showerhead

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Limit 2 per home (regardless of showerhead type)
Flow Rate of Existing Showerhead (GPM)			Must be ≥ 2.0 GPM
Flow Rate of Low Flow Showerhead (GPM)			Required: must be ≤ 1.5 GPM at 80 PSI
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Standard Flow Showerhead with Thermostatic Restrictor Valve (TSV)

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Limit 2 per home (regardless of showerhead type)
Flow Rate of Existing Showerhead (GPM)			
Number of People in the Household			Use 2.51 if unknown
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Measure Workbook – Direct Install Measures

Wi-Fi Enabled Smart Thermostat

Key Inputs	Value	Notes	Instruction/Clarification
Make and Model Number			*Must be one of the approved models listed on the next page
Quantity Installed			Limit 1 per household (must replace manual thermostat)
Controlled Cooling Capacity (Tons)			Input actual controlled capacity; leave blank if unknown
AC Efficiency (SEER)			If unknown, use 9.3 for electric resistance or 14 for heat pump
Heating Efficiency (COP or HSPF)			If unknown, use 1 COP or 8.2 HSPF
Total Installation Cost			
Photographic Documentation	• Pre-installation photograph • Post-installation photograph • *Document if existing thermostat was programmable and if it was programmed, if applicable		

*If the customer qualifies for a new HVAC system, the Wi-Fi enabled smart thermostat will be installed during the follow-up visit, in coordination with the HVAC installation.

Measure Workbook – Direct Install Measures

*Approved Wi-Fi Enabled Smart Thermostats

Ecobee - Ecobee3 - Ecobee3 Lite - Ecobee 4 - Ecobee Smart Thermostat - Ecobee Smart Thermostat with Voice Control - Ecobee Smart Thermostat Premium - Ecobee Smart Thermostat Enhanced	Sensi - Sensi Lite Smart Thermostat - Sensi Touch 2 Smart Thermostat - Sensi Touch Smart Thermostat (Silver) - Sensi Touch Smart Thermostat (White) - Sensi Smart Thermostat	Google Nest - Google Nest Learning Thermostat - Google Nest Thermostat - Google Nest Thermostat E
Pelican - TS200 - TS200H - TS250 - TS250H	Honeywell Home Lyric - TH6220WF2006 - TH6320WF2003 - RCHT8610WF2006 - RCHT8610WF2014 - RCHT8610WF3005 - RCHT8612WF2005 - RCHT8612WF2015 - RCHT9510FW2001 - RCHT9510FW2017 - RCHT	Honeywell - TH8110R1008 - TH8320R1003 - TH8321R1001 - YTH8321R1002 - TH8321WF1001 - YTH8321WF1036 - TH9320WF5003 9421R5021WW - YTHX9421R5085WW - YTHX9421R5127WW - YTHX9421R7001WW - YTHX9421R5101WW - RTH9585WF1004 - RTH9585WF1012 - TH6320WF1005 - RTH6580WF1001 - RTH6580WF1006 - RTH8580WF1004 - RTH8580WF1007 - RTH9580WF1005 - RTH9580WF1013 - RTH9580WFKITHQ - RET97A5E1001

Pipe Wrap Insulation

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Number of Feet of Insulated Hot Water Line			Limited to 15-feet in total
Installed Insulation Type			Specify foam insulation or foam insulation with insulating tape
Pipe Material Selection			Specify ½" plastic pipe, ½" copper pipe, ¾" plastic pipe, ¾" copper pipe
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Measure Workbook – Direct Install Measures

ENERGY STAR Air Purifier

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Smoke (CADR) Range			Per specifications of installed unit
Quantity Installed			Replacement unit must be the same size or smaller than the unit being replaced
Existing Clean Air Delivery Rate (Smoke CADR)			Actual replaced
Total Installation Cost			
Photographic Documentation	• Pre-installation photograph • Post-installation photograph • ENERGY STAR® certification		

Measure Workbook – Direct Install Measures

ENERGY STAR Dehumidifier

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Replacement unit must be the same size or smaller than the unit being replaced
Equipment Type			Specify if: - ENERGY STAR Whole House: > 8 cu. ft. - ENERGY STAR Most Efficient Whole House: ≤ 8 cu. ft. - ENERGY STAR Whole House: ≤ 8 cu. ft. - ENERGY STAR Portable: > 50 - ENERGY STAR Most Efficient Portable: > 25 to ≤ 50 pints/day - ENERGY STAR Portable: > 25 to ≤ 50 pints/day - ENERGY STAR Most Efficient Portable: ≤ 25 pints/day - ENERGY STAR Portable: ≤ 25 pints/day
Capacity (Pints Per Day)			For whole house dehumidifiers, use 59.2 if unknown For portable dehumidifiers, use 22.4 if expected to be less than or equal to 25 pints/day If expected to be between 25 and 50 pints/day, use 40. Otherwise, use 75
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph - ENERGY STAR certification		

Measure Workbook – Direct Install Measures

Water Heater Tank Wrap

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			Limit 1 per household
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Door Sweeps

Key Inputs	Value	Notes	Instruction/Clarification
Manufacturer			
Model Number			
Quantity Installed			
Total Installation Cost			
Photographic Documentation	- Pre-installation photograph - Post-installation photograph		

Measure Workbook – Retrofit Measures

Air Sealing

Key Inputs	Value	Notes	Instruction/Clarification
Infiltration Before Air Sealing Performed (CFM)			Blower door test results at 50 Pascals, actual
Infiltration After Air Sealing Performed (CFM)			Blower door test results at 50 Pascals, actual
Cooling Efficiency (SEER)			If unknown, please enter 13 for electric resistance and fossil fuel with central AC or 14 for heat pumps
Heating Efficiency (COP or HSPF)			If unknown, please enter 1 COP for electric resistance or 8.2 HSPF for heat pumps. For fossil fuel with central AC, enter 1
Material Cost			
Labor Cost			
Photographic Documentation	Proof of pre- and post-installation photographs of the unit number or front of home, and illustrating actions taken: • Air sealing around pipe penetrations, construction components • Weather stripping around windows and doors • Attic access cover • Knee wall door insulation and air sealing • Pre- and post- CFM blower door readings from pressure gauge • For multifamily buildings, photographs of 10% of the units must be submitted • Complete ASHRAE Calculator such as Red Calc ASHRAE 62.2-2016 • Ventilation calculator and submit screenshot with submission		

Measure Workbook – Retrofit Measures

Duct Sealing (Duct Blaster)

Key Inputs	Value	Notes	Instruction/Clarification
Leakage Before Duct Sealing (CFM25)			Actual measured
Leakage After Duct Sealing (CFM25)			Actual measured
Cooling Efficiency (SEER)			
Heating Efficiency (COP)			If unknown, please leave this field in blank. Please note that COP = HSPF/3.412
Material Cost			
Labor Cost			
Photographic Documentation	• Photo documentation of the pre- and post- duct sealing pressure readings • Duct Blaster: CFM25 pre- and post-, Pascals pre- and post- • Modified Blower Door Subtraction Method: CFM50 Whole house pre- and post-, CFM50 Envelope pre- and post-, Duct Pascals pre- and post-		

Measure Workbook – Retrofit Measures

Duct Sealing (Blower Door)

Key Inputs	Value	Notes	Instruction/Clarification
Whole House CFM (Before)			Actual measured
Whole House CFM (After)			Actual measured
Envelope CFM (Before)			Actual measured
Envelope CFM (After)			Actual measured
House to Duct Pressure in Pascals (Before)			Actual measured
House to Duct Pressure in Pascals (After)			Actual measured
Cooling Efficiency (SEER)			
Heating Efficiency (COP)			If unknown, please leave this field in blank. Please note that COP = HSPF/3.412
Material Cost			
Labor Cost			
Photographic Documentation	• Photo documentation of the pre- and post- duct sealing pressure readings • Duct Blaster: CFM25 pre- and post-, Pascals pre- and post- • Modified Blower Door Subtraction Method: CFM50 whole house pre- and post-, CFM50 envelope pre- and post-, duct Pascals pre- and post-		

Measure Workbook – Retrofit Measures

ENERGY STAR Freezer

Key Inputs	Value	Notes	Instruction/Clarification
Existing Unit Energy Consumption (UEC)			Use 1215, if unknown
Quantity Installed			Limit 1 per home
Existing Unit Available Opening (if applicable)			Please provide the dimensions of the current unit opening (width x height x depth)
Access Path Dimensions			Measure the height and width of the exterior door Measure with the front door open, and measure inside the door frame to where the door is
Installed Freezer Model Number			
Installed Freezer Serial Number			
Installed Freezer Manufacturer			
Installed Freezer Size (cu. ft.)			
Installed Unit Energy Consumption (UEC)			Obtain from ENERGY STAR listing or use 340, if unknown
Material Cost			
Labor Cost			
Photographic Documentation	• Photo of existing freezer and nameplate • Photo of new freezer and nameplate • ENERGY STAR certification		

Measure Workbook – Retrofit Measures

ENERGY STAR Refrigerator

Key Inputs	Value	Notes	Instruction/Clarification
Existing Unit Energy Consumption (UEC)			Use 1081, if unknown
Existing Unit Available Opening			Please provide the dimensions of the current unit opening (width x height x depth)
Access Path Dimensions			Measure the height and width of the exterior door Measure with the front door open, and measure inside the door frame to where the door is
Quantity Installed			Limit 1 per home
Installed Refrigerator Model Number			
Installed Refrigerator Serial Number			
Installed Refrigerator Manufacturer			
Installed Refrigerator Size (cu. ft.)			
Installed Unit Energy Consumption (UEC)			Obtain from ENERGY STAR listing or use 426, if unknown
Material Cost			
Labor Cost			
Photographic Documentation	• Photo of existing refrigerator and nameplate • Photo of new refrigerator and nameplate • ENERGY STAR certification		

Measure Workbook – Retrofit Measures

ENERGY STAR Clothes Washer

Key Inputs	Value	Notes	Instruction/Clarification
Existing Unit Available Opening (if applicable)			Please provide the dimensions of the current unit opening (width x height x depth)
Access Path Dimensions			Measure the height and width of the exterior door. Measure with the front door open, and measure inside the door frame to where the door is
Quantity Installed			Limit 1 per home
Manufacturer			
Model Number			
Serial Number			
Integrated Water Factor of Baseline Equipment			If unknown, use 6.5 for top loading or 4.7 for front loading
Equipment Type			Specify ENERGY STAR or CEE Tier 2
Capacity (cu. ft.)			If unknown, use 3.23
Integrated Water Factor of Efficient Equipment			For top loading, if unknown use 4.3 if ENERGY STAR or 3.2 if CEER Tier 2. For front loading, if unknown use 3.2
Integrated Modified Energy Factor of Efficient Equipment			For top loading, if unknown use 2.06 if ENERGY STAR certified or 2.92 if CEE Tier 2. For front loading, if unknown use 2.76 if ENERGY STAR certified or 2.92 if CEE Tier 2
Material Cost			
Labor Cost			
Photographic Documentation	• Photo of existing washer and nameplate • Photo of new washer and nameplate • ENERGY STAR certification		

Measure Workbook – Retrofit Measures

ENERGY STAR Heat Pump Clothes Dryer

Key Inputs	Value	Notes	Instruction/Clarification
Existing Unit Available Opening (if applicable)			Please provide the dimensions of the current unit opening (width x height x depth)
Access Path Dimensions			Measure the height and width of the exterior door. Measure with the front door open, and measure inside the door frame to where the door is
Quantity Installed			Limit 1 per home
Manufacturer			
Model Number			
Serial Number			
Heat Pump Product Class			Specify electric heat pump, standard (≥ 4.4 cu. ft.) or electric heat pump, compact (120v) (≥ 4.4 cu. ft.)
ENERGY STAR Certification Type			Must be ENERGY STAR Most Efficient
Load (lbs)			If unknown, use 8.45 for standard dryer size or 3 for compact dryer
Material Cost			
Labor Cost			
Photographic Documentation	• Photo of existing dryer and nameplate • Photo of new heat pump dryer and nameplate • ENERGY STAR certification		

Measure Workbook – Retrofit Measures

ENERGY STAR All-in-One Clothes Washer-Dryer

Key Inputs	Value	Notes	Instruction/Clarification
Existing Unit Available Opening (if applicable)			Please provide the dimensions of the current unit opening (width x height x depth)
Access Path Dimensions			Measure the height and width of the exterior door. Measure with the front door open, and measure inside the door frame to where the door is
Quantity Installed			Limit 1 per home
Manufacturer			
Model Number			
Serial Number			
Unit Capacity (cu. ft.)			If unknown, assume 4.9
Integrated Modified Energy Factor of Efficient Equipment			If unknown, use 2.76 if ENERGY STAR or 2.92 if ENERGY STAR Most Efficient
Load (lbs)			If unknown, use 8.45
Combined Energy Factor (CEF) (lbs/kWh)			If unknown, use 4.97 if ENERGY STAR or 6.9 if ENERGY STAR Most Efficient
Material Cost			
Labor Cost			
Photographic Documentation	• Photo of existing washer and dryer and nameplates • Photo of new all-in-one clothes washer-dryer and nameplate • ENERGY STAR certification		

Measure Workbook – Retrofit Measures

ENERGY STAR Heat Pump

Key Inputs	Value	Notes	Instruction/Clarification
Existing Unit Model Number			Include model numbers for both the indoor and outdoor unit if applicable
Existing Unit Part-load Cooling Efficiency (SEER)			Must be below 10 SEER
Existing Unit Cooling Capacity (tons)			
Existing Unit Heating Efficiency (HSPF)			
Quantity Installed			Limit 1 per home unless preapproved by Resource Innovations
Installed Unit Manufacturer			
Installed Unit Model Number			Include model numbers for both the indoor and outdoor unit
Installed Unit Serial Number			Include serial numbers for both the indoor and outdoor unit
Installed Unit Cooling Capacity (tons)			
Installed Unit Heating Capacity (kBtu/h)			$\text{kBtu/h} = \text{MBH} = \text{Mbtu/h} = \text{Btu/h} / 1,000$
Installed Unit Full-load Cooling Efficiency (EER2)			New equipment must be ≥ 8.5 EER2
Installed Unit Part-load Cooling Efficiency (SEER2)			New equipment must be ≥ 16 SEER2
Installed Unit Heating Efficiency (HSPF2)			New equipment must be ≥ 8.5 HSPF2
Material Cost			
Labor Cost			
Photographic Documentation	- Pre- and post-installation photographs are required. The nameplates of the existing and new unit must be submitted - For multifamily buildings, photographs for 10% of each unit type must be submitted - ENERGY STAR certification		

Measure Workbook – Retrofit Measures

ENERGY STAR Mini-Split Heat Pump

Key Inputs	Value	Notes	Instruction/Clarification
Existing Unit Model Number			Include model numbers for both the indoor and outdoor unit if applicable
Existing Unit Part-load Cooling Efficiency (SEER)			Must be below 10 SEER
Existing Unit Cooling Capacity (tons)			
Existing Unit Heating Efficiency (HSPF)			
Quantity Installed			Limit 1 per home unless preapproved by Resource Innovations
Installed Unit Manufacturer			
Installed Unit Model Number			Include model numbers for both the indoor and outdoor unit
Installed Unit Serial Number			Include serial numbers for both the indoor and outdoor unit
Installed Unit Cooling Capacity (kBtu/h)			kBtu/h = MBH = Mbtu/h = Btu/h / 1,000
Installed Unit Heating Capacity (kBtu/h)			kBtu/h = MBH = Mbtu/h = Btu/h / 1,000
Installed Unit Full-load Cooling Efficiency (EER2)			New equipment must be ≥ 8.5 EER2
Installed Unit Part-load Cooling Efficiency (SEER2)			New equipment must be ≥ 16 SEER2
Installed Unit Heating Efficiency (HSPF2)			New equipment must be ≥ 8.5 HSPF2
Material Cost			
Labor Cost			
Photographic Documentation	- Pre- and post-installation photographs are required - The nameplates of the existing and new unit must be submitted - For multifamily buildings, photographs for 10% of each unit type must be submitted - ENERGY STAR certification		

Measure Workbook – Retrofit Measures

ENERGY STAR Heat Pump Water Heater

Key Inputs	Value	Notes	Instruction/Clarification
Water Heater Location			Specify conditioned or unconditioned space
Existing Dehumidifier?			Enter “yes” or “no”
Quantity Installed			
Installed Unit Manufacturer			
Installed Unit Model Number			
Installed Unit Uniform Energy Factor (UEF)			
Installed Unit Water Heater Storage Capacity (Gallons)			
Material Cost			
Labor Cost			
Photographic Documentation	• Pre- and post-installation photographs are required • For multifamily buildings, photographs for 10% of each unit type must be submitted • ENERGY STAR certification		

Measure Workbook – Retrofit Measures

Attic Insulation

Key Inputs	Value	Notes	Instruction/Clarification
Existing Attic Insulation R-value			Must be R-19 or less (enter R-5 if unknown)
New Attic Insulation R-value			
Existing Insulated Area (sq. ft.)			
New Total Insulated Area (sq. ft.)			Ignore framing in estimates; calculation automatically adjusts for this
Air Sealing Measure Included?			
Material Cost			
Labor Cost			
Photographic Documentation	- Pre- and post-installation photographs are required. For multifamily buildings, photographs of 10% of each unit type must be submitted - Exterior image of unit number on apartment door/wall or front of home - Installed insulation		

Measure Workbook – Retrofit Measures

Floor Insulation

Key Inputs	Value	Notes	Instruction/Clarification
Existing Floor Insulation R-value			Must be R-5 or less (enter R-3.53 if unknown)
Existing Insulated Area (sq. ft.)			
New Floor Insulation R-value			
New Total Insulated Area (sq. ft.)			Ignore framing in estimates; calculation automatically adjusts for this
Material Cost			
Labor Cost			
Photographic Documentation	- Pre- and post-installation photographs are required. For multifamily buildings, photographs of 10% of each unit type must be submitted - Exterior image of unit number on apartment door/wall or front of home - Installed insulation		

Measure Workbook – Retrofit Measures

Wall Insulation

Key Inputs	Value	Notes	Instruction/Clarification
Existing Wall Insulation R-value			Must be R-5 or less (enter R-5 if unknown)
Existing Insulated Area (sq. ft.)			
New Wall Insulation R-value			
New Total Insulated Area (sq. ft.)			Ignore framing in estimates; calculation automatically adjusts for this
Material Cost			
Labor Cost			
Photographic Documentation	- Pre- and post-installation photographs are required. For multifamily buildings, photographs of 10% of each unit type must be submitted - Exterior image of unit number on apartment door/wall or front of home - If possible, wall interior space with no insulation or with damaged insulation - If possible, installed insulation		

Measure Workbook – Retrofit Measures

Rim Joist Insulation

Key Inputs	Value	Notes	Instruction/Clarification
Existing Rim Joist Insulation R-value			Must be R-5 or less (enter R-5 if unknown)
Existing Insulated Area (sq. ft.)			
New Rim Joist Insulation R-value			
New Total Insulated Area (sq. ft.)			Ignore framing in estimates; calculation automatically adjusts for this
Material Cost			
Labor Cost			
Photographic Documentation	- Pre- and post-installation photographs are required. For multifamily buildings, photographs of 10% of each unit type must be submitted - Exterior image of unit number on apartment door/wall or front of home - If possible, rim joist interior space with no insulation or with damaged insulation - If possible, installed insulation		

Measure Workbook – Retrofit Measures

Basement / Sidewall Insulation

Key Inputs	Value	Notes	Instruction/Clarification
Existing Basement / Sidewall Insulation R-value			Must be R-5 or less (leave blank, if unknown or none)
Is the Basement Conditioned?			Enter “yes” or “no”
New Floor Insulation R-value			
Total Length of Basement Wall (ft.)			
Total Height of Basement Wall – Above Grade (ft.)			
Total Height of Basement Wall – Below Grade (ft.)			
Material Cost			
Labor Cost			
Photographic Documentation	- Pre- and post-installation photographs are required. For multifamily buildings, photographs of 10% of each unit type must be submitted - Exterior image of unit number on apartment door/wall or front of home - If possible, basement / sidewall interior space with no insulation or with damaged insulation - If possible, installed insulation		

Minor Repair – Health and Safety

*Preapproval is required. Please submit a quote and description of health and safety issue for approval.

Key Inputs	Value	Notes	Instruction/Clarification
Description			Enter description of health and safety issue
Material Cost			
Labor Cost			
Required Documentation	Photograph of health and safety issue		