

# 2023 MEEP Application Specifications

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## QUESTIONS

If you have program or application questions, call (866) 277-5605 or (602) 385-0900 or email [apsmeep@dnv.com](mailto:apsmeep@dnv.com).

## ADDITIONAL RESOURCES

[aps.com](http://aps.com)  
[energystar.gov](http://energystar.gov)  
[cee1.org](http://cee1.org)  
[ahridirectory.org](http://ahridirectory.org)

These APS Multifamily Energy Efficiency Program (MEEP) application specifications should be used in conjunction with the MEEP Policies and Procedures.

## Residential Area

Product delivery is made to the APS customer or customer's representative after the pre-inspection by the MEEP team or Trade Ally. A Pre-Application must be completed to document the initial product quantities and types of products.

The APS customer is responsible for the installation of the energy-saving products within 30 days of delivery. The MEEP team will conduct a post inspection to collect any unused or broken products and to get a final count on the products installed.

### ENERGY-SAVING PRODUCTS

#### LEDs

The wattages of the new LED bulbs will be based on the existing lighting type and wattage. No substitutions of LED wattages will be allowed.

- 5 Watt LED replacing a 40 Watt Candelabra
- 6 Watt LED replacing a 40 Watt Incandescent Globe
- 8 Watt LED replacing a 65 Watt Flood PAR30
- 8 Watt LED replacing a 65 Watt Flood PAR38
- 9 Watt LED replacing a 60 Watt Incandescent Lamp

#### Water Heater Timer/Controller

- The provided water heater timer/controller will be based on MEEP program requirements. APS will provide the device for installation.
- Installation of APS-provided water heater controller to an electric water heater.

#### HVAC EC Fan Motor

**Measure: Install new or replace existing shaded pole (SP) or permanent split-capacitor (PSC) fan motor with electronically commutated (EC) motor on indoor fan.**

- Ensure EC motor is rated to withstand intended operating conditions.
- EC motor should provide airflow requirements as specified by manufacturer.
- Consult with equipment manufacturer if adding variable speed controls.
- Rebates are based on horsepower (hp) of installed motor.

#### Bathroom Exhaust Fan EC Motor

**Measure: Install new or replace existing shaded pole (SP) or permanent split-capacitor (PSC) fan motor with electronically commutated (EC) motor on bathroom exhaust fan.**

- Ensure EC motor is rated to withstand intended operating conditions.
- EC motor should provide airflow requirements as specified by manufacturer.
- Rebates are based on horsepower (hp) of installed motor.

## Common Area

Common areas include non-residential areas such as hallways, offices, and exterior property. For details on Common Area energy-saving products, review the Solutions for Business [Application Specifications General Measures](#).

### LED LIGHTING

#### General LED lighting requirements:

- A manufacturer's specification sheet for each LED lamp/LED fixture/LED component shall accompany every application.
- A room-by-room survey may be requested for complex lighting projects.
- Invoice/purchasing documentation shall reflect manufacturer, model number and quantity of each lamp/fixture/component.
- Removed polychlorinated biphenyl (PCB) ballasts and all lamps must be disposed of properly. Documentation of disposal may be requested by program staff.
- Lighting projects should comply with the Illuminating Engineering Society of North America (IESNA) recommended lighting levels and local code.

#### Option A

**Integral lamp or fixture must appear on one of the following lists. If not, reference Option B:**

- ENERGY STAR® Qualified Products List  
[energystar.gov/index.cfm?c=ssl.pr\\_commercial](http://energystar.gov/index.cfm?c=ssl.pr_commercial)
- DesignLights Consortium Qualified Products List  
[designlights.org/QPL](http://designlights.org/QPL)
- Consortium for Energy Efficiency (CEE) Tier II (two) listed  
<https://library.cee1.org/content/commercial-lighting-qualifying-products-lists>

#### Option B

LEDs that do not appear on the Qualified Products list of either ENERGY STAR, DesignLights Consortium, or CEE will be evaluated using the minimum performance criteria in the appropriate product category from either ENERGY STAR, DesignLights Consortium, or CEE for the following variables:

- Light output in lumens
- Luminaire efficacy (lm/W)
- Manufacturer's warranty (years)
- Color rendering index (CRI)
- Correlated color temperature (CCT)
- LED lumen maintenance at 6,000 hours
- Manufacturer's estimated lifetime for L70 (70% lumen maintenance at end of useful life)

*Please contact a representative from the Solutions for Business team for assistance in determining if an LED product complies with Option B.*

## Exit Signs

**Measure: Replace incandescent or CFL exit sign with an electroluminescent or LED exit sign.**

- Exit sign must be UL or ETL certified, have a minimum lifetime of 10 years and have an input wattage  $\leq 5$  watts.
- Non-electrified and remote exit signs are not eligible.

## Linear LED Lamps

**Measure: Replace 2, 3, 4 & 8 foot T12, T8 or T5 lamps with linear LED lamps (see General LED Lighting Requirements).**

- Replace linear fluorescent lamps on a one-for-one basis.
- Compatibility between the LED lamp and electronic ballast shall be verified by the contractor.
- Components shall be UL or ETL certified.
- Rebates are paid on a per lamp basis.

*Ballast replacement/LED driver consideration should be given to ballasts that are more than 6 years old.*

Acceptable replacement product types are:

- Lamps only (“plug and play”) (UL Type A)
- Internal driver/line voltage lamp (UL Type B)
- New external driver (ballast) and lamp (UL Type C)

Safety recommendations:

- UL Type B and UL Type C products must be delivered as part of a UL 1598C Classified Luminaire Retrofit Kit with instructions explaining the LED tube must be installed on a luminaire that is already UL Listed.
- The retrofitted luminaire must be clearly identified using the label included with the Retrofit Kit indicating the luminaire has been modified and can no longer operate the originally intended lamp(s).

## Delamping

**Measure: Permanently remove existing fluorescent lamps and lamp holders.**

- A signed pre-notification application is required for all delamping projects.
- Contractors/vendors/customers are responsible to ensure IES lighting levels are maintained after retrofit.
- Delamping must be completed in conjunction with linear LED retrofit (delamp only projects are not eligible for rebates).
- Unused tombstones must be removed from the fixture to prevent lamp reinstallation.
- Room-by-room survey and pre-inspection may be requested for delamping projects.

## LED Lamps

**Measure: Replace CFL, PL, incandescent or halogen lamps with qualified LED products (see General LED Lighting Requirements).**

- Replace non-LED lamps on a one-for-one basis with LED light sources.
- Eligible LED products include screw-in or pin-based lamps and kits.
- Lamps can be replaced with either LED lamps or LED kits.
- Apply for the replacement of 2-foot and greater linear fluorescent lamps under Linear LED Lamps.
- Reflector lamps must be R, BR or PAR series or PAR kits.
- Non-reflector lamps must be A, B, BA or G series.
- MR16 lamps must retain MR16 base.

## Outdoor LED Fixtures

**Measure: Replace or retrofit non-LED outdoor fixtures with qualified LED products on a one-for-one basis (see General LED Lighting Requirements).**

- Rebates are paid based on the installed LED input wattage.
- The installing contractor is responsible to comply with any applicable “Dark Sky Ordinance” or local outdoor light codes or ordinance.

## Occupancy Sensors

**Measure: Install occupancy-based controls on common area lighting.**

- Passive infrared and/or ultrasonic detectors are eligible.
- Wall box and wall-, ceiling-, or fixture-mounted sensors must control interior lighting fixtures on/off.
- Interior common areas within multifamily facilities are eligible for sensor rebates.
- Rebate is per sensor.
- Rebate not eligible for new construction projects.

# HVAC Quality Installation

To qualify for the rebate, the HVAC or heat pump (package or split unit) must meet both the equipment requirements and Quality Installation Standards described below. *Please contact the APS MEEP team at [apsMEEP@dnv.com](mailto:apsMEEP@dnv.com) if you are interested in pursuing an HVAC Quality Installation project.*

## EQUIPMENT REQUIREMENTS

- Final Application must be submitted within 6 months after installation to be eligible for the rebate.
- Rebate amounts are on a per-HVAC-unit basis. The HVAC unit must be a new installation that replaces an existing heat pump or AC in an existing residence served by APS.
- HVAC window units and mini-splits do not qualify for a rebate.
- Minimum HVAC package and split systems energy efficiency standards:

PACKAGE UNITS	SEER	EER/HSPF	SPLIT SYSTEMS	SEER	EER < 4 TONS	EER > 4 TONS
AC	15	11 EER	AC	14	12.2 EER	11.7 EER
HP	15	8.0 HSPF or 11 EER	HP	14	----	8.2 HSPF or 11 EER

Note: The AHRI Directory of Certified Product Performance is used to validate all SEER and EER ratings. The HVAC unit's EnergyGuide label is used to determine the HSPF rating.

## QUALITY INSTALLATION STANDARDS

- The HVAC equipment must be installed by an approved APS Trade Ally, licensed contractor or community maintenance team trained by APS in the HVAC Quality Installation standards. Please contact the APS MEEP team at [apsMEEP@dnv.com](mailto:apsMEEP@dnv.com) to learn more.
- Airflow across the coil, at fan design speed and full operating load, is within 15% of the airflow required per the system design and within the range recommended by the OEM product data.
  - Airflow across the coil is typically between 350-450 cubic feet per minute (CFM) per ton. (ACCA Standard 5, ANSI/ACCA 5 QI-2007)
  - Target airflow of 400 CFM per ton or +/- 3°F of target temperature differential between supply and return air.
- A dated contractor invoice or receipt with work order will be required as proof of purchase and that includes the date of installation. Invoice must include the manufacturer, model number, AHRI reference number, size (tons), SEER and EER efficiency levels, proof of installation at site address, proof of payment, and Trade Ally or contractor license number.
- Trade Ally or licensed contractor/trained maintenance team will fill out the rebate Final Application and include the required testing information results.
- All applications must include a cooling load calculation worksheet consistent with ACCA Manual J procedures. The Trade Ally or licensed contractor/trained maintenance team must size the equipment within 15% or one half-ton of the calculated cooling load ("Manual J Calculation" or equivalent). If an extended rating is used, please attach a copy of the document(s) used to perform this calculation.
- The installing Trade Ally or licensed contractor/trained maintenance team must completely fill out the APS Quality Installation Test Results required for the rebate.
  - The installing Trade Ally or licensed contractor/trained maintenance team must correct and document the airflow across the evaporator.
  - The refrigeration charge must be verified using superheat and subcooling from the equipment manufacturer's specifications. If installing Trade Ally or licensed contractor utilizes another form of determining refrigerant charge, provide documentation that includes the target and actual results for both test in and, if out of range, for test out.

# New Construction

The APS Multifamily Energy Efficiency Program's New Construction (MEEP NC) Program promotes energy-efficient construction practices to developers, architects and builders of new multifamily projects.

- Eligible projects include new construction, new multifamily additions and major renovations.
- All projects shall comply with federal, state and local codes.

## APPLICATION PROCESS

The application process includes both a Pre-Application and Final Application. The MEEP team will work with the Trade Ally/builder and APS customer to complete the applications.

Project information such as design scope, builder, schedule and home energy rating system (HERS) rater (if applicable) will be collected in the applications.

All equipment must be new per the program specifications. Used or rebuilt equipment is not eligible for rebate. Participation forms will be collected throughout the building process. The rebate approach (Prescriptive or Performance) will be determined early in the design phase, if possible, by the Trade Ally builder and APS customer.

## WI-FI CONNECTED SMART ELECTRIC WATER HEATER

- Multifamily new construction only
- Minimum size of 40 gallons
- Built-in Wi-Fi control
- Electric powered only

## PERFORMANCE APPROACH

- Properties with 35 or more units **must follow** the performance approach.
- The performance testing shall be conducted by a certified HERS rater.
- The performance testing HERS score of 60 and below must be satisfied to receive a rebate per dwelling unit.
  - A dwelling unit is defined as a residential dwelling in a multifamily building and does not include common areas.
- Project completion must be communicated to the APS MEEP team at least 60 days prior to building occupancy.
- The APS MEEP team reserves the right to perform field inspections and testing as required to validate the results.

## PRESCRIPTIVE APPROACH

- Properties with 34 or fewer units may follow either the Prescriptive Approach or the Performance Approach.
- Periodic meetings should be held throughout the building process to ensure all prescriptive measures will be satisfied in order to receive a rebate per dwelling unit.
  - A dwelling unit is defined as a residential dwelling in a multifamily building and does not include common areas.
- Prescriptive measures include HVAC requirements by Climate Zone, Thermostat, Ductwork, Envelope Infiltration,



Insulation, Windows, Water Heater, Lighting and Appliances and their requirements are presented in the following table:

HVAC EQUIPMENT				
<b>HVAC Requirements</b> (Climate Zones 2 & 3)	<b>Room, Packaged and Terminal A/C</b>		<b>Central Chiller</b>	
	Heat Pump	14 SEER A/C & 8.2 HSPF (See Ductwork) 15 SEER A/C & 8.0 HSPF (See Ductwork)		80 AFUE furnace or boiler 10% more efficient than local building codes
	Boilers Gas Furnace Oil Furnace	80 AFUE		
<b>HVAC Requirements</b> (Climate Zones 4 & 5 Based on 2012 IECC Figure C301.1)	ENERGY STAR® qualified Gas Furnace (90% AFUE) OR ENERGY STAR qualified Heat Pump OR ENERGY STAR qualified Boiler (85% AFUE) OR ENERGY STAR qualified Oil Furnace (85% AFUE)			
<b>Thermostat</b>	ENERGY STAR qualified programmable thermostat			
<b>Ductwork</b>	1. All ducts and air handling equipment must be in the conditioned space (minimum 14 SEER) 2. Leakage must be less than or equal to 4 CFM to outdoors per 100 sq ft. (minimum 15 SEER) 3. Minimum R-6 insulation on ducts in unconditioned spaces (minimum 15 SEER)			
<b>Envelope Infiltration</b> (Climate Zones Based on 2012 IECC Figure C301.1)	Climate Zone 1 & 2 6 ACH50 Climate Zone 3 & 4 5 ACH50 Climate Zone 5 & 6 4 ACH50			
<b>Insulation</b>	<b>Climate Zone</b>	<b>Ceiling R-Value</b>	<b>Wood Wall R-Value</b>	<b>Floor R-Value</b>
	1 & 2	38	19	13
	3 & 4	38	19	19
	5 & 6	49	23	30
<b>Windows</b>	<b>Climate Zone</b>	<b>U-Factor</b>	<b>SHGC</b>	<b>Window to Floor Area</b> Equal to or Less Than 15% WFA per unit
	1 & 2	0.4	0.25	
	3	0.35	0.25	
	4	0.32	0.4	
	5 & 6	0.3	Any	
<b>Water Heater</b>	Gas	40 gallons = 0.61EF	50 gallons = 0.57EF	80 gallons = 0.53EF
	Electric Gas Boiler	40 gallons = 0.93EF	50 gallons = 0.92EF	80 gallons = 0.89EF
	Thermal Efficiency = 80%			
	To determine domestic hot water (DHW) EF requirements for additional tank sizes, use the following equations: Gas DHW EF > 0.69 - (0.002 x Tank Gallon Capacity); Electric DHW EF > 0.97 - (0.001 x Tank Gallon Capacity)			
<b>Lighting</b>	75% ENERGY STAR Lamps and Light bulbs			
<b>Appliances</b>	Five (5) or more ENERGY STAR qualified appliances, light fixtures, ceiling fans with light fixtures and ventilation fans			

The APS MEEP team reserves the right to perform field inspections and testing as required to validate the results.

### Electric Vehicle (EV) Prewire

**Measure: Install EV prewire in Multifamily community.**

- Install breaker, piping and wiring to support a Level 2 EV charger without the extra wiring expense.
- Each location shall be rated at a minimum of 240 V, 40 A alternating current (AC) and meet rough-in requirements of charger supplier.
- Installation to comply with National and Local code requirements.
- Rebate is per Electric Vehicle Charging circuit.
- New construction projects are eligible for rebate.