MEEHA EmPower Program Guidance
2/21/2024

The Maryland Department of Housing and Community Development (DHCD) is administering the MEEHA EmPower Program for the 2024-2026 Program Cycle. DHCD accepts funding requests for projects seeking funds for energy conservation measures (ECMs). Starting on January 1st, 2024, projects applying to receive MEEHA EmPOWER funds will use the MEEHA EmPOWER Measure Funding List to determine the maximum funding amount for each measure. Measures are determined to be eligible for funding based on the following program guidance.

Projects must complete an energy audit by an energy auditor from DHCD's Qualified Energy Auditor (QEA) List. QEAs must perform comprehensive, unbiased, whole building energy audits in full compliance with program guidance. In the case that this guidance conflicts with previously stated program guidance, this guidance takes precedence.

QEAs must perform energy audits in accordance with current BPI Multifamily Building Analyst standards. This includes inspecting a sample of units based on the total unit count, including one representative dwelling unit from each unique unit type, as defined in BPI's Technical Standards for the Multifamily Building Analyst Professional[1]. Variations in basic floor plan layout, HVAC type, space or water heating fuel source, or location within the building shall cause the dwelling unit to be considered a unique type. The sample shall include a representative 10 percent of all dwelling units; or a minimum of 5 units, whichever is greater. In projects with 100 units or greater, where no more than two unit types exist, and evaluation shows little variation between similar units, the sample size may be reduced to no fewer than 10 units. In most cases, no more than 20 units should require inspection. However, if results are inconsistent, additional units must be sampled.

QEAs must confirm that the estimated post-retrofit condition of the project will meet current ASHRAE ventilation standards. When necessary, QEAs must provide building ventilation recommendations that align with current building ventilation standards and take into account the recommended scope of work. QEAs must submit ASHRAE ventilation calculations to DHCD upon request.

QEAs must consider all feasible energy saving opportunities and complete a MEEHA funding request by entering the recommended energy conservation measures (ECMs) into DHCD's Hancock Mobile Intake Tool (MINT)[2]. The funding request is completed and submitted on behalf of the project owner and must have the owner's approval. Measure costs must be identified for each ECM utilizing actual contractor bids prepared by the owners' selected contractor(s) and must include cost of materials, equipment, and installation.

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[1] https://www.bpi.org/sites/default/files/Technical%20Standards%20for%20the%20Multifamily%20Building%20Analyst%20Professional.pdf

[2] MINT is under development and plans to be fully operational 4/1/2024

ECMs will be entered into MINT separately for measures associated with a residential utility meter and commercial utility meter. ECMs must be labeled indicating the location, measure type, efficiency and capacity (if applicable).

At least one authentic picture of the existing condition for each recommended ECM must be uploaded and saved in MINT. An additional picture showing the model and serial number of the existing condition is required for all measures that have model or serial numbers. Typically no more than 2 or 3 pictures will be needed for each ECM.

Additional project information is required to be entered into MINT in the Building Information's Notes section. The following information must be provided for each project:

- Building Type
- Number of Residential Units
- Number of Buildings
- Metering Structure (Master Metered or Individually Metered)
- Square Feet of Residential Space
- Square Feet of Commercial Space (Excluding Garage/Parking Area)
- Date of Energy Audit

Additional information is required for each measure and must be stated in the notes section for that measure. The additional required information is stated below in each measure section. DHCD may also request additional clarifying information during the project review.

System efficiencies may be degraded from nameplate specifications. Degraded values must fall within the Measure Specification Parameters stated below. Sources used to determine degraded values must be cited in the measure's notes.

Funding for measures not explicitly listed on the Measure Funding List can be requested and funding will be determined on a case by case basis. Calculations or methods of determining energy savings for the associated energy savings measures must be provided upon request.

Some measures stated below are mandatory. Exemptions for mandatory measures may be granted on a case by case basis.

Air Sealing: Air sealing is mandatory.
If air sealing opportunities exist, the project must make all reasonable efforts to reduce air leakage. Locations of typical air sealing opportunities are as follows in their respective locations:

Measure	Existing Condition	Retrofit Condition	Maximum Funding Amount
In Unit Air Sealing	No Air Sealing Present	Locations: - Plumbing penetrations	$250/unit

		- Electrical penetrations (light switches, electric plugs, other junction boxes) - Mechanical penetrations (PTHP openings, exhaust fans) - Around duct registers - Accessible gap along base of drywall to floor - Weatherstripping of all exterior doors - Gaps around fenestration trim	
Exterior Mechanical Closet	No Air Sealing Present	- Around ducting - Plumbing penetrations - Other penetrations in exterior walls	$150/unit
Attic Air Sealing	No Air Sealing Present	- Plumbing or electrical penetrations in the attic floor - Top plates - Chases or bulkheads - Other penetrations to the building shell found in the attic	Low to mid rise or garden style $300/unit
			Townhouse or Detached House $800/unit

Air Sealing Measure Notes:

- Include all locations of air sealing
- If Air Sealing is not recommended, a note must be submitted justifying why Air Sealing was not recommended
- Projects must also state the effects of Air Sealing measures and if the project meets ASHRAE ventilation compliance, or needs mechanical ventilation to achieve compliance with ASHRAE requirements

Appliances: Appliance replacement measures are optional based on the QEA's recommendations.

Bath and kitchen fans or whole unit dehumidifiers can be replaced if they are shown to have an energy savings. They can also be replaced under the Health and Safety section if they are needed to achieve ASHRAE ventilation requirements.

Measure	Existing Condition	Minimum Retrofit Efficiency Specification	Maximum Funding Amount
Bathroom Exhaust Fan	Less than 2 CFM/Watt	Energy Star Certified	$300

Bathroom Exhaust Fan w/controls	Less than 2 CFM/Watt	Energy Star Certified with Controls	$325	
Kitchen Exhaust Fan	Less than 2 CFM/Watt	Energy Star Certified	$350	
Front Loading Clothes Washer (Capacity greater than 2.5 cubic feet)	Less than 2.76 IMEF and greater than 3.2 IWF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Front Loading Clothes Washer (Capacity less than 2.5 cubic feet)	Less than 2.07 IMEF and greater than 4.2 IWF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Top Loading Clothes Washer (Capacity greater than 2.5 cubic feet)	Less than 2.06 IMEF and greater than 4.3 IWF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Top Loading Clothes Washer (Capacity less than 2.5 cubic feet)	Less than 2.07 IMEF and greater than 4.2 IWF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Standard Electric Clothes Dryer (120V)	Less than 3.93 CEF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Standard Electric Clothes Dryer (240V)	Less than 2.68 CEF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Compact Electric Clothes Dryer (120V)	Less than 3.8 CEF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Compact Electric Clothes Dryer (240V)	Less than 3.45 CEF	Energy Star certified and at least 15% more Efficient Rating than existing	$800	
Refrigerator	Greater than 425 kWh/yr	Energy Star certified and at least 15% more efficient than existing	10-14 CF	$750
			14.1-18 CF	$850
			18.1-22 CF	$950
Standard Dishwasher	Greater than 270 kWh/yr	Energy Star certified and at least 15% more efficient than existing	$700	

Compact Dishwasher	Greater than 203 kWh/yr	Energy Star certified and at least 15% more efficient than existing	$700
Induction Range	Electric resistance range or cooktop	Induction range or cooktop	$1,000
Elevator Motor or Controls	If no soft start controls exist	Geared/Gearless Regenerative; Gearless Nonregenerative	$4,500
Vending Miser	If no miser exists	Miser	$350
Bathroom Exhaust Fan (Health and Safety)	If needed to achieve ASHRAE ventilation compliance	Energy Star Certified and project meets ASHRAE Ventilation Compliance	$300
Bathroom Exhaust Fan w/controls (Health and Safety)	If needed to achieve ASHRAE ventilation compliance	Energy Star Certified w/Controls and project meets ASHRAE Ventilation Compliance	$325
Kitchen Exhaust Fan (Health and Safety)	If needed to achieve ASHRAE ventilation compliance	Energy Star Certified and project meets ASHRAE Ventilation Compliance	$350
Dehumidifier (Health and Safety)	No dehumidifier present	Energy Star Certified (must be hard wired)	$430

Appliance Measure Notes:

- Source used to determine existing condition specifications
- Nameplate efficiency for appliances if the efficiency specification has been derated
- Ventilation settings needed to meet ASHRAE standards for mechanical ventilation requirements

Domestic Hot Water (DHW): Existing water heaters past their expected useful life must be replaced.

Measure	Existing Condition	Minimum Retrofit Efficiency Specification	Maximum Funding Amount	
Electric Water Heater	Less than 0.9 EF	0.92 UEF	30 Gal	$1,050
			40 Gal	$1,150
			50 Gal	$1,250
			80 Gal	$1,350
Heat Pump Water Heater	Less than 1.0 EF	2.8 UEF (40 gal) 3.0 UEF (50 gal) 3.0 UEF, 3.0 COPh (80 gal)	40 Gal	$2,200
			50 Gal	$2,600

			80 Gal	$3,000
Electric Water Heater (Electrification)	Switching to electric DHW from fossil fuel DHW	0.92 UEF	30 Gal	$525
			40 Gal	$575
			50 Gal	$625
			80 Gal	$675
Heat Pump Water Heater (Electrification)	Switching from fossil fuel DHW to electric DHW	2.8 UEF (40 gal) 3.0 UEF (50 gal) 3.0 UEF, 3.0 COPh (80 gal)	40 Gal	$1,100
			50 Gal	$1,300
			80 Gal	$1,500
Natural Gas Water Heater 79 gal or less	Less than 0.8 EF	0.81 UEF	30 Gal	$525
			40 Gal	$575
			50 Gal	$625
Natural Gas Water Heater 80 gal and above	Less than 0.8 EF	0.86 UEF / 95 TE	80 Gal	$675
Faucet Aerators	Kitchen greater than 2 GPM Bath greater than 1.5 GPM	Kitchen 1.5 GPM Bath 1.0 GPM	$5	
Showerheads	Greater than 2.0 GPM	1.5 GPM	$25	

DHW Measure Notes:

- Source used to determine existing condition specifications
- Nameplate efficiency for DHWs if the DHW efficiency specification has been derated
- Aerators and Showerheads - flow rate tested or nameplate efficiency

Fenestration: Exterior window or door replacement measures are optional based on the QEA's recommendations.

Measure	Existing Condition	Minimum Retrofit Efficiency Specification	Maximum Funding Amount
Exterior Door	Less than R-3	Door assembly must have a minimum rating of R-5	$700
Window	Greater than .4 U-value and 0.45 SHGC	Energy Star or equivalent windows at or below 0.25 U-value and 0.4 SHGC	$35/sq ft

Fenestration Measure Notes:

- Source used to determine existing condition specifications
- Framing material

HVAC: The replacement of space heating and cooling equipment is mandatory if the existing equipment is past its expected useful life. All space heating and cooling equipment must be evaluated for capacity reduction based on post retrofit conditions. Demand/load calculations must be submitted to DHCD upon request. HVAC equipment cannot increase in size without written approval from DHCD.

Duct systems must be evaluated. Accessible ducts must be sealed, including ducts that exist outside the building envelope. Projects may request funding to use Aeroseal to seal the entire system's ducts when recommended by the QEA.

Measure	Existing Condition	Minimum Retrofit Efficiency Specification	Maximum Funding Amount	
Packaged Terminal Heat Pump	Less than 2.8 COP and 10 EER	3.0 COP, 10.8 EER	$3,000	
Packaged Terminal Heat Pump (Electrification)	Switching to electric from fossil fuel	3.0 COP, 10.8 EER	$1,500	
Split System Heat Pump	Less than 13 SEER and 7.5 HSPF or electric resistance	16 SEER, 8.1 HSPF / 15.2 SEER2, 6.9 HSPF2	24K BTU	$6,500
			36K BTU	$6,750
			48K BTU	$7,000
	Less than 15 SEER and 7.9 HSPF or electric resistance	18 SEER, 8.5 HSPF / 17.1 SEER2, 7.2 HSPF2	24K BTU	$7,000
			36K BTU	$7,250
			48K BTU	$7,500
Split System Heat Pump (Electrification)	Switching to electric from fossil fuel	16 SEER, 8.1 HSPF / 15.2 SEER2, 6.9 HSPF2	24K BTU	$3,250
			36K BTU	$3,375
			48K BTU	$3,500
	Switching to electric from fossil fuel	18 SEER, 8.5 HSPF / 17.1 SEER2, 7.2 HSPF2	24K BTU	$3,500
			36K BTU	$3,625
			48K BTU	$3,750
Mini-Split Heat Pump	Less than 15 SEER / 12 EER, 7.9 HSPF or electric resistance	18 SEER, 8.5 HSPF / 17.1 SEER2, 7.2 HSPF2 and at least 15% more efficient than existing	24K BTU	$8,000
			36K BTU	$8,500
			48K BTU	$9,000
	Less than 16 SEER / 14 EER, 8.5 HSPF or electric resistance	20 SEER, 9.0 HSPF / 19 SEER2, 7.6 HSPF2	24K BTU	$8,500
			36K BTU	$9,000
			48K BTU	$9,500
Mini-Split Heat Pump (Electrification)	Switching to electric from fossil fuel	18 SEER, 8.5 HSPF / 17.1 SEER2, 7.2 HSPF2	24K BTU	$4,000

			36K BTU	$4,250
			48K BTU	$4,500
	Switching to electric from fossil fuel	20 SEER, 9.0 HSPF / 19 SEER2, 7.6 HSPF2	24K BTU	$4,250
			36K BTU	$4,500
			48K BTU	$4,750
Combination Space and Water Heating Gas Boiler	Less than 82 AFUE or less than 0.8 EF	90 AFUE or .86 UEF	$4,500	
Gas Furnace	Less than 82 AFUE	90 AFUE	$2,500	
Condensing Unit	Less than 13 SEER	16 SEER /15.2 SEER2	24K BTU	$3,000
			36K BTU	$3,250
			48K BTU	$3,500
	Less than 15 SEER	18 SEER / 17.1 SEER2	24K BTU	$3,500
			36K BTU	$3,750
			48K BTU	$4,000
Duct Sealing	No existing or ineffective duct sealing	Seal all accessible ducts	$3/ln ft	
Duct Sealing (Aeroseal)	No existing or ineffective duct sealing	8% total system leakage	$600	
Smart Thermostats	Analog or programmable thermostat	Smart thermostats	$300	
Variable Frequency Drives	Drive is not variable frequency	Variable Frequency Drive	$1,500	

HVAC Measure Notes:

- Nameplate efficiency for HVAC systems if the HVAC system efficiency specification has been derated
- Source used to determine existing condition specifications
- Duct systems - tested or estimated for system leakage

Insulation: Insulation measures in accessible gabled attics are mandatory if the existing insulation level is below R-19. Funding will not be provided for attic or roof insulation levels above R-60.

Crawlspace and basement rim joist and ceiling and wall insulation is mandatory if no insulation exists in the location of the building shell (thermal boundary). Funding will not be provided for crawlspace wall or ceiling insulation levels above R-30. QEAs may recommend to encapsulate crawlspaces that are currently vented based on the existing conditions and industry best practices.

Spray foam insulation must be continuous and achieve the minimum required R-value on all intended covered surfaces. Spray foam insulation must cover all joist and framing members on the surface it is insulating.

Duct insulation measures on accessible ducts that exist outside the building envelope are mandatory where no insulation exists or existing insulation is not effective.

Minimum efficiency specifications for the retrofit condition in these locations are stated in the table below.

Insulation Measure Location	Existing Condition	Minimum Retrofit Efficiency Specification
Gabled Attic	Less than R-38	Minimum R-49
Flat Roof	Less than R-25	Minimum R-30
Above Grade Wall	Less than R-10	Minimum R-19
Below Grade Wall	Less than R-10	Minimum R-12
Rim Joist	Less than R-10	Minimum R-19
Crawlspace or Basement Ceiling	Less than R-10	Minimum R-30
Duct Insulation	Less than R-5	Minimum R-8
Pipe Insulation	Less than R-3	Minimum R-6

Costs for each type of insulation are stated in the table below.

Measure	Maximum Funding Amount	
Blown-in Insulation	R-11	$1.50/sq ft
	R-19	$2.15/sq ft
	R-30	$2.75/sq ft
	R-38	$3.25/sq ft
	R-49	$3.50/sq ft

Batt Insulation	R-11	$1.35/sq ft
	R-13	$1.90/sq ft
	R-19	$2.35/sq ft
	R-30	$2.95/sq ft
Closed Cell Spray Foam or Rigid Insulation	2”	$4.50/sq ft
	3”	$5.75/sq ft
Duct Insulation	$1.50/ln ft	
Pipe Insulation	$3.00/ln ft	

Insulation Measure Notes:

- Scope of work for insulation measures

Lighting: Lighting measures must show a minimum 15% improvement in energy specification. The location of each lighting ECM must be stated in the measure description. (Example: “Kitchen Ceiling Lighting Replacement”, “Bathroom Vanity Lighting Replacement”, “Entry/Foyer Lighting Replacement”, etc.)

Measure	Existing Condition	Minimum Retrofit Efficiency Specification	Maximum Funding Amount
Exterior Lighting	Non-LED Lighting	LED Bulbs or Fixtures	Screw/Pin Base Bulb $10
			18W ILED Fixture $20
			30W ILED Fixture $40
			55W ILED Fixture $50
			90W ILED Fixture $100
Interior Screw or Pin Based SSL Lighting	Non-LED Screw or Pin Based SSL Bulbs	LED Bulbs or Fixtures	Screw/Pin Base Bulb $10
			18W ILED Fixture $20
			30W ILED Fixture $40
			55W ILED Fixture $50
			90W ILED Fixture $100
T-Type Lighting	Non-LED Bulbs or Fixtures	LED Bulbs or Fixtures	TLED Bulb $25
			18W ILED Fixture $20
			30W ILED Fixture $40
			55W ILED Fixture $50

			90W ILED Fixture $100
Lighting Sensor	No Sensor	Sensor (Occupancy, Photocell, Timer, etc.)	$30

Lighting Measure Notes:

- If there is a change in the quantity of lamps, it must be stated in the measure notes. This includes lighting measures going from lamps to integrated fixtures as well as measures where the new fixtures will have fewer bulbs than the existing fixtures.

Miscellaneous/Other: Projects are eligible to receive incentives for the Energy Audit, Health and Safety, and Incidental Repair measures. Incentives for the energy audit are released no earlier than the first construction draw which must include energy conservation measures.

Health and Safety and Incidental Repair measures are approved on a case by case basis. Projects can request Health and Safety funding if the measure shows it will prevent or resolve issues regarding indoor air quality (IAQ), mold, etc. Projects can request Incidental Repair funding for work that is required to install or protect a program funded energy savings measure.

Maximum amounts available for Energy Audit, Health and Safety, and Incidental Repair measures are as follows.

Measure		Maximum Funding Amount
Energy Auditor		$4,000
Incidental Repair	Electrical Repairs	Up to 10% of Energy Efficiency funding
	Plumbing Repairs	
	Carpentry Repairs	
	Exterior Wall Repairs	
	Interior Wall Repairs	
	Floor Repair	
	Install Access (Attic, Kneewall, Crawlspace)	
	Other	
Health and Safety	Dehumidifier	Up to 10% of Energy Efficiency funding
	Bath Exhaust Fan	
	Kitchen Exhaust Fan	
	ERV/HRV	
	Fan Timer/Controls	
	Exhaust Vent/Flue Pipe	

	Repair	
	Exterior Vent Termination	
	Exhaust Vent Insulation	
	Supply Air Vent Installation	
	Vapor Barrier	
	Asbestos Remediation	
	Other	

Miscellaneous/Other Measure Notes:

- A description of each Incidental Repair or Health and Safety measure
- The associated energy conservation measure must be stated for each Incidental Repair measure
- The reason for Health and Safety measures (i.e. to meet ASHRAE requirements, to control humidity, etc.)

New Construction: New Construction projects can receive funds for achieving specific energy efficiency certifications. Projects must submit a signed letter from an energy auditor/consultant certifying the project is designed to achieve the intended certification(s) prior to the commitment of funds. The auditor must also submit a letter at the end of construction stating the project was in-fact built to achieve the intended certification(s). Funding for new construction projects is cumulative and projects may receive funding for multiple certifications.

Measure	Maximum Funding Amount
Energy Star New Construction Certification	$700/Unit
Energy Star NextGen Certification	$600/Unit
Zero Energy Ready Home Certification	$1,500/Unit
Passive House Certification	$1,500/Unit

Measure Specification Parameters: Measure specification parameters are being implemented for energy savings calculation inputs in MINT. All MINT inputs for specific equipment must fall within the ranges stated below. Inputs must be based on existing conditions found by the energy auditor during the energy audit.

There may be situations where the existing condition input falls outside the stated input parameter range. In this situation, the Auditor may use an input outside of the stated range but must also state the condition causing the situation in the measure notes in MINT, including a detailed description of why this input is outside the parameter range. DHCD will review the description of the situation and will approve or deny the input change.

The following table is a list of measures and their acceptable high and low input ranges. The table also states the typical or average input based on historical program results.

Measure Category	Measure	Input	Parameter High	Typical Input or Average Value	Parameter Low
Heating System	Gas Furnace	AFUE	Nameplate Efficiency	2.0 AFUE reduction	5.0 AFUE reduction
	Heat Pump (Heat)	HSPF	Nameplate Efficiency	1.4 HSPF reduction	1.7 HSPF reduction
	Electric Resistance Heat (PTAC, Baseboard, Furnace)	COP	1	0 reduction	0 reduction
	PTHP (heating)	COP	Nameplate Efficiency	0.4 COP reduction	0.5 COP reduction
Cooling System	Split System Condensing Unit	SEER, EER	Nameplate Efficiency	2 EER or 2.3 SEER reduction	2.5 EER or 2.8 SEER reduction
	PTAC (cooling)	SEER, EER	Nameplate Efficiency	2 EER or 2.3 SEER reduction	2.5 EER or 2.8 SEER reduction
DHW	Electric DHW	EF, UEF	Nameplate Efficiency	0.01 EF/UEF reduction	0.03 EF/UEF reduction
	Gas DHW	EF, UEF	Nameplate Efficiency	0.02 EF/UEF reduction	0.05 EF/UEF reduction
	Instantaneous Gas DHW	EF, UEF	Nameplate Efficiency	0.02 EF/UEF reduction	0.05 EF/UEF reduction
Annual Lighting Run Times by Location	Exterior (commercial)	hrs	8,670	3,650	730
	Exterior (residential)	hrs	4,380	365	182
	Kitchen (residential)	hrs	3,650	1,095	365
	Bathroom (residential)	hrs	1,825	912	365
	Living / Dining Room (residential)	hrs	2,920	1,095	365

	Hallway / Foyer (residential)	hrs	2,920	1,095	1365
	Range (in kitchen) (residential)	hrs	1,460	365	182
	Closet (used by tenant) (residential)	hrs	1,095	365	182
	Closet (not used by tenant) (residential)	hrs	365	182	91