

2020-2021 Implementation Manual

Programs Presentation of Changes

August 15, 2019



General IM Changes

Corinne Mauck, Implementation Manual Coordinator

Universal Changes

Changes made throughout the Implementation Manual:

- All edits from the 2017-2019 rate period incorporated
- References to fax submission pathway removed
- AP Style Guide edits have been made throughout
- Revised Requirements and Specification sections to be more concise
- Used a standard format for Payment summary tables

Changes to Sector Chapters

- Chapter 13 new measures incorporated into sector sections
- Sector section renumbering
- Multi-Sector offerings updated

Changes made to non-Sector Chapters

- 0.0 Definitions:
 - Update to Manufactured Home
 - Added Third Party Implementers
- 2.2 Funding Sources and Savings Allocation
 - Non-Reportable and Reportable savings must be submitted separately
 - Added information for SEM and Self Funding
- 3.1 General Documentation Requirements
 - Added language regarding customer created forms
- 3.2 General Reporting Requirements
 - Clarified that for standard protocol measures, customers must use the calculator in effect at the time of submission

Changes made to non-Sector Chapters

- 4.1 Custom Project Payments
 - + Commercial HVAC
 - - Nonres Lighting
- 4.3.1 Custom Projects Process
 - Clarified Implementation Assistance requirements
- 4.3.2 Custom Project General Requirements
 - Clarified requirements for Nonres Lighting projects
- 5.0 Custom Programs
 - Custom Programs are on hold for the 2020-2021 rate period.

Multi-Sector Changes

Dave Moody, Programs Supervisor

Multi-Sector Changes

DISTRIBUTION TYPE	REQUIREMENTS AND SPECIFICATIONS	DOCUMENTATION DESCRIPTION (RETAIN IN CUSTOMER FILE)
Retail	<p>Includes Simple Steps Smart Savings and utility-run retail programs. Mechanisms may include in-store markdowns, midstream/upstream promotions and coupons.</p> <p>See specific measure for complete requirements and specifications.</p>	<p>For in-store markdowns, online markdowns, or midstream/upstream promotions customers must submit a store sales report or invoice detailing: the date period for sales, sales by store location, qualified product make, model and manufacturer sufficient to assign corresponding energy efficiency measure. Reports must document the allocation methodology when a store serves multiple customers. Retail measures (both Simple Steps Smart Savings and utility-run programs) must be reported using the Retail Sales Allocation Tool, or an alternate methodology must be provided to BPA for review and approval to mitigate the possibility of double counting.</p> <p>Coupons must contain the (utility) customer name and end-user address, and require the customer to (1) document that the product meets BPA's requirements; and (2) provide store name and address.</p>
By Request and Mailed By Request	<p>Applies to delivery mechanisms that include distributing products "over the counter," at events, or otherwise directly to the end-user upon their request.</p> <p>Also applies to reimbursing end-users for a qualified purchase.</p> <p>The customer must document the request by the end-user.</p> <p>Additional requirements such as: documenting water heater fuel for showerheads may apply.</p> <p>See specific measure for complete requirements and specifications.</p>	<p>Product invoice documenting that the product meets BPA's requirements.</p> <p>Completed Measure Distribution Log (available in the IM Document Library) or equivalent form with required information.</p> <p>The customer must document the request by the end-user. Examples of end-user requests may be postcards, signatures on the Measure Distribution Log (available in the IM Document Library), or an equivalent form with required information.</p> <p>Mailed By Request also requires documentation of mailing, air waybill, or bill of lading to document the date the product entered the mail stream (i.e., for drop shipments,</p>

Original

		Methodology Allocating Savings	End-user identifying information	Documentation of request	Sales report	Equipment/contractor invoice	Documentation of mailing
Distribution Channel	Mailed Nonrequest		X			X	X
	By Request		X	X		X	X (when distributed by mail)
	Simple Steps By Request		X	X		X	X (when distributed by mail)
	Coupon or Instant Rebate		X		X		
	Simple Steps or other BPA midstream	X			X		
	Retail	X			X		
	Direct Install		X			X	
	Standard Rebate Payment		X			X	

Revised

Agriculture Sector

David J. Lee, Agriculture Sector Lead

Transformer De-energization

- Payment for this measure will go up from \$0.025 to \$0.03 per kWh at busbar
- The fractional cent incentive was causing problems in IS2.0

VFD in Agriculture Turbine Pumps

- Payment will increase from \$60/HP to \$80/HP
- Aligns payment with VFD for New Agriculture Pump Installation measure (added Oct 2018)

Irrigation Upgrades: Changes to Payments & Savings

Measure	Site Savings	Revised Savings	Current Payment (\$)	Revised Payment (\$)
Center pivot base boot gasket	1252	2216	\$ 175.00	\$ 275.00
Rebuild or replace leveler	2	5	\$ 0.75	\$ 1.00
Pipe repair	41	56	\$ 10.00	\$ 12.00
Drain and/or drain gasket replacement	20	13	\$ 1.00	\$ 3.00
New hubs for wheel lines	58	32	\$ 14.50	\$ 7.00
New, rotating type sprinklers that replace impact sprinklers	20	4	\$ 4.00	\$ 1.00
New rotating-type sprinklers that replace low-pressure models	20	4	\$ 4.00	\$ 1.00
Replace leaking impact sprinkler with rebuilt or new impact sprinkler	25	4	\$ 3.75	\$ 1.00
New nozzle for center pivot and lateral moves	35	31	\$ 3.00	\$ 3.00
Replace leaking pipe section and riser cap gaskets for wheel or hand lines, or portable main line gasket with new gasket	20	20	\$ 2.75	\$ 4.00

Expiring Measures

1. Drop tube for low-pressure pivot sprinklers
2. Gooseneck elbow for new drop tubes (convert to LEPA/LESA)
3. Multi-trajectory sprays that replace impact sprinklers
4. Multi-trajectory sprays that replace low-pressure sprinklers
5. Multiple configuration nozzles for low-pressure pivot sprinklers
6. Flow-controlling nozzle for impact sprinklers
7. New nozzle for impact sprinkler
8. Low-pressure regulators
9. Low Energy Precision Agriculture (LEPA) (BPA-Qualified)
10. Low Elevation Sprinkler Application (LESA) (BPA-Qualified)

New Multisector Opportunities

(BPAQ)

- Battery Charger Upgrade, (see Industrial, section 9.6)
- Welder Upgrade, (see Industrial, section 9.7)
- Water System Leak Abatement, (see Industrial, section 9.8)

Correction

- Requirements language for thermostatically controlled outlets has been revised to indicate that "Thermostatically controlled outlet should turn on to prevent freezing conditions and turn off at temperatures no higher than 50°F".
 - The word "no" had been erroneously omitted. It has been added back to clarify that lower cutout temperatures are permitted.

Measures Renamed (1)

Former IM name	Former Measure list name	New name
Replace leaking impact sprinkler with rebuilt or new impact sprinkler. Limited to two units per sprinkled acre for solid set sprinklers.	Sprinkler Replacements Impact Sprinkler Wheel-line, Hand-line, Lateral Move or Center Pivot Systems	Replace leaking Impact Sprinkler with new or rebuilt impact sprinkler
New nozzle for center-pivot and lateral-move systems.	Nozzle Replacement Any Nozzle Type Wheel-line or Hand-line System	Replace Nozzle
New, rotating type sprinklers that replace impact sprinklers.	Sprinkler Replacements Rotating Type Sprinkler Wheel-lines, Hand-lines, Center Pivots or Lateral Move systems Replace Impact Sprinkler	Upgrade Impact sprinkler to rotating type sprinkler
Replace leaking pipe section and riser-cap gaskets for wheel or hand lines, or portable main-line gasket with new gasket.	Gasket Replacement Pipe Section Wheel-lines, Hand-lines, Riser or Portable Main Line	Replace gasket for wheel-lines, hand-lines or portable main-line, including leaking mainline riser cap gaskets or portable mainline section gaskets .
New rotating-type sprinklers that replace low-pressure models.	Sprinkler Replacements Rotating Type Sprinkler Center Pivot or Lateral Move System Replace Low Pressure Sprinkler	Upgrade Low pressure sprinklers to rotating type sprinklers

Measures Renamed (2)

Former IM name	Former Measure list name	New name
Replace leaking drain gaskets with new gaskets on wheel lines, hand lines, lateral moves, or pivots.	Gasket Replacement Drain Gasket Wheel-line, Hand-line, Lateral Move or Center Pivot Systems	Replace leaking drain gaskets with new gaskets
New hubs for wheel lines.	Hub Replacement Thunderbird Wheel Line hubs Wheel Line System	Replace Thunderbird wheel line hubs
Replace leaking center-pivot base boot gasket with new gasket.	Gasket Replacement Base Boot Center Pivot or Lateral Move System	Replace leaking base boot gasket with new gasket
Pipe repair of leaking hand lines, wheel lines and portable mainline.	Pipe Repair Pipe Repair Wheel-line, Hand-line, or Portable Main-Line System	Repair leaking pipes
Rebuild or replace leaking or malfunctioning leveler with new or rebuilt wheel-line leveler.	Leveler Rebuild New or rebuilt leveler Wheel Line System	Rebuild or replace leaking or malfunctioning leveler with new or rebuilt leveler

Commercial

Michelle E. Lichtenfels, Commercial Sector Lead

Commercial Themes

Nonres Lighting

Clarified requirements; LC 5.0

Custom

Updated Commercial Custom Project HVAC rates

HVAC

Savings and payments tuned up

Other UES

RTF updates and measure expirations

7.0 Commercial Sector

- Measures reordered and renumbered
- Updated sector definition to promote clarity and align with RTF building types
- Added applicability language to extend blanket applicability to Industrial; Agricultural
 - Removed this language on a measure-by-measure basis
- All measures reviewed for clarity and intent
- Updated Project Information Forms – fillable PDFs – coming soon!

7.3 Nonresidential Lighting

Updated IM language

- Promote clarity and ease of understanding
- Reordered sections
- Numbered for quick reference
- Incorporated requested clarifications

New Construction projects

- Added new invoice documentation requirement
- Provided guidance on calculating incremental cost

7.3 Nonresidential Lighting

- Effective Date/Retirement Date table updated
- Queues up LC 5.1 but does not commit to dates

Lighting Calculator Series Name	Calculator Version	Effective Date	Lighting Calculator Retirement Date
Lighting Calculator Series 4	LC 4.0	October 1, 2017	December 31, 2019
Lighting Calculator Series 5	LC 5.0	April 1, 2019	December 31, 2021
	LC 5.1	TBD	TBD

4.0 Custom Projects Payments

Commercial HVAC custom projects

- Increased payment by 15%
- All other end uses remain the same

Nonresidential Lighting custom project requirements moved to this section; updated payments

- Decreased payment from \$0.18 to \$0.13/kWh (same as LC 5.0)
- Must follow Custom Project M&V protocols

7.4.1 Advanced Rooftop Unit Control (ARC)

- BPAQ measure replaced with new RTF measure
- QPL reviewed to ensure products meet updated requirements
- Small decrease in savings
- Simplified payment structure
 - Two categories instead of four

- QPL
- Project Form required

IM Number	Measure	2018-2019	2020-2021
7.4.1	Advanced Rooftop Unit Control Retrofit	\$100–\$225/ton	Full: \$200 Lite: \$100

7.4.2 Connected Thermostat

- BPAQ measure replaced with new RTF measure
- Current QPL being reviewed to ensure products meet updated requirements
- New measure incorporates a second payment type for verification of thermostat programming

- QPL
- Project Forms required

IM Number	Measure	2018-2019	2020-2021
7.4.2	Connected Thermostat	\$200/thermostat	\$150/thermostat (initial install) \$50/verification

7.4.3 Ductless Heat Pump Retrofit & Upgrade (BPA-Qualified)

- Simplified structure: DHP retrofit and DHP upgrade now one set of measure requirements
- Updated specification: Based on 75th percentile of performance.
- Note: Different specs than Residential

- QPL (same as Res)
- Project Form required

IM Number	Measure	2018-2019	2020-2021
7.4.3	Ductless Heat Pump Retrofit	\$800/ton	\$1000/ton
	DHP Upgrade	-	\$300/ton

7.4.4 Air-Source Heat Pump Retrofit and Upgrade (BPA-Qualified)

- Simplified structure: HP retrofit and HP upgrade now one set of measure requirements
- Updated specification: Based on 75th percentile of performance
- Removed 20 ton individual unit size cap

Project Form required

IM Number	Measure	2018-2019	2020-2021
7.4.4	Heat Pump Retrofit (formerly Conversion)	\$500/ton	\$1000/ton
	Heat Pump Upgrade	<6 tons: \$1,000/heat pump 6–20 tons: \$200/ton	\$150/ton

7.4.5 Variable Refrigerant Flow System Retrofit (BPA-Qualified)

- Updated specification: Based on 75th percentile of performance
- Removed 100,000 SF building size cap
- Savings increase improves measure cost-effectiveness

Project Forms required

IM Number	Measure	2018-2019	2020-2021
7.4.5	Variable Refrigerant Flow System	\$800/ton	\$1000/ton

7.4.6 Variable Frequency Drive on Air Handling Unit Fan (BPA-Qualified)

Removed requirements that impede implementation

- Post-condition requirement for VFD trending
- Minimum building operating hours

Project Form required

IM Number	Measure	2018-2019	2020-2021
7.4.6	Variable Frequency Drive on Air Handling Unit Fan	\$300/ horsepower	No change

7.5 Commercial Shell Measures

- **Insulation:** 65-77% increase in payment depending on heating zone
- **Windows:** Increases payments by 3X
 - Renamed to be consistent with Commercial Insulation
- No changes in savings

Project Form required

IM Number	Measure	2018-2019	2020-2021
7.5.1	Commercial Insulation (BPA-Qualified)	\$0.45–\$1.25/ square foot	\$0.45-\$2.05/ square foot
7.5.2	Commercial Windows (BPA-Qualified)	\$3–\$6/ square foot	\$9-\$18/ square foot

~~7.6 Electric water heaters~~

- **Electric Resistance:** Removed this expired RTF measure
- **HPWH:** Now available as a cross-sector measure using the Residential measure
 - The Commercial measure has always been designed for “residential style” applications

7.6 Commercial Refrigeration

- Expiring 4 measures: Low uptake (floating head pressure; compressor head cooling fan; walk-in evaporator; door gaskets)
- Requirements previously embedded in the Basis for Energy Savings moved into Requirements section
- No payment or savings changes

IM Number	Measure	2018-2019	2020-2021
7.6.1	Anti-Sweat Heater (ASH) Controls	\$40 per linear foot of case	No change
7.6.2	Walk-In or Display Case Evaporator Fan Motor - Shaded Pole to Electronically Commutated Motor (ECM)	\$55-140/motor	No change
7.6.3	Strip Curtains for Walk-In Coolers and Freezers	\$9 per square foot of doorway	No change

7.7 Commercial Kitchen & Food Service Equipment

- Pre-Rinse Spray Wash Valves
 - New requirement previously embedded in the Basis for Energy Savings
 - Valve is required to be WaterSense qualified or have a minimum spray force of 4.0 ounces-force.
- Most measures updated with 2018 RTF values and ENERGY STAR specifications

7.7 Kitchen & Food Service (Cont'd)

IM Number	Measure	2018-2019	2020-2021
7.7.1	Demand Controlled Kitchen Ventilation (BPA-Qualified)	\$200-\$400	No change
7.7.2	Electric Commercial Steam Cookers	\$50-\$200/ steamer pan	\$500/6-pan
7.7.3	Hot Food Holding Cabinets	\$75-\$200/ cabinet	Half: \$250 Full: \$500 Double: \$1,000
7.7.4	Electric Combination Ovens	\$500/oven	No change
7.7.5	Electric Convection Ovens	\$300/oven	Half Oven: \$200 Full Oven: \$400
7.7.6	Commercial Electric Fryers	\$300/fryer	\$250/large vat
7.7.7	Pre-Rinse Spray Valves	\$100/spray valve	No change

7.8.1 ENERGY STAR Commercial Clothes Washers

Updated the Basis for Energy Savings and ENERGY STAR requirement for clarity

IM Number	Measure	2018-2019	2020-2021
7.8.1	ENERGY STAR Commercial Clothes Washers	\$25-\$125 per washer	No change

7.8.2 Smart Power Strips

- RTF updated the measure in November 2018
 - Revised measure requirements to match RTF; resulted in more clear requirement language
- Removed language about false switching
- Small decrease in savings; no impact to payment

IM Number	Measure	2018-2019	2020-2021
7.8.2	Smart Power Strips	\$15/strip	No change

7.8.3 Commercial Showerheads

Updated the measure distribution documentation requirements to reference the Multi-Sector chapter

IM Number	Measure	2018-2019	2020-2021
7.8.3	Commercial Showerheads	\$8-11 per showerhead	No change

7.8.4 Generator Block Heaters (BPA-Qualified)

Updated the Basis for Energy savings for clarity

IM Number	Measure	2018-2019	2020-2021
7.8.4	Generator Block Heaters (BPA-Qualified)	\$200-\$1,500 per unit	No change

7.8.5 Vehicle Engine Block Heater

- BPAQ measure replaced with new RTF measure
- Decrease in savings
- Slight increase in payment

~~Project Form required~~

IM Number	Measure	2018-2019	2020-2021
7.8.5	Vehicle Engine Block Heater Controls	\$160/unit	\$200/unit

Questions?

**Thank you
for your time**

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