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October 2023 Implementation Manual Changes

General, Agricultural, Residential
08/17/2023



General IM

Corinne Mauck, Implementation Manual Coordinator

Changes: Non-Sector Chapters

- **Overall**
 - Reformatting of tables and removal of sidebar content
- **1. Introduction**
 - 1.7 COTR Request and Acknowledgement Procedure: Removed the Green Motors Rewind Initiative from the enrollment examples.
- **2. BPA Funding**
 - Reorganized sections for readability and clarity.
- **3. General Requirements**
 - Corrected minor typos and grammar errors.
 - Added section 3.6 Hemp and Marijuana to reflect BPA policy:
 - Hemp and associated load is allowed to participate in the BPA EE program.
 - BPA will not provide funding or support for measures or projects involving marijuana-related business load.
 - BPA will allow customers to report self-funded marijuana related activities that meet the rules and requirements of the Implementation Manual.

Changes: Non-Sector Chapters

- **4. Custom Projects**
 - Updated this section’s language throughout to align with other IM sections and clarify custom project requirements.
 - Also updated section 4.1 Custom Project Payment Rate (table) to increase specific payment rates.

PROJECT TYPE	MEASURE LIFE (YEARS)	SECTOR	PAYMENT RATE (\$/KWH)
NONRESIDENTIAL LIGHTING	ALL	AGRICULTURAL, COMMERCIAL, INDUSTRIAL	\$0.13
NEW OR RETROFIT CONSTRUCTION, MAJOR RENOVATION (EXCLUDING NONRESIDENTIAL LIGHTING)	1	ALL	\$0.025
	2-3	AGRICULTURAL, COMMERCIAL, INDUSTRIAL, RESIDENTIAL	\$0.06
	4-19	AGRICULTURAL, COMMERCIAL, INDUSTRIAL, RESIDENTIAL, UTILITY DISTRIBUTION	\$0.33
		WHOLE BUILDING NEW CONSTRUCTION COMMERCIAL, INDUSTRIAL	\$0.35
	20+	AGRICULTURAL, COMMERCIAL, INDUSTRIAL, RESIDENTIAL, UTILITY DISTRIBUTION	\$0.38
NEW CONSTRUCTION	45+	RESIDENTIAL	\$0.45

Changes: Non-Sector Chapters

- **5. Custom Programs**
 - Updated this section’s language to align, where applicable, with section 4. Custom Projects
 - Also updated section 5.1 Custom Programs Payment Rate (table) which increases payment rates to match section 4.1 Custom Project Payment Rate (table).

PROJECT TYPE	MEASURE LIFE (YEARS)	SECTOR	PAYMENT RATE (\$/KWH)
NONRESIDENTIAL LIGHTING	ALL	AGRICULTURAL, COMMERCIAL, INDUSTRIAL	\$0.13
NEW OR RETROFIT CONSTRUCTION, MAJOR RENOVATION (EXCLUDING NONRESIDENTIAL LIGHTING)	1	ALL	\$0.025
	2-3	AGRICULTURAL, COMMERCIAL, INDUSTRIAL, RESIDENTIAL	\$0.06
	4-19	AGRICULTURAL, COMMERCIAL, INDUSTRIAL, RESIDENTIAL, UTILITY DISTRIBUTION	\$0.33
		WHOLE BUILDING NEW CONSTRUCTION COMMERCIAL, INDUSTRIAL	\$0.35
	20+	AGRICULTURAL, COMMERCIAL, INDUSTRIAL, RESIDENTIAL, UTILITY DISTRIBUTION	\$0.38
NEW CONSTRUCTION	45+	RESIDENTIAL	\$0.45

Changes: Intro to Sectors

- **6.2 Measure Distribution Channels**
 - BPA corrected the Measure Delivery Channel (table) language to better differentiate who the term 'customer' applies to, i.e., BPA customer or end-user.
 - Added language to refer reader to the table in 6.2 for verification requirements when using the direct install delivery channel.
 - BPA updated the Documentation Requirements by Channel (table) "End-user Identifying Information (Required in BEETS)" column to say "May Be Required in BEETS."
 - Not all measures have the same end-user identification information requirements in BEETS for each delivery channel.

Changes: Intro to Sectors, cont'd

DOCUMENTATION REQUIRED*						
DISTRIBUTION CHANNEL	METHODOLOGY ALLOCATING SAVINGS	END-USER IDENTIFYING INFORMATION (MAY BE REQUIRED IN BEETS)*	DOCUMENTATION OF REQUEST	SALES REPORT	EQUIPMENT/ CONTRACTOR INVOICE	DOCUMENTATION OF MAILING
Retail	X			X		
By Request		X	X		X	X (when distributed by mail)
Direct Install		X			X	
Coupon or Instant Rebate		X		X		
Standard Rebate Payment		X			X	

*Additional requirements may apply and will be listed in the body of the IM for each measure category.

Questions?

Agricultural

David J. Lee, Agricultural and Federal Sector Lead



Measure Expirations

These measures **expire on September 30, 2023:**

- **Thermostatically controlled stock tank de-icers**
 - RTF expire the measure
 - Low measure uptake

Measure Changes: Savings

As a result of changes made by the Regional Technical Forum, BPA increased the following measure energy savings, effective October 1, 2023:

- **7.5.1 Irrigation System Conversion: LESA/LEPA/MDI**
 - Savings increase between 0.7kWh - 4kWh
- **7.5.2 Sprinkler Package Replacement**
 - Savings increase between 0.5kWh -2kWh
- **7.5.3 Irrigation System Low-Pressure Conversion: High-Pressure to Low-Pressure**
 - Savings increase between 6.8kWh – 8.4kWh

Program Requirement Change

BPA changed the following requirements for section 7.7.5 - Other Agricultural Measures:

- **Requirement effective until September 30, 2023:**
 - Nursery and greenhouse project improvements in irrigation, air handling, temperature, and humidity controls for facilities using less than 1 aMW. Please note: If usage is above 1 aMW, projects at the facility are considered Industrial.
- **Requirement effective on October 1, 2023:**
 - Nursery and greenhouse facilities with project improvements in energy and water efficiency (e.g., lighting, irrigation, humidity controls, etc.).

Measure Changes: Incentives

BPA increased incentives values for the following measures due to Regional Technical Forum changes and to align with current marketplace costs.

- 7.5.1 Irrigation System Conversion: LESA/LEPA/MDI
- 7.5.2 Sprinkler Package Replacement
- 7.5.3 Irrigation System Low-Pressure Conversion: High-Pressure to Low-Pressure
- 7.6.1 Irrigation Pump Testing and Systems Analysis (BPA-Qualified)
- 7.6.2 Variable Frequency Drive for Agricultural Centrifugal Pumps (BPA-Qualified)
- 7.6.3 Variable Frequency Drive in Agricultural Turbine Pump Applications (BPA-Qualified)
- 7.6.4 Variable Frequency Drive for New Agricultural Pump Installations (BPA-Qualified)
- 7.6.5 Agricultural New Pump Efficiency Upgrade (BPA-Qualified)

Incentives: Irrigation Measures

IMPLEMENTATION MANUAL SECTION AND MEASURE TITLE	CURRENT VALUE	VALUE EFFECTIVE OCTOBER 1, 2023
7.5.1 Irrigation System Conversion: LESA/LEPA/MDI from High-Pressure	\$14	\$18
7.5.1 Irrigation System Conversion: LESA/LEPA/MDI from MESA	\$14	\$18
7.5.2 Sprinkler Package Replacement – High-Pressure Sprinkler Package	\$14	\$16
7.5.2 Sprinkler Package Replacement – MESA Sprinkler Package	\$10	\$15
7.5.2 Sprinkler Package Replacement – LESA/LEPA/MDI Sprinkler Package	\$4	\$7
7.5.3 Irrigation System Low-Pressure Conversion: High-Pressure to Low-Pressure – Center-pivot or Lateral-move	\$12	\$18
7.5.3 Irrigation System Low-Pressure Conversion: High-Pressure to Low-Pressure – Wheel-line or Hand-line	\$12	\$16

Incentive: Pumps and VFDs

IMPLEMENTATION MANUAL SECTION AND MEASURE TITLE	CURRENT VALUE	VALUE EFFECTIVE OCTOBER 1, 2023
7.6.1 Irrigation Pump Testing And System Analysis (BPA-Qualified)		
Pump Testing Service Simple System Evaluation	\$50	\$100
Pump Testing Service Irrigation Pump Test Simple System or Open Discharge	\$100	\$200
Pump Testing Service Irrigation Pump Test System Analysis 400 acres or less	\$200	\$400
Pump Testing Service Irrigation Pump Test System Analysis Over 400 acres	\$300	\$600
Pump Testing Service Irrigation Pump Test (main pump) Complex System Over 400 acres	\$200	\$400
Pump Testing Service Irrigation Pump Test (booster pump) Complex System Over 400 acres	\$50	\$100

Incentive: Pumps and VFDs cont'd

IMPLEMENTATION MANUAL SECTION AND MEASURE TITLE	CURRENT VALUE	VALUE EFFECTIVE OCTOBER 1, 2023
7.6.2 Variable Frequency Drive for Agricultural Centrifugal Pumps (BPA-Qualified)	\$50	\$70
7.6.3 Variable Frequency Drive in Agricultural Turbine Pump Applications (BPA-Qualified)	\$80	\$100
7.6.4 Variable Frequency Drive for New Agricultural Pump Installations (BPA-Qualified) – New Centrifugal Pump	\$50	\$70
7.6.4 Variable Frequency Drive for New Agricultural Pump Installations (BPA-Qualified) – New Turbine Pump	\$80	\$100
7.6.5 Agricultural New Pump Efficiency Upgrade (BPA-Qualified)	\$50	\$70

New: Agricultural Energy Audits

7.8.1 Agricultural Energy Audit Screening

- **Basis for Energy Savings**

The Agricultural Energy Audit Screening measure enables agricultural producers to provide:

- High-level information about electrical energy-consuming equipment
- Information about the farm type and agricultural production activities to inform participation in the detailed Agricultural On-Site Energy Audit measure (7.8.2).
- There are no energy savings associated with this measure.

New: Agricultural Energy Audits

7.8.1 Agricultural Energy Audit Screening, cont'd

- **Requirements and Specifications**

- Agricultural Energy Audit Screening form completed by either:
 - The agricultural producer independently; OR
 - The agricultural producer and their electric utility; OR
 - The agricultural producer and an experienced agricultural energy auditor who is:
 - ✓ Association of Energy Engineers certified energy manager (CEM), U.S. Department of Agriculture Natural Resource Conservation Service Technical Service Provider (USDA NRCS TSP), state licensed professional engineer (P.E.), and/or
 - ✓ Individual with several years of agricultural energy auditing experience.
- The Agricultural Energy Audit Screening form must be filled out and submitted to BPA customer service engineer for review and approval, before the agricultural producer proceeds with an on-site energy audit.

New: Agricultural Energy Audits

7.8.1 Agricultural Energy Audit Screening, cont'd

- **Documentation Requirements** submitted into BEETS and also kept in the customer file
 - End user identifying information
 - Agricultural Energy Audit Screening form
- **Supporting Content**
 - Available Agricultural Energy Auditors
 - Within the document will be hyperlinks to other entity's list of auditors (USDA TSPs, contracted ODOE auditors); as well as, other auditor/firms that not on those lists.
 - Agricultural Energy Audit Measure Program Process Steps
- **Payment**
 - \$150 per agricultural producer (e.g., farm, ranch, greenhouse, dairy, etc.)

New: Agricultural Energy Audits

7.8.1 Agricultural Energy Audit Screening, cont'd

Customer information

Farm Business Name	Click or tap here to enter text.		
Site Address	Street Click or tap here to enter text.		
	City Click or tap here to enter text.	State Click or tap here to enter text.	Zip Code Click or tap here to enter text.
Phone Number	Click or tap here to enter text.	Email Address Click or tap here to enter text.	
Is the farm owned or leased?	<input type="checkbox"/> Owned <input type="checkbox"/> Leased		
Electric Utility Name	Click or tap here to enter text.		
Electric Utility Account Number	Click or tap here to enter text.		
Annual Electricity Use (kWh/yr.)	Irrigation Electricity Usage Click or tap here to enter text.	Farm Operations Electricity Usage Click or tap here to enter text.	

Agricultural Site Information

Site Type (Select all that apply)	<input type="checkbox"/> Dairy	<input type="checkbox"/> Orchard	<input type="checkbox"/> Green House	<input type="checkbox"/> Other (please describe): Click or tap here to enter text.
	<input type="checkbox"/> Poultry	<input type="checkbox"/> Vineyard	<input type="checkbox"/> Forestry Products	
	<input type="checkbox"/> Ranch	<input type="checkbox"/> Irrigated Crop	<input type="checkbox"/> Nursery Stock	
			<input type="checkbox"/> Produce Storage	

Farm Buildings

Fuel Source for HVAC system in heated and/or cooled buildings: <input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane <input type="checkbox"/> Electricity <input type="checkbox"/> Other: Click or tap here to enter text.	How many heated and/or cooled buildings are on site? Click or tap here to enter text.	How many lighted buildings are on site? Click or tap here to enter text.
	Total square footage of heated and/or cooled buildings: Click or tap here to enter text.	Total square footage of lighted buildings: Click or tap here to enter text.
	Age of HVAC system in heated and/or cooled buildings: Click or tap here to enter text.	Yard Lighting? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown

Irrigation Systems

Type of Irrigation System (select all that apply and enter acres served)		Total Acres of Irrigated Land: Click or tap here to enter text.
<input type="checkbox"/> Hand-line/Wheel-line Acres Served <input type="text"/> <input type="checkbox"/> Solid Set Sprinklers Acres Served <input type="text"/> <input type="checkbox"/> Solid Set Drip Acres Served <input type="text"/> <input type="checkbox"/> Solid Set Orchard Acres Served <input type="text"/> <input type="checkbox"/> Pivot with Mid-Elevation Sprinklers (MESA ≥ 40 inches) Acres Served <input type="text"/> <input type="checkbox"/> Pivot/Linear with Low Elevation Sprinklers (LESA, LEPA ≤ 39 inches) Acres Served <input type="text"/>	<input type="checkbox"/> Low Energy Precision Application Acres Served <input type="text"/> <input type="checkbox"/> Pivot/Linear with Impact Sprinklers Acres Served <input type="text"/> <input type="checkbox"/> Pivot/Linear with Mobile Drip Irrigation Acres Served <input type="text"/> <input type="checkbox"/> Other irrigation system (please describe) Click or tap here to enter text. Acres Served <input type="text"/>	
		Typical Crops and Rotation: Click or tap here to enter text.

New: Agricultural Energy Audits

7.8.1 Agricultural Energy Audit Screening, cont'd

Irrigation Pumps

Enter the number of pumps and the total horsepower of the pumps for each age range:		
0 - 5 years: <input type="text"/>	10 - 15 years: <input type="text"/>	21 - 25 years: <input type="text"/>
Total Horsepower: <input type="text"/>	Total Horsepower: <input type="text"/>	Total Horsepower: <input type="text"/>
6 - 9 years: <input type="text"/>	16 - 20 years: <input type="text"/>	26+ years: <input type="text"/>
Total Horsepower: <input type="text"/>	Total Horsepower: <input type="text"/>	Total Horsepower: <input type="text"/>
Are any pumps on VFDs: <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know		

Dairy Information (if applicable)

Total Head Count of Milkers: Click or tap here to enter text.	Square Footage of Dairy Parlor: Click or tap here to enter text.
Is there a plate cooler? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know	Is there a VFD on the vacuum pump? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't know
Is there a VFD on the compressor? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> DK	Does this dairy process or chill the milk? <input type="checkbox"/> Process <input type="checkbox"/> Chill
Are there cooling fans? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know	Has the lighting been converted to LEDs? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Don't Know

Green House/Indoor Agriculture Grow Information (if applicable)

How many green houses are on site? Click or tap here to enter text.	What's the total square footage of the green houses? Click or tap here to enter text.	Do the greenhouses have lighting? <input type="checkbox"/> Yes <input type="checkbox"/> No
Are the green houses heated and/or cooled? <input type="checkbox"/> Yes <input type="checkbox"/> No	What fuel is used heat and/or cool the green houses: <input type="checkbox"/> Natural Gas <input type="checkbox"/> Propane <input type="checkbox"/> Electric	

Potential Energy Efficiency Project Details

Briefly describe any areas of interest for potential equipment improvement projects at the site (e.g. lighting, HVAC, irrigation pumps...).	Was an energy audit assessment performed before? <input type="checkbox"/> Yes <input type="checkbox"/> No
Click or tap here to enter text.	If yes, what year was the audit performed? Click or tap here to enter text.

Have you contacted a USDA NRCS Technical Service Provider or Energy Auditor about completing an on-site energy audit? Yes No If "yes," complete the information below:

<u>Energy Auditor Name:</u> Click or tap here to enter text.	<u>TSP, P.E., CEM, or Other:</u> Click or tap here to enter text.	<u>Auditor Phone Number:</u> Click or tap here to enter text.	<u>Auditor Business Address:</u> Click or tap here to enter text.
	<u>Years of Experience:</u> Click or tap here to enter text.	<u>Auditor Email:</u> Click or tap here to enter text.	

(A) Estimated Energy Audit Cost: Click or tap here to enter text.	(B) Outside Funding Available for Energy Audit: Click or tap here to enter text.	Net Cost (A-B) = Click or tap here to enter text.
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New: Agricultural Energy Audits

7.8.2 Agricultural On-Site Energy Audit

- **Basis for Energy Savings**

- Enables agricultural producers to complete an agricultural on-site energy audit that identifies potential energy efficiency improvements that include available BPA Agricultural Program UES measures and custom energy efficiency project opportunities.
- Agricultural producer must first complete the requirements for the Agricultural Energy Audit Screening measure (7.8.1) before completing the agricultural on-site energy audit.
- An experienced agricultural on-site energy auditor will inspect buildings, equipment and processes, to identify and analyze energy efficiency improvements that could be implemented and result in energy savings.
- There are no energy savings associated with this measure.

New: Agricultural Energy Audits

7.8.2 Agricultural On-Site Energy Audit, cont'd

• Requirements and Specifications

- This measure is available for agricultural producers that first complete the requirements for the Agricultural Energy Audit Screening measure (7.8.1). This measure requires the following:
 - Agricultural On-site Energy Audit and Report that meets BPA's Agricultural Energy Audit Standard.
 - Agricultural On-site Energy Audit must be completed by an experienced agricultural energy auditor who is:
 - An Association of Energy Engineers certified energy manager (CEM), USDA NRCS TSP, state licensed professional engineer (P.E.) and/or
 - An individual with several years of agricultural energy auditing experience.
 - The Agricultural On-site Energy Audit Report must be submitted to the BPA customer service engineer for review and approval.

• Documentation Requirements

- Submitted into BEETS and also kept in the customer file
 - End-user identifying information
 - On-site Agricultural Energy Audit Report
- Just for customer file
 - Receipt or invoice showing the date and cost of the On-Site Energy Audit Report

New: Agricultural Energy Audits

7.8.2 Agricultural On-Site Energy Audit, cont'd

• Supporting Content

- Agricultural Energy Audit Standard
 - Document that lists minimum requirements for a completed energy audit report (ODOE Standards and ASABE 2009 Standards)
 - Ensures the energy auditor energy audit efforts and report meets expectations
- Available Agricultural Energy Auditors
 - Document with hyperlinks to other entity's list of auditors (USDA TAP, contracted ODOE auditors) as well as other auditor/firms that are not on those lists.
- Agricultural Energy Audit Program Process Steps
- Agricultural Energy Audit Payment Calculator

• Payment (Lesser of:)

- Actual energy audit cost **minus** any funding provided by other federal, state or local agencies, or
- \$15,000

Note: The Agricultural Energy Audit measure may be combined with 7.6.1 Irrigation Pump Testing and System Analysis (BPA-Qualified) measure.

Questions?

Residential

Jonathon Belmont – Residential Sector Lead



Measure Expirations

Jonathon Belmont
Residential Sector Lead

Measure Expirations

These measures expire on **September 30, 2023:**

- **Residential Consumer Products**
 - LED lamps and TLED lamps
 - Advanced Power Strips
 - RTF sunset
 - Not cost-effective
 - Low installation rate outside of kits
 - Energy Saver Kits
 - No longer cost-effective

***No changes to the following measures: EV Chargers, Clothes Washers, Clothes Dryers**

Measure Expirations

These measures **expire on September 30, 2023:**

- **Electric Water Heating Measures**
 - Pipe Insulation and Tier 1 & Tier 2 Unitary HPWHs measures

Measure Expirations

These measures **expire on September 30, 2023:**

- **Ductless Heat Pump Upgrade and Air-Source Heat Pump Upgrade measures**
- **PTCS program and all associated PTCS measures:**
 - PTCS Air Source Heat Pumps
 - PTCS Variable Speed Heat Pumps
 - PTCS Ground Source Heat Pumps
 - PTCS Duct Sealing
 - PTCS Commissioning, controls, and sizing
- BPA removed any PTCS-specific requirements and specifications from non-PTCS HVAC measures (standard and low-income)

Measure Expiration and Extension

These measures **expire on September 30, 2023:**

- **New Construction**

- BPA **expire** Montana House on September 30, 2023.
- BPA **extended** the program expiration date for Single-Family New Construction Performance Path from September 30, 2023 to September 30, 2024.

Measure Expiration

These measures **expire on September 30, 2023:**

- **All HVAC-Specific Weatherization measure options**
 - All weatherization "**Any Electric**" measures remained with **no changes** to incentives.

Measure Expiration

These measures **expire on September 30, 2023:**

- **Low-Income measures:**
 - PTCS Air Source Heat Pump Conversions, PTCS Air Source Heat Pump Upgrades, Ductless Heat Pump Upgrades, and PTCS Duct Sealing.
- **All Low-Income HVAC-Specific Weatherization measure options**
 - All low-income weatherization "Any Electric" measures options remained with no changes to incentives.

Questions?

Heat Pump Water Heaters

Section 11.4

Jonathon Belmont
Residential Sector Lead

Measure Changes: Savings

11.4 Electric Water Heating Measures

- Savings increased and decreased for Unitary HPWHs Tier 3 and 4 units.
 - Greatest increase +12%
 - Greatest decrease -8%
- Savings for TSVs increased slightly; Incentives remain the same.

Measure Changes: Incentives

BPA increased incentives for Tier 3 & Tier 4 Unitary HPWHs

- 11.4.2 Unitary HPWHs 40 gallon
 - \$700
- 11.4.3 Unitary HPWHs 50 and above
 - Tier 3 \$800
 - Tier 4 \$900
- 11.4.4 Split System HPWHs
 - \$1,100

Questions?

Residential HVAC

Section 11.5 & 11.6

Michelle Kelly
Program Manager

Requirement Changes

- **11.5 BPA removed the HSPF and SEER efficiency rating in the requirements and specification section**
 - Testing procedures updated efficiency ratings in January 2023
 - BPA will use applicable HSPF2 and SEER2 ratings
- **11.5 BPA removed “must be installed by licensed technician” throughout HVAC measures**
 - BPA does not enforce code
 - Licensure requirements vary by state, city, municipality, etc.
 - Utilities set specifications for contractors

Definitions Change: BPA added portable (i.e. plug-in) electric resistance heaters to the definition of “zonal electric heating system” in the definitions section of IM.

Requirement Changes

- **January 1, 2023:**
 - 11.5 HVAC testing procedures changed replacing HSPF and SEER ratings with new HSPF2 and SEER2 ratings.
- **Effective October 1:**
 - 11.5 DHPs, ASHPs, and VSHPs are required to meet HSPF2 and SEER2 federal minimum efficiency standard on AHRI certificate.

Split-System Heat Pumps	Current IM Requirements	October Change (Current Federal Minimum Standards)
HSPF	9.0	8.8
SEER	14.0	15.0
HSPF2	7.6	7.5
SEER2	13.4	14.3

Measure Changes: Incentive

- 11.5 BPA increased the incentives for the following measures:

Measure Name	Current BPA Incentive	Incentive Effective October 1, 2023
ASHP Conversion	\$800	\$1,000
VSHP Conversion	\$1,000	\$1,200
VSHP Upgrade	\$150	\$200

11.5.8 Prescriptive Duct Sealing

- BPA decreased the savings for prescriptive duct sealing in manufactured homes and single-family homes.
- Per RTF updates, BPA removed the heating zone requirements for savings. One line for “all heating zones.” BPA updated the Reference Numbers to incorporate this new savings information.
- BPA removed the requirement that ducts must be sealed by “a Prescriptive Duct Sealing technician listed in the online site registry or in a pre-approved utility certification program.”
 - The PTCS registry is no longer active. Reduce administration burden by removing pre-approval process for a utility program.

Persisting Requirements: Prescriptive Duct Sealing projects must be completed according to the BPA Prescriptive Duct Sealing Specifications. Must complete Prescriptive Duct Sealing form for qualifying projects (held in customer file)

11.6.3 Advanced Smart Thermostats

- BPA updated the qualified products list for advanced smart thermostats to include units that come packaged with an external occupancy sensor device.
 - This programmatic change brings BPA into alignment with the RTF measure and therefore advanced smart thermostats will transition from a BPAQ to a RTF measure.
 - BPA will continue to host devices with an on-board occupancy sensor on the QPL.
- Savings decreased for all advanced smart thermostat reference numbers per RTF updates.
- Requirement Clarification: In order to properly choose the correct reference number during the invoice submission process, utilities must indicate the primary heating system where the thermostat was installed.

New: Ground Source Heat Pumps (11.5.7)

- BPA migrated the GSHP upgrade and GSHP conversion measures from PTCS program in to the standard residential HVAC portfolio.
 - Installations will continue to be performed by licensed contractor certified by the International Ground Source Heat Pump Association (IGSHPA).
- Savings decreased for all GSHP measures
- Incentives for GSHPs – same as former PTCS levels
 - GSHP Upgrade: \$500
 - GSHP w/o desuperheater: \$3,000
 - GSHP with desuperheater: \$3,500

Questions?

Weatherization

Section 11.8

Amy Burke
Program Manager

Measure Changes

- 11.8.1 For Existing Multifamily Mid/High-Rise buildings, BPA repurposed the HVAC-Specific measure options to reflect an Any Electric heating type for three measures:
 - Wall Insulation
 - Roof Insulation
 - Prime Windows & Patio Doors
- 11.8.1 Clarified that Insulation products must be rated by material R-values to qualify. Products that potentially achieve an R-value based on assembled requirements, reflectivity and/or emissivity do not meet BPA's requirements for insulation and do not qualify for BPA reimbursement.
- 11.8.2 Clarified that Prime Windows can include qualifying windows on the roof (e.g. skylights).

New: Door Sweeps

New measure is available in 11.8.7.

- Following RTF measure guidelines, offering multiple distribution options
- To qualify, install in a door with existing door sweep and must on a door opening from conditioned space to unconditioned space, fully covering the gap between the bottom of the door and threshold and floor.
- See UES measure list for savings
- Incentives:

Direct Install	By Request
\$25 each	\$10 each

Questions?

Residential Low-Income

Section 11.9

Amy Burke
Program Manager

Measure Changes

- For Low-Income Existing Multifamily Mid/High-Rise buildings, BPA repurposed the HVAC-Specific measure options to reflect an “Any Electric” heating type for three measures:
 - Low-Income Wall Insulation
 - Low-Income Roof Insulation
 - Low-Income Prime Windows & Patio Doors
- Savings changes for the Low-Income Prescriptive Duct Sealing measure.

Income Verification Requirement Changes

- Removed the requirement to collect and document the total number of individuals in the household.
- Added language to clarify what other examples of “verifiable” sources of income may include.
- Added clarification that customer utilities just need to provide proof or an attestation that the “verifiable” documents were reviewed and approved and that they are not required to be kept on file for BPA review.
- Added language to allow utilities to retain documentation of proof that the end-user’s signed self-attestation of income was reviewed.

Low-Income Documentation Description Table Updated

- Now refers readers to the “non-low income” income equivalent measure sections for current documentation and retention requirements to reduce duplication.
- This update does not change any documentation requirements, rather how they are referenced in this low-income section.
- LIEE requirement for documentation of income verification remains.

Example:

<i>Documentation Description</i>	<i>RETENTION/SUBMITTAL LOCATIONS</i>	
	<i>BPA ENERGY EFFICIENCY TRACKING SYSTEM</i>	<i>CUSTOMER FILE</i>
<i>Documentation that the end user’s income eligibility was reviewed from a verifiable source (e.g., paystub, Section 8 voucher, etc.) or documentation that a self-attestation of income signed by the end-user was reviewed</i>		X
<i>Please reference the Documentation Requirements tables in the corresponding “standard income” measure sections when claiming low-income measures:</i>		
<i>Insulation: Section 11.8.1</i>		
<i>Prime windows or patio doors: Section 11.8.2</i>		
<i>Low-E Storm Windows: Section 11.8.3</i>		

Measure Changes: Incentives

LIEE Payment Cost Cap Increases (Effective October 2023)		
	Previous LIEE Cost Cap: Dollar-for dollar up to...	New LIEE Payment Cost Cap: Dollar-for dollar up to...
40-Gallon Heat Pump Water Heater	\$1,850	\$2,800
Tier 3 Heat Pump Water Heater	\$2,000	\$3,000
Tier 4 Heat Pump Water Heater	\$2,000	\$3,000
Ductless Heat Pump Conversions	\$4,400	\$6,000
Prescriptive Duct Sealing	\$500	\$750
High-Efficiency Prime Windows & Patio Doors	\$20/sq. ft.	\$45/sq. ft.
Exterior Insulated Doors	\$400	\$700

New: Low-Income Measures

New LIEE Measures (Effective October 2023)

	IM “Non-Low Income” Equivalent Section Number	LIEE Payment Cost Cap: Dollar-for dollar up to...
Clothes Washers (ENERGY STAR Front Load or Top Load & Multifamily Common Areas)	11.2.1	\$800
Clothes Dryers (ENERGY STAR or BPA Tiers 1 – 3)	11.2.1	\$800
Electric Forced Air Furnace to Air Source Heat Pump Conversion	11.5.2	\$9,000
Electric Forced Air Furnace to Variable Speed Heat Pump Conversion	11.5.3	\$9,000
Variable Speed Heat Pump Upgrade	11.5.4	\$9,000
Packaged Terminal Heat Pumps	11.5.6	\$1,600
Line Voltage Thermostats	11.6.1	\$85
Communicating Line Voltage Thermostats	11.6.2	\$225
Door Sweeps	11.8.7	\$35

New: Low-Income Measures, cont'd

New Commercial LIEE Measures (Effective October 2023)		
<i>All new LIEE Commercial Measures will be available only for installations in Multifamily shared common areas.</i>		
	IM “Standard Income” Equivalent Section Number	LIEE Payment Cost Cap: Dollar-for dollar up to...
Commercial Connected Thermostats	8.4.2	\$400
Commercial Ductless Heat Pump Retrofit & Upgrade	8.4.3	\$2,000/ton
Commercial Air-Source Heat Pump Retrofit & Upgrade	8.4.4	\$1,400/ton

Commercial mixed-use retail and office space will not be covered by these low-income commercial measures. See Implementation Manual for details on income qualifying a multifamily building.

New Low-Income Support Resources

- **Publishing a new Optional Low-Income Project Information and Income Verification Form**, which will contain some guidance on accepting self-attestation of income. Utilities will be able to customize this tool for their program. To be posted in the IM Document Library.
- **Publishing a new Low-Income Utility Website** to support utilities wanting to offer low-income measures. Can be found on the Comfort Ready Home website.

Questions?

Behavioral Home Energy Reports

Section 11.10

Michelle Kelly
Program Manager

Behavioral Home Energy Reports

- **BPA updated the measure to digital report delivery.** The paper report delivery channel remains in the measure. Adding a digital report option allows utilities to design program delivery that best meets customer needs.
 - Some utility considerations for choosing a report delivery channel – residential customer mix, quantity of reports, frequency of reports, cost of implementation
- **Incentive levels differ by age of program and by delivery channel:**
 - First year program costs are higher – data integration, sample draw, program design
 - BPA provides higher incentive for first program year to account for cost

Behavioral Home Energy Reports

- Incentive levels by age of program and by delivery channel:

	First Year Incentive (per household)	Second and Beyond Year Incentive (per household)
Paper	\$14	\$7
Digital	\$12	\$5

- Savings by delivery channel:

	Site Savings per Household (kWh)
Paper*	417.27
Digital*	469.85

*Utilities wishing to offer some customers "paper" reports and some "digital" reports would be considered a hybrid program. The utility would claim "paper" with X customers and "digital" with Y customers.

Questions?

Utility Distribution

Corinne Mauck



Payment Changes

- **12.1 Utility Distribution Custom Project Program:** increased payment rates to align with changes made to Section 4. Custom Projects.

MEASURE CATEGORY	PAYMENT
Utility Distribution Custom Project Program (4-19 year measure life)	Lesser of \$0.33 per kWh or 70% of project cost
Utility Distribution Custom Project Program (20+ year measure life)	Lesser of \$0.38 per kWh or 70% of project cost

- **12.2 Re-conductor & Transformer Program:** increased payment rates to align with changes made to Section 4. Custom Projects.
 - Updated the RT Calculator with the increased payment rates.

MEASURE CATEGORY	PAYMENT
Re-Conductor & Transformer Program (4-19 year measure life)	Lesser of \$0.33 per kWh or 70% of project cost
Re-Conductor & Transformer Program (20+ year measure life)	Lesser of \$0.38 per kWh or 70% of project cost

Questions?

Definitions Updates

Mike Gross, Marketing Lead

Definition Update

- **Busbar Energy Savings:** Updated the site-to-busbar savings factor

“Energy that did not have to be produced at the generator (e.g., the site energy savings, plus any transmission and distribution losses that would have occurred had the energy been generated). The site and busbar relationship depends upon the particular measure being implemented and its associated load shape. For UES measures, the site-to-busbar savings factor varies by measure **and is reflected in the current BPA UES Measures List**. For site-specific calculators, site-to-busbar savings factor currently in use is **1.11183**, with exception to current versions of the BPA lighting calculators** (see 8.3 Nonresidential Lighting) which use 1.07478 or **1.10816**. BPA provides payment for energy savings calculated from the busbar.”

***LC 5.1 uses 1.07478 and LC 6.0 uses 1.10816.*

Definition Corrections

Removed these terms and definitions to eliminate confusion caused by the different meanings that exist between the two Strategic Energy Management measures:

- **SEM Annual Savings Achieved**
- **SEM Baseline**
- **SEM Cumulative Verified Savings**
- **SEM Participant Payment**
- **SEM Verified Savings**

These terms and definitions are located in the BPA Commercial and Industrial Strategic Energy Management Measurement and Verification Reference Guide's Glossary.

Corrections, cont'd

- **Single-Family:** Adjusted the definition for what qualifies as a single-family home by removing the term townhouse.
- **Townhouse:** Removed this term and definition. There are no references to this term in the IM.

These corrections bring clarity to the Residential sector and eliminates confusion.

New Definitions and Acronyms

- **Agent:** Added the new definition

“A person or entity designated to work on behalf of the customer.”

- **MBH:** Added the new acronym and definition

“It is the equivalent of 1,000 BTU per hour and is a unit of measure to calculate the heating/cooling capacity of air conditioning and refrigeration equipment.”

This new term is associated with the new Commercial Sector measure, Refrigeration Floating Pressure Control (see section 8.6.4).

Questions?

Thank you for your time

Coming Soon:

<https://www.bpa.gov/energy-and-services/efficiency/implementation-manual>

9/1/2023

