



OREGON HOUSING & COMMUNITY SERVICES

MULTIFAMILY

Energy Program

Program Manual

Version Number 2024.0

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The Program Manual is a working document and program staff reserves the right to update, change, and revise the document to clarify program rules, requirements, and incentive amounts. Program staff will release updated versions on a quarterly basis if applicable.

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Summary of Changes

This is a summary of changes since version 2023.0, published July 7, 2023.

Menu and Bundled Path Measure and Incentive Updates

- Increased incentives to close the incentive gap between Bundled and Whole Building Path projects
- Updated the incentive units for select measures to better scale with the true size of the homes
- Removed the following measures:
 - Thermostats (smart and 7-day programmable)
 - Low flow fixtures
 - Window or portable AC
 - Lighting (eligible for Tailored Measure)

Measures Eliminated From all Pathways

- Following measures are no longer eligible in any pathway
 - Smart or 7-day programmable thermostats
 - Low flow fixtures

Whole Building Path Requirements

- All known measures that lead to electric savings must be modeled and documented in the Energy Efficiency Plan.
- To pursue the Whole Building Path, the project must include measures in each of the following categories:
 - **Primary Heating Equipment:** Improved primary heating equipment must be a heat pump (no electric resistance or radiant heating)
 - **Water Heating Equipment:** Improved domestic hot water equipment must be a heat pump water heater
 - **Envelope:** There must be improvements to an envelope component

Program Terms & Definitions

The following is a brief list of program terms and definitions included in this manual;

- ◆ *Oregon Housing & Community Services' Multifamily Energy Program*: Referred to as OR-MEP throughout this document.
- ◆ *Participant*: The entity applying to OR-MEP for their multifamily project and the recipient of program incentives.
- ◆ *OR-MEP Energy Advisor*: The OR-MEP program staff assigned to each project who is the main point of contact for the Participant and any members of the project team throughout a project's participation in OR-MEP from enrollment to completion.
- ◆ *Independent Third Party*: A licensed architect (RA), engineer (PE), or certified energy professional (e.g., OHCS Approved Utility Allowance contractor, BPI-MFBA, CEM) who can provide technical assistance, verification and/or energy modeling services for the Participant.

Program Summary

The Oregon Housing & Community Services' (OHCS) Multifamily Energy Program (OR-MEP) is a community-focused program that incorporates energy-efficient design in affordable multifamily housing. The program offers program participants resources including design assistance, cash incentives, coordination with other regional programs.

The purpose of OR-MEP funding is to reduce energy burden¹ for low-income residents of Oregon through energy efficiency improvements and education in both Existing Buildings and New Construction. The program targets to benefit residents who are navigating low income, people of color, those who are disproportionately impacted, those customers for whom English is not their first language, those living in rural communities. Program participants may apply for OR-MEP funding to upgrade Existing Building or New Construction projects.

The [OR-MEP Diversity, Equity, and Inclusion \(DEI\) Coalition](#) will analyze, recommend, and influence changes to OR-MEP to make the program more accessible. The OR-MEP DEI Coalition is team of community members from across the state to help OR-MEP incorporate diversity, equity, and inclusion in the program design, understand barriers to participation, and recommend modifications to the program and policies.

To deliver OR-MEP, OHCS works with a program implementation team, including TRC, Dragonfly Consulting, Encolor, Elevate Energy, and Unrooz Solutions. The program team implements, oversees, provides technical assistance, and coordinates the program on OHCS' behalf.

¹ **Energy burden** is defined as the percent of household income spent on energy bills. Energy burden is a key component to determining if a housing unit is affordable. The most commonly used metric is that an affordable energy burden must be no higher than six percent of the household's income.

(<https://www.oregon.gov/energy/Get-Involved/Documents/2018-BEEWG-Ten-Year-Plan-Energy-Burden.pdf>)

Program Contact

For more information about OR-MEP contact:

Phone: 503-505-6787
Email: OHCSMultifamilyEnergy@trccompanies.com
Website: www.oregonmultifamilyenergy.com

Applicant Eligibility Requirements

General Eligibility

- ◆ Eligible applicants include nonprofit organizations, for-profit businesses, and local government entities including, but not limited to, cities, counties, housing authorities, nonprofit community organizations, regional or statewide nonprofit entities and private individuals or corporations.
- ◆ Existing or New Construction affordable multifamily properties with five (5) or more apartments per building are eligible to participate including low-rise, mid-rise, and high-rise multifamily buildings. Campus of five or more duplexes, triplexes, and quadplexes are also eligible.
- ◆ Projects must be in Oregon and must receive electric service from Portland General Electric or Pacific Power.
- ◆ Projects must be heated by a hard-wired electrical heating system.
- ◆ To meet affordability requirements, the residents residing in at least 50% of the dwelling units must be at or below 80% AMI (area median income) and these units must remain affordable for a period of 10 years, unless superseded by other department funding resource requirements.
- ◆ The program can only provide incentives for measures that result in electric savings.

Participation Requirements

The following list outlines general program requirements, which all Participants shall review prior to participating in OR-MEP. For detailed requirements and program process, refer to the subsequent sections.

- ◆ Meet all State and local building code, inspection and permitting requirements.
- ◆ Ensure that only licensed contractors complete construction work.
- ◆ Submit a complete and accurate application package, review OR-MEP feedback on building design, successfully complete OR-MEP staff technical review, and receive final enrollment approval.
- ◆ The Participant agrees not to apply for, nor accept incentives from multiple utilities or utility-sponsored energy efficiency programs for the same electricity savings unless approved by program staff.
- ◆ Incentive payments are available only to the parties named on the Program Application.
(Note: If there are changes in property ownership during construction or renovation period, Program Staff can accommodate applicant entity changes and must be agreed to by both existing and new applicant entities.)
- ◆ **Funding for this program is limited and the program does not guarantee access to OR-MEP funding for all Participants. To apply to OR-MEP, projects must apply during the OR-MEP Open Enrollment application period. OR-MEP Open Enrollment rounds are scheduled to be open twice annually. Applications in response to the Open Enrollment are reviewed and competitively ranked. Applications that have the highest scores within each set-aside category will be recommended for funding as allocated resources allow. Projects that are selected for funding are then eligible to enroll in the OR-MEP to reserve incentives. To stay updated when**

OR-MEP Open Enrollment dates are released, sign up for the OR-MEP newsletter at: oregonmultifamilyenergy.com.

Non-Qualifying Facilities

If you are uncertain about the eligibility of your project, please contact OR-MEP staff. The following are example project types that do not qualify for OR-MEP incentives and services:

- ◆ **Single-family homes, duplexes, and townhouses of four or less structures:** As noted in above in the General Eligibility section, campuses of five or more structures of attached residences, each with four units or less, including duplexes, triplexes, and fourplexes, are eligible.
- ◆ **Commercial Space within Mixed Use Building:** If a building is mixed use (e.g. includes both multifamily residential spaces and commercial office or retail spaces), then only residential areas may be eligible for incentives for energy efficiency upgrades.
- ◆ **Projects that do not receive electric service from Portland General Electric or Pacific Power:** An existing building project must have an active electric account or be eligible for electric service with Portland General Electric or Pacific Power. New construction project must be located in a site that is eligible for electric service with Portland General Electric or Pacific Power.

Definition of a Project

The program defines a project as one building or a group of buildings on a property. The Participant will develop one application for each project. Each building in a project must adhere to the requirements of the program pathway chosen. Projects may include residential dwelling units and any space providing support services for residents at the property.

Technical Assistance

The program recommends that all projects engage an independent third party who can provide technical assistance, verification and/or energy modeling services. OR-MEP staff is available on a limited basis to provide technical assistance to projects. Please contact program staff at OHCSMultifamilyEnergy@trccompanies.com to learn more.

Incentive Caps

The program caps incentives at \$200,000 per project.

Open Enrollment Application Deadlines

Funding for this program is limited and the program does not guarantee access to OR-MEP funding for all Participants. To apply to OR-MEP, projects must submit an application during the OR-MEP Open Enrollment period. OR-MEP Open Enrollment rounds are scheduled to be open twice annually. Applications in response to the Open Enrollment are reviewed and competitively ranked. Applications

that have the highest scores within each set-aside category will be recommended for funding as allocated resources allow. Projects that are selected for funding are then eligible to enroll in the OR-MEP to reserve incentives.

To stay updated on when OR-MEP Open Enrollment dates are released, sign up for the OR-MEP newsletter at: oregonmultifamilyenergy.com/news/

Installation and Construction Deadlines

At incentive reservation, OR-MEP staff and the project team will determine a construction completion deadline for each project. **If projects fail to meet the completion deadline identified in the Incentive Reservation Letter, or a one-time approved extension deadline, this failure may result in significant changes to the final incentive amount (including cancellation of incentive reservation).**

To best manage program volume, and serve the low-income multifamily market equitably, OR-MEP staff relies on continual progress of each project in the program. OR-MEP staff will communicate regularly with the Participant during construction to ensure the project remains on schedule. This includes, and is not limited to, quarterly email notifications and milestone meetings. The Participant must update OR-MEP staff on project changes.

The construction deadlines for the program are as follows:

- ◆ **Existing Buildings:** All projects must complete construction within 18 months of enrollment.
- ◆ **New Construction:** All projects must complete construction within 36 months of enrollment.

Existing Conditions Assessment

For Existing Building projects, existing conditions shall be demonstrated in accordance with the Sampling Protocols summarized below.

Verification

At project completion, an independent third party must complete the Measure Verification form to certify energy measures are installed according to program specifications in order to request eligible incentives. The independent third party shall complete verification in accordance with the Sampling Protocols summarized below.

Sampling Protocol

OR-MEP requires the following sampling protocol for existing conditions assessment in Existing Building projects and verification for both Existing Building and New Construction projects. These protocols have been adapted from the [RESNET Guidelines for Multifamily Energy Ratings](#) (*Refer to Sampling section, p.52*).

Unit Sampling

The independent third party shall inspect the first seven (7) apartment units, and then perform verification at a minimum ratio of one (1) out of seven (7) apartment units in the project. Sampled

units shall be representative of the variety of apartment types in the project including end/corner and inside units; top-floor, middle-floor, bottom-floor units; and at least one unit of each type (i.e: studios, 1-bed, 2-bed, etc.). For projects less than seven (7) units, all units must be verified.

The independent third party shall increase the sampling set if inconclusive and/or inconsistent findings occur. *(Refer to RESNET Guidelines for more details)*

For projects with multiple buildings, at least one unit in each unique building type shall be verified.

Common Area Sampling

The independent third party shall meet the following requirements for sampling of common area spaces:

- ◆ **Unique Area Sample Size:** The independent third party shall inspect 100 percent of unique common area spaces such as basements, lobbies, etc.
- ◆ **Repetitive Area Sample Size:** The independent third party shall inspect a representative 20 percent sample (with a minimum of five areas) of similar or repetitive areas such as stairwells and stairwell landings, corridors, trash chute rooms, etc.

Program Structure

OR-MEP supports two types of multifamily projects: [Existing Buildings \(EB\)](#) and [New Construction \(NC\)](#).

Both include three participation pathways noted in **Error! Reference source not found.**. Each pathway is suited for varying scopes of work. Incentives for each pathway escalate to reward more comprehensive improvements and design strategies. Projects interested in a specific pathway should reference that specific section within this Program Manual.

Figure 4 below outlines the overall program process. This diagram details the different stages of the program, estimated timelines, and responsibilities at each stage for the Participant's project team and the OR-MEP program team.

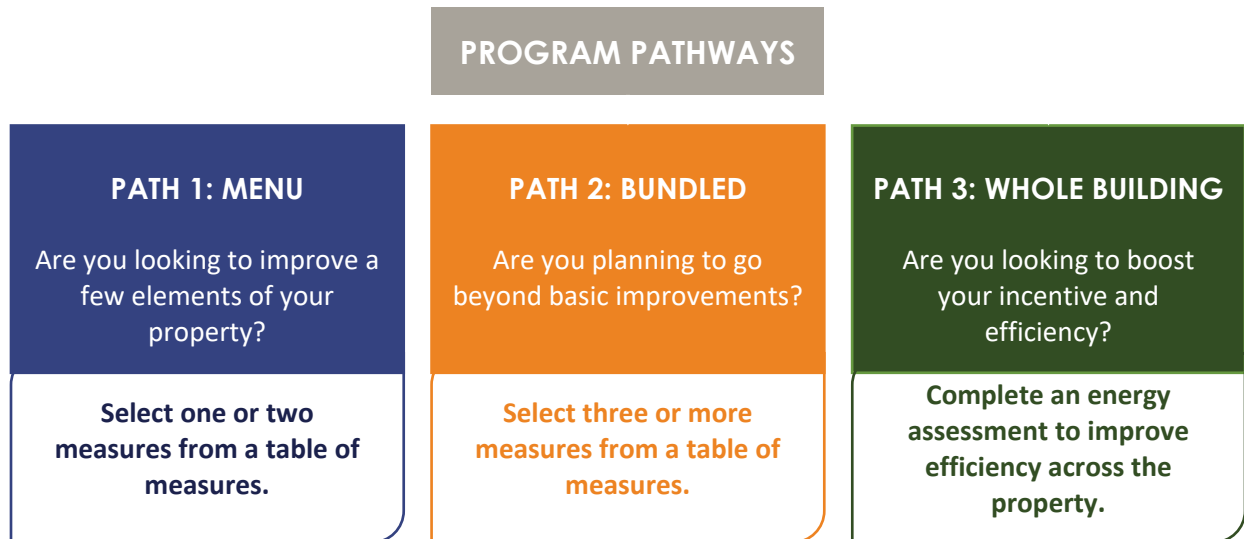


Figure 1: OR-MEP Pathways

Participation Process

To participate in the Existing Buildings or New Construction offering, Participant must apply during the OR-MEP Open Enrollment period. OR-MEP Open Enrollment rounds are scheduled to be open twice annually. Applications submitted during Open Enrollment are reviewed and competitively ranked. Applications that have the highest scores within each set-aside category will be recommended for funding as allocated resources allow. Projects that are selected for funding are then eligible to enroll in the OR-MEP to reserve incentives. To stay updated when OR-MEP Open Enrollment dates are released, sign up for the OR-MEP newsletter at: oregonmultifamilyenergy.com

Each approved project will be assigned an OR-MEP Energy Advisor, who will work with the Participant from the enrollment stage through the installation completion stage.

The participation process includes the following steps:

1. **ENROLLMENT PACKAGE:** Participant submits complete enrollment package. A complete package includes:
 - ◆ **Signed Acceptance Letter**
 - ◆ **Proof of Utility Provider**
 - ◆ **Proof of Affordability (if not applying for other OHCS funding)**
 - ◆ **Form W-9 (may be submitted later if entity to receive incentives is not yet established)**

2. **SCOPE OF WORK PACKAGE:** Participant submits complete scope of work package. OR-MEP Energy Advisor will review and confirm specifications are eligible for the requested incentives. A complete package includes:

- ◆ **Energy Efficiency Plan (EEP) Worksheet:** The EEP is a program-specific Excel spreadsheet that summarizes measures, savings, and eligible incentives for projects. Projects should complete the Path sections of the workbook for which they are applying. Contact OR-MEP staff for instructions on completing and obtaining the EEP worksheet.
- ◆ **Specification Sheets:** For all applicable measures, manufacturer specification sheets must be submitted. Menu and Bundled Path projects must meet minimum efficiency requirements noted in Figure 5 (EB) and Figure 11 (NC). Any measure pursued must be noted in the specification sheets submitted for verification.
- ◆ **Construction Drawings / Work Scope Specifications:** For all applicable envelope measures, (attic / ceiling insulation) construction drawings or work scope specifications detailing the proposed measure work scope must be submitted.
- ◆ **Photos of pre-install existing conditions (EB Only):** Photos of all existing conditions (including measure nameplate data when available) must be submitted prior to installation of any new measure or equipment. *(Contact Program Staff for OR-MEP Photo Template document, which includes details on type of photos to provide for various measure types)*
 - *Whole Building Path Only:* Onsite assessments completed by the Participant's independent third party are required for all projects participating in the Whole Building Path. The EEP workbook includes a section where existing conditions gathered from this onsite assessment must be detailed.
- ◆ **Energy Model (Whole Building Path Only):** The Participant must submit the modeling files used to calculate savings summarized in the Energy Efficiency Plan. Any OHCS approved energy analysis tool is acceptable for calculating savings. OHCS has reviewed and approved the following tools for multifamily use: EnergyPro (mid-rises only), TREAT, DOE-2, TRACE, HAP, REM/Rate, REM/Design, eQuest, and IES-VE.
- ◆ **External Calculations (Whole Building Path Only):** For measures that cannot be modeled in the approved energy modeling software, external engineering calculations may be submitted instead, typically as spreadsheets or industry specific tools. Applicants should consult with OR-MEP staff prior to using any external calculation methods for pre-approval of the general method and for technical assistance with alternate calculation options.

3. **APPROVAL:** When a project passes technical review, the OR-MEP Energy Advisor will notify the Participant and will detail the project's approved measure and eligible incentive in the *Incentive Reservation Letter*.

The OR-MEP Energy Advisor will communicate regularly with the Participant during construction to ensure the project remains on schedule to receive program incentives. This will include quarterly email notifications and reminders. The Participant must update the OR-MEP Energy Advisor on project changes including the following:

- ◆ **Changes in energy measures:** Participants must notify OR-MEP staff of any changes to the energy measures that may affect the building energy use; these changes could significantly impact a project's program eligibility and final incentive amount.
 - ◆ **Changes in construction schedule:** The Participant must notify OR-MEP staff of any construction schedule changes or delays. OR-MEP staff will update the project records to reflect revised construction start and completion dates. All projects must complete construction by the custom project completion date detailed in the *Incentive Reservation Letter*, or within 18 months of enrollment; whichever comes first. If a project's estimated completion date falls outside of this timeframe, the Participant must immediately contact OR-MEP staff to assess the impact to the reserved incentives.
4. **VERIFICATION:** When installation of approved measures is complete, the Participant must submit the following documents. The OR-MEP Energy Advisor will review to ensure the installed measures are installed as proposed.
 - ◆ **Photos (post-install conditions):** Photos of all installed measures must be submitted. Photos should clearly show equipment name plates, make/model number, levels of insulation, etc.
 - ◆ **Measure Verification Form:** An independent third party must complete this program form to certify energy measures have been installed according to program specifications to request eligible incentives. The independent third party shall complete verification in accordance with the Sampling Protocols summarized earlier in this program manual on page 6.
 5. **ON-SITE INSPECTION (CASE BY CASE):** On-site inspections by OR-MEP staff are completed at random. To ensure installation quality and compliance with rebate requirements, OR-MEP reserves the right to inspect any project at any time. The OR-MEP Energy Advisor will work with the Participant to schedule these on-site verifications.
 6. **PAYMENT:** After OR-MEP staff approves the project completion documentation, OHCS staff will issue the incentive check(s) to the Participant listed on the application. The letter of completion will be sent to the entire project team.

Rural DHP, Wildfire Resiliency and Smart Homes Bonus

Projects located in rural areas are subjected to barriers installing Ductless Heat Pumps (DHP) that projects in urban areas are not. HVAC contractors are often unavailable in rural areas and many projects must pay a premium to bring contractors from urban areas to install the equipment. Additionally, urban cities have additional local incentives that reduce the cost of equipment that is not available to rural projects. To alleviate some of these issues, OR-MEP is offering bonus incentives for rural projects installing DHPs. Rural is defined in [OHCS' QAP 2022, p. 12-13](#) for "Balance of Non-Urban/Rural" region.

In recent years, Oregon has suffered from the effects of climate change in the form of wildfires, destroying structures and spreading smoke throughout the state with devastating health impacts. To prepare affordable multifamily homes to better protect or shelter residents from wildfire and smoke, OR-MEP is offering bonus incentives for energy efficient features that are also more fire resistant or promote higher air quality in homes.

Additionally, technology is quickly advancing, and smart homes technologies are proven to simplify and promote additional energy savings by influencing behavior. OR-MEP is providing bonus incentives for

smart homes technology to promote installation and consideration of new technology as well as the infrastructure to provide these conveniences.

All participants pursuing the Menu, Bundled, or Whole Building Path are eligible for bonuses for which the minimum requirements are met. The bonus incentives may be layered on top of other measures. The sum of the standard pathway incentives and the bonus incentives must not exceed \$200,000, or the total installed cost of measures in the OR-MEP scope of work.

Bonus incentives available for Existing Buildings are listed in Figure 2 below, and New Construction are listed in Figure 3.

	MEASURE	EXISTING CONDITION REQUIREMENTS	MINIMUM EFFICIENCY REQUIREMENTS	EXISTING BUILDINGS INCENTIVE
Rural	DHP	Electric Resistance	Project is in rural area as defined by OHCS and qualifies for a standard DHP bonus	\$500/each
Smart Homes	Energy Monitor	No energy monitor	Whole home energy consumption monitors with hard wired display	\$350/each
Wildfire Resiliency	ERV/HRV with HEPA Filter	1.4 CFM/W or less	ERV/HRV must be compatible and equipped with HEPA filter (H13-H14 rating or MERV >=17)	\$100/each
	Triple Pane Windows	Single-pane or double-pane window.	Windows must be triple paned	\$10/sf fenestration
	Fire Resistant Attic Insulation	Existing condition must be R-18 or less.	Class A fire-resistant mineral wool or polyiso insulation with minimum R-49 or fill attic space	\$1.00/sf insulation
	Vented to Unvented Attic	Existing condition must be a vented attic.	Air seal attic at roofline so entire attic is within the thermal boundary	\$1.00/sf attic floor
	Fire Resistant Continuous Wall Insulation	Existing cavity insulation must be R-6.5 or less.	Class A fire-resistant mineral wool or polyiso continuous insulation with an R-value of R-4 or higher in all exterior walls	\$1.00/sf insulation

Figure 2: Existing Building Bonus Enhancement Incentives

	MEASURE	REQUIREMENT	NEW CONSTRUCTION INCENTIVE
Rural	DHP	Project is in rural area as defined by OHCS and qualifies for a standard DHP bonus	\$500/DU
Smart Homes	Energy Monitor	Whole home energy consumption monitors with hard wired display	\$200/DU
Wildfire Resiliency	ERV/HRV with HEPA Filter	ERV/HRV must be compatible and equipped with HEPA filter (H13-H14 rating or MERV >=17)	\$100/DU
	Triple Pane Windows	Windows must be mostly triple paned with an area weighted average U-value of U-0.22	\$100/DU
	Fire Resistant Attic Insulation	Class A fire-resistant mineral wool or polysio insulation with minimum R-49 or fill attic space	\$100/DU
	Unvented Attic	Air seal attic at roofline so entire attic is within the thermal boundary	\$100/DU
	Fire Resistant Continuous Wall Insulation	Class A fire-resistant mineral wool or polyiso continuous insulation with an R-value of R-4 or higher in all exterior walls	\$100/DU

Figure 3: New Construction Bonus Enhancement Incentive

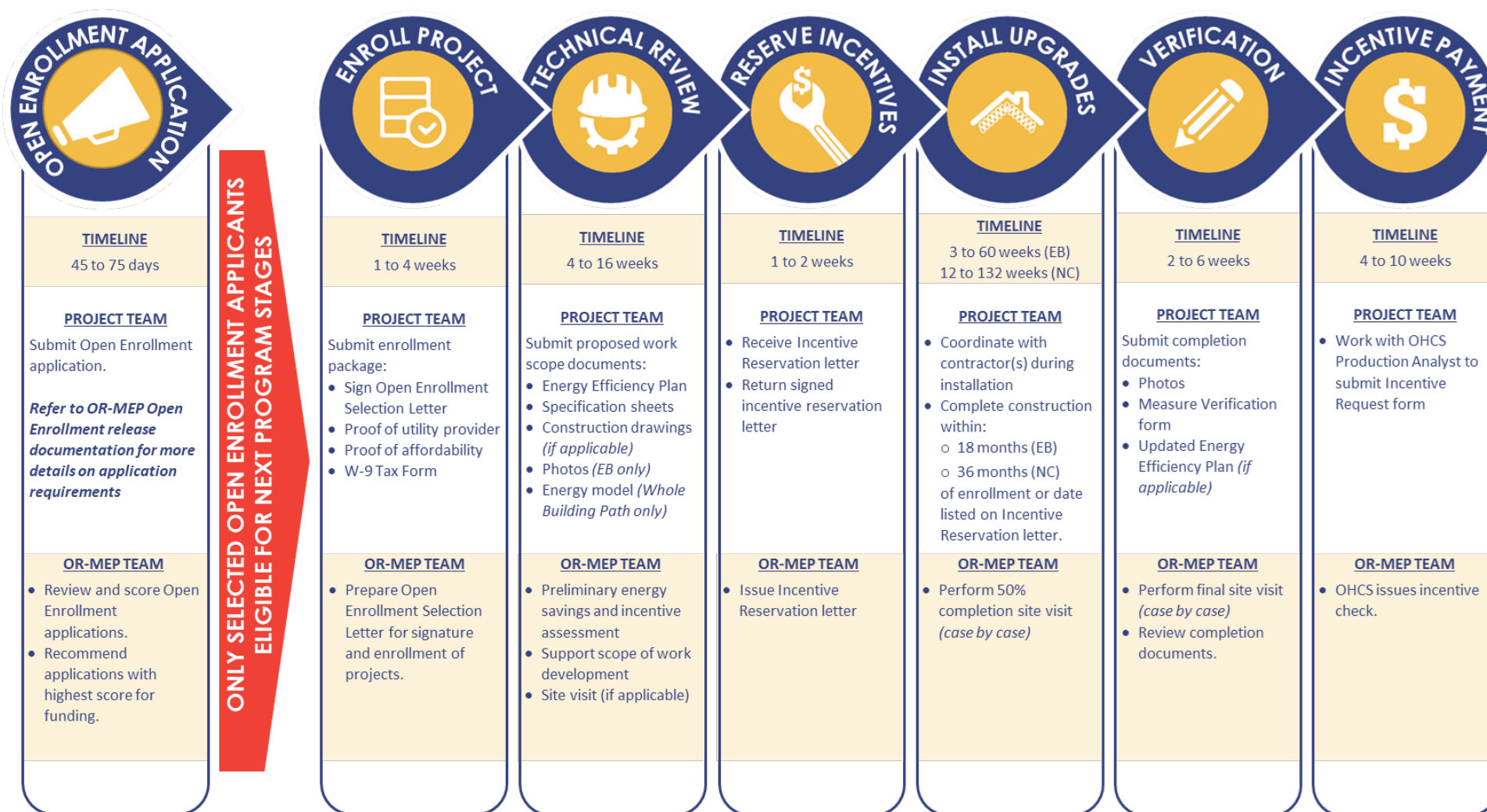


Figure 4: Program Process Flow and Documentation Requirements

Existing Buildings (EB)

Existing Building projects are existing structures where energy efficiency upgrades are completed.

OR-MEP staff will evaluate existing buildings that involve substantial renovation to determine whether it falls under the program's *Existing Building* component or *New Construction* component. This will be determined based on applicable permits the project is required to obtain for code compliance.

Existing Buildings Measure Table

Projects participating in the Menu and Bundled path must select measures meeting the requirements listed in Figure 5.

Tailored Measure

Participants interested in pursuing energy efficiency measures outside of those offered in the measure table can pursue one (1) custom measure by selecting the Tailored Measure option. Through this option, the participant can work closely with their Energy Advisor to receive incentives for a measure by calculating the savings specific to their project. The measure must meet the requirements of the program, including but not limited to:

- ◆ Lead to electric savings.
- ◆ Residents are the primary users of the equipment and space.
- ◆ Have proven, quantifiable energy savings potential (e.g., Regional Technical Forum, Department of Energy, ENERGY STAR etc.)

Measures that are a good fit for include:

- Innovative measures with proven energy savings potential
- Equipment used in a manner or application that is significantly different from the intent of the measure options (e.g., HPWH serving exclusively the laundry room hot water demand)

To qualify for a Tailored Measure incentive:

1. Discuss your interest to pursue a tailored measure with your Energy Advisor during enrollment.
2. In the EEP, Project Info tab, select the project type and the program pathway. Tailored Measure tab will populate.
3. Navigate to the Tailored Measure tab and complete the Measure Feasibility section. Submit the EEP to your Energy Advisor. Your Energy Advisor will determine the eligibility and feasibility of your proposed Tailored Measure and provide next steps.

Incentive

Tailored measures are eligible for **\$1.00/kWh** of estimated annual energy savings.

Figure 5 below is a summary of Menu and Bundled path incentives and technical requirements for Existing Buildings projects.

Figure 5 Existing Buildings Measure Table

MEASURE CATEGORY	MEASURE NAME	MENU PATH INCENTIVE	BUNDLED PATH INCENTIVE	EXISTING CONDITION REQUIREMENTS	MINIMUM EFFICIENCY REQUIREMENTS	
HVAC	Ductless Heat Pump (DHP)	DHP HSPF 9-11	\$2,700/ton	\$3,000/ton	Must replace electric resistance heat.	Installation of DHP with minimum efficiency of HSPF 9, up to 11 or HSPF2 8.1 – 9.9
		DHP HSPF >=11	\$3,600/ton	\$4,000/ton	Must replace electric resistance heat.	Installation of DHP with minimum efficiency of HSPF 11 or HSPF2 10 or greater
		RURAL BONUS: DHP	\$500/each ¹		Existing equipment must be electric resistance heat	Project is in a rural area as defined by OHCS and qualifies for a standard DHP bonus
	Packaged Terminal Heat Pump (PTHP)	Packaged Terminal Heat Pump (PTHP)	\$1,800/ton	\$2,000/ton	Must replace electric resistance heat.	Installation of PTHP with minimum efficiency of 3.0 COP (heating) / 9.8 EER (cooling).
	Energy Monitor	SMART HOME BONUS: Whole Home Energy Monitor	\$350/each ¹		No energy monitor	Installation of a whole home energy monitor with hard wired display.
	Bathroom Exhaust Fan	Efficient Bathroom Exhaust Fan	\$65/each	\$75/each	Non-ENERGY STAR rated bathroom fan	ENERGY STAR rated bathroom fan, or 2.8 CFM/W or better
	ERV/HRV	Spot or In-unit ERV/HRV	\$450/each	\$500/each	No Spot or In-Unit ERV/HRV	Energy or Heat Recovery Ventilation (ERV/HRV) with minimum of 80% recovery efficiency installed in unit. Must be sized per ASHRAE 62.2 for apartments.
		Common Area or Shared ERV/HRV	\$18/CFM	\$20/CFM	No Common Area or Shared ERV/HRV	Energy or Heat Recovery Ventilation (ERV/HRV) with minimum of 80% recovery efficiency shared between multiple units, serving common areas, or the whole building. Must be sized per ASHRAE 62.2 for apartments and ASHRAE 62.1 for common areas.
		WILDFIRE RESILIENCY BONUS: ERV/HRV with HEPA Filter	\$100/each ²		1.4 CFM/W or less	ERV/HRV must be compatible and equipped with HEPA filter (H13-H14 rating or MERV >=17)

¹ Rural, Wildfire Resiliency and Smart Home bonus incentives may be combined with related standard measure incentives.

² Rural, Wildfire Resiliency and Smart Home bonus incentives may be combined with related standard measure incentives.

MEASURE CATEGORY		MEASURE NAME	MENU PATH INCENTIVE	BUNDLED PATH INCENTIVE	EXISTING CONDITION REQUIREMENTS	MINIMUM EFFICIENCY REQUIREMENTS
Envelope	Windows	Windows U-0.3 - 0.28	\$12/sf	\$13/sf	Single-pane or double-pane window.	Minimum Efficiency: U value 0.3 - 0.28
		Windows U-0.27 - 0.25	\$13/sf	\$14/sf	Single-pane or double-pane window.	Minimum Efficiency: U value 0.28 - 0.25
		Windows U ≤ 0.24	\$14/sf	\$15/sf	Single-pane or double-pane window.	Minimum Efficiency: U value 0.24 or lower
		WILDFIRE RESILIENCY BONUS: Triple Pane Windows	\$10/sf ¹	Single-pane or double-pane window.	Windows must be triple paned	
	Attic/Ceiling Insulation	Attic/Ceiling Insulation R-38, or fill attic space	\$2.25/sf	\$2.5/sf	Existing condition must be R-18 or less.	Installed insulation must be minimum R-38 or fill attic space.
		Attic/Ceiling Insulation R-49	\$3/sf	\$4/sf	Existing condition must be R-18 or less.	Installed insulation must be minimum R-49 or better.
		WILDFIRE RESILIENCY BONUS: Fire Resistant Attic Insulation	\$1.00/sf ¹	Existing condition must be R-18 or less.	Class A fire-resistant mineral wool or polyiso insulation with minimum R-49 or fill attic space.	
		WILDFIRE RESILIENCY BONUS: Vented to Unvented Attic	\$1.00/sf attic floor ¹	Existing attic must be a vented.	Air seal attic at roofline so entire attic is within the thermal boundary.	
	Wall Insulation	Wall Cavity Insulation	\$0.90/sf	\$1/sf	Existing condition must be R-6.5 or less.	Installed insulation must be minimum R-11 or fill wall cavity.
		Wall Cavity and Continuous Insulation	\$2.75/sf	\$3/sf	Existing condition must be R-6.5 or less.	Installed insulation must be minimum R-11, or fill wall cavity, Plus R-3 continuous insulation
WILDFIRE RESILIENCY BONUS: Fire Resistant Continuous Insulation		\$1.00/sf ¹	Existing condition must be R-6.5 or less.	Class A fire-resistant mineral wool or polyiso continuous insulation with an R-value of R-4 or higher in all exterior walls		

¹ Rural, Wildfire Resiliency and Smart Home bonus incentives may be combined with related standard measure incentives.

MEASURE CATEGORY		MEASURE NAME	MENU PATH INCENTIVE	BUNDLED PATH INCENTIVE	EXISTING CONDITION REQUIREMENTS	MINIMUM EFFICIENCY REQUIREMENTS
DHW	Heat Pump Water Heater	NEEA Tier 1 or equivalent	\$1,600/each	\$1,800/each	Electric resistance water heater	Heat pump water heaters must be an eligible model in NEEA's Northern Climate Specification Tier 1 or EF 2.0 or better.
		NEEA Tier 3 or equivalent	\$2,100/each	\$2,300/each	Electric resistance water heater	Heat pump water heaters must be an eligible model in NEEA's Northern Climate Specification Tier 3 or EF 2.6 or better.
		NEEA Tier 4 or equivalent	\$2,300/each	\$2,500/each	Electric resistance water heater	Heat pump water heaters must be an eligible model in NEEA's Northern Climate Specification Tier 4 or EF 3.0 or better.
	Central Heat Pump Water Heater	Central HPWH	\$1,400/dwelling unit (DU) ¹	\$1,600/dwelling unit (DU) ²	Electric resistance water heater	EF 2.0 or greater
Appliances	Refrigerators	ENERGY STAR Refrigerator	\$130/each	\$140/each	Non-ENERGY STAR refrigerator	Installation of ENERGY STAR refrigerator.
	Dishwasher	ENERGY STAR Dishwasher	\$40/each	\$50/each	Non-ENERGY STAR dishwasher	Installation of ENERGY STAR dishwasher.
	In-unit and Common Area Clothes Washer	ENERGY STAR In-Unit and Common Area Clothes Washer	\$160/DU	\$180/DU	Non-ENERGY STAR clothes washer	Installation of ENERGY STAR in-unit clothes washer, or MEF 2.2 or greater. Dryer with moisture sensing recommended.
Tailored Measure			\$1.00/kWh	Must be an energy efficiency measure not covered by standard incentives. Preapproval required. Contact program staff for guidance.		

¹ Central HPWH incentives are capped at the installed cost

EB - Menu Path

General Requirements

The Menu Path is targeted to projects only interested in limited upgrades. The project team must meet the following requirements to qualify for incentives:

- ◆ Participants must choose at least **one** energy efficiency upgrade to qualify for Menu Path incentives. The list of eligible measures listed in Figure 5. These predefined measures are proven cost-effective measures with deemed savings already associated with each measure. *Note: Consider adding a third measures to qualify for higher incentives through the Bundled Path.*
- ◆ Each measure has minimum efficiency requirements. All requirements must be met to qualify for incentives.
- ◆ Incentives are capped at \$200,000 per project.

Incentives

Each measure in the *Existing Building Measure Table* is assigned incentives. The program has determined the incentives for each measure for the measure unit relative to the savings and costs of each measure.

Example: A Menu Path project with twenty (20) apartment units is installing new efficient packaged terminal heat pumps and refrigerators in each apartment unit. The project is eligible for incentives totaling \$38,800.

MEASURE	QUANTITY	INCENTIVES PER UNIT	TOTAL INCENTIVE
Packaged Terminal Heat Pump	20 tons	\$1,800	\$36,000
Refrigerators	20 each	\$130	\$2,600
MENU PATH TOTAL			\$38,600

Figure 6: Example Existing Building Menu Path Incentive

EB - Bundled Path

General Requirements

The Bundled Path is targeted for projects interested in three or more measure upgrades.

The project team must meet the following requirements to qualify for incentives:

- ◆ Participants can select **three or more** measures listed in Figure 5.
- ◆ Each measure has specific minimum efficiency requirements. All requirements must be met to qualify for incentives.
- ◆ Incentives are capped at \$200,000 per project.

Incentives

Each measure in the Existing Building Measure Table is assigned incentives. The program has determined the incentives for each measure based on the measure unit defined relative to the savings and costs of each measure.

Example: A Bundled Path project with fifty (50) apartment units is installing the following measures in each unit. The project is eligible for incentives totaling \$40,750.

MEASURE	QUANTITY	INCENTIVES PER UNIT	TOTAL INCENTIVE
Refrigerators	50	\$140	\$7,000
Windows U ≤ 0.24	2,000	\$15	\$30,000
Bathroom Exhaust Fan	50	\$75	\$3,750
BUNDLED PATH TOTAL			\$40,750

Figure 7: Example Existing Building Bundled Path Incentive with No Bonus

Example: A Bundled Path project with fifty (50) apartment units is installing the following measures in each unit including two bonus measures. The project is eligible for incentives totaling \$73,250.

MEASURE	QUANTITY	INCENTIVES PER UNIT	TOTAL INCENTIVE
Refrigerators	50	\$140	\$7,000
Windows U ≤ 0.24	2,000	\$15	\$30,000
Bathroom Exhaust Fan	50	\$75	\$3,750
Fire Resiliency Bonus: Triple Pane Windows	1,500	\$10	\$15,000
Smart Homes Bonus: Energy Monitor	50	\$350	\$17,500
BUNDLED PATH TOTAL			\$73,250

Figure 8: Example Existing Building Bundled Path Incentive with Bonus Incentives

EB - Whole Building Path

General Requirements

The Whole Building Path is targeted for projects interested in comprehensive energy upgrades and in need of a whole building energy assessment to identify energy efficiency opportunities.

The project team must meet the following requirements to qualify for incentives:

- ◆ Participants must work with an independent third party, hired at the discretion of the Participant, to complete energy savings calculations through an approved energy modeling software. This independent third party must do an onsite assessment according to industry standards, such as Building Performance Institute's (BPI) Multifamily Standards. The independent third party shall complete the onsite assessment in accordance with the Sampling Protocols summarized earlier in this program manual on page 6. OR-MEP staff is available on a limited basis to provide technical assistance to projects. Please contact program staff at OHCSMultifamilyEnergy@trccompanies.com to learn more.
- ◆ The project team must document existing conditions and capture these conditions in an energy model to establish a proper baseline to calculate energy savings.
- ◆ NEW: All known electric savings measures must be documented in the Energy Efficiency Plan regardless of if OR-MEP incentives are being pursued.
- ◆ NEW: To be eligible for the Whole Building path, a project must include a measure from each of the following measure type:
 - **Primary Heating Equipment:** Improved primary heating equipment must be a heat pump (no electric resistance or radiant heating)
 - **Water Heating Equipment:** Improved domestic hot water equipment must be a heat pump water heater
 - **Envelope:** There must be improvements to an envelope component
- ◆ OR-MEP can only provide incentives for improvements that contribute to electric savings, excluding:
 - Thermostats (smart or 7-day programmable)
 - Low flow fixtures
- ◆ Incentives are capped at \$200,000 per project.

Incentives

There are three incentive tiers in the Whole Building Path. Each tier is based on percent of electric savings compared to existing conditions. The higher the savings achieved, the higher the project incentive. The incentive tiers are as follows:

TIER	SAVINGS THRESHOLD	INCENTIVE
Tier 1	≥ 20% kWh savings compared to existing conditions	\$0.80 /kWh saved
Tier 2	≥ 25% kWh savings compared to existing conditions	\$0.90 /kWh saved
Tier 3	≥ 30% kWh savings compared to existing conditions	\$1.00 /kWh saved

Figure 9: Existing Building Whole Building Path Incentive Tiers

Example: A Whole Building Path project with eighty (80) apartment units is achieving 120,000 kWh in total savings, equivalent to 20% kWh savings compared to existing conditions. The project is eligible for Tier 1 incentives. The project is also eligible for 2,500 sf of Fire-Resistant Continuous Wall Insulation bonus. The project is eligible for incentives totaling \$98,500.

TIER	% SAVINGS	kWh SAVINGS	INCENTIVE per KWH	TOTAL INCENTIVE
Tier 1	20%	120,000	\$0.80	\$96,000
Bonus Category		Quantity	Incentive Per Unit	Bonus Incentives
Fire Resistant Continuous Wall Insulation		2,500 sf	\$1/sf	\$2,500
WHOLE BUILDING PATH TOTAL				\$98,500

Figure 10: Example Existing Building Whole Building Path Incentive

Technical Reviews Quality Assurance Process

The intent of the Technical Review is to provide a thorough review of the submittal documents and verify the project's projected energy savings. Projects that do meet the minimum energy savings targeted outlined in Figure 9: Existing Building Whole Building Path Incentive Tiers cannot be incentivized through the Whole Building Path and can opt to participate in either the Menu or Bundled Path.

OR-MEP Energy Advisors will work with the Participant's Energy Consultant to complete the Technical Review. If a submittal is not accepted, the OR-MEP Energy Advisor will provide comments in a review document identifying the issues of each submittal to inform revision. The Energy Consultant should review all comments and find and correct the errors causing each identified issue or explain why an identified issue is justified. OR-MEP Energy Advisors are available to provide one-on-one technical support with the Participant's Energy Consultant to discuss and resolve any issues identified in the Technical Review.

It is the Energy Consultant's responsibility to identify any modeling issues causing the issues identified and to resolve them. OR-MEP staff are available to provide any needed technical assistance if the Energy Consultant is having difficulties.

All participating projects are expected to review their work and to submit a high-quality model along with fully completed tools and documents. If at any time during the Technical Review process the OR-MEP Energy Advisor deems the submittal as incomplete or missing information, the submittal will be rejected and sent back to the Participant/ Energy Consultant to resubmit.

New Construction (NC)

New Construction is a new building, or portion within a new building, where a licensed professional architect or engineer has prepared and certified the building plans.

OR-MEP staff will evaluate existing buildings that involve substantial renovation to determine whether it falls under the program's *Existing Building* offering or *New Construction* offering. This will be determined based on any applicable permits the project is required to obtain for code compliance.

New Construction Measure Table

Projects participating in the Menu and Bundled path must select measures meeting the requirements listed in Figure 11 *New Construction Measure Table*.

Tailored Measure

Participants interested in pursuing energy efficiency measures outside of those offered in the measure table can pursue one (1) custom measure by selecting the Tailored Measure option. Through this option, the participant can work closely with their Energy Advisor to receive incentives for a measure by calculating the savings specific to their project. The measure must meet the requirements of the program, including but not limited to:

- ◆ Lead to electric savings
- ◆ Residents are the primary users of the equipment and space
- ◆ Have proven, quantifiable energy savings potential (e.g. Regional Technical Forum, Department of Energy, ENERGY STAR etc.)

Measures that are a good fit for include:

- ◆ Innovative measures with proven energy savings potential
- ◆ Equipment used in a manner or application that is significantly different from the intent of the measure options (e.g., HPWH serving exclusively the laundry room hot water demand)

To qualify for a Tailored Measure incentive:

1. Discuss your interest to pursue a tailored measure with your Energy Advisor during enrollment.
2. In the EEP, Project Info tab, select the project type and the program pathway. Tailored Measure tab will populate.
3. Navigate to the Tailored Measure tab and complete the Measure Feasibility section. Submit the EEP to your Energy Advisor.
4. Your Energy Advisor will determine the eligibility and feasibility of your proposed Tailored Measure and provide next steps.

Incentive

Tailored measures are eligible for **\$1.00/kWh** of estimated annual energy savings.

Figure 11 below is a summary of Menu and Bundled path incentives and technical requirements for New Construction projects.

Figure 11: New Construction Measure Table

Measure Category		MEASURE NAME	MENU PATH INCENTIVE	BUNDLED PATH INCENTIVE	MINIMUM EFFICIENCY REQUIREMENTS
HVAC	Ductless Heat Pump (DHP)	DHP HSPF 9-11	\$1,700/ton	\$1,900/ton	Minimum HSPF of 9 (HSPF2 8.1)
		DHP HSPF >=11	\$1,900/ton	\$2,100/ton	Minimum HSPF of 11 (HSPF2 10)
		RURAL BONUS: DHP		\$500/unit ¹	Project is in rural area as defined by OHCS and qualifies for a standard DHP bonus
	Package Terminal Heat Pump (PTHP)	High Efficiency PTHP	\$1,000/ton	\$1,100/ton	Minimum 3.0 COP/9.8 EER
	Efficient Exhaust Fan	Efficient Bathroom Exhaust Fan	\$65/each	\$75/each	ENERGY STAR rated bathroom exhaust or 2.8 CFM/W or greater
	ERV/HRV	Spot or In-unit ERV/HRV	\$300/each	\$330/each	Energy or Heat Recovery Ventilation (ERV/HRV) with minimum of 60% recovery efficiency installed in unit. Must be sized per ASHRAE 62.2 for apartments.
		Common Area or Shared ERV/HRV	\$11/CFM	\$12/CFM	Energy or Heat Recovery Ventilation (ERV/HRV) with minimum of 60% recovery efficiency that is shared between multiple units, serving common areas, or the whole building. Must be sized per ASHRAE 62.2 for apartments and ASHRAE 62.1 for common areas.
		WILDFIRE RESILIENCY BONUS: ERV/HRV with HEPA Filter		\$100/DU ¹	ERV/HRV must be compatible and equipped with HEPA filter (H13-H14 rating or MERV >=17)
	Energy Monitor	SMART HOME BONUS: Whole Home Energy Monitor		\$200/DU ¹	Installation of a whole home energy monitor with hard wired display.

¹ Rural, Wildfire Resiliency and Smart Home bonus incentives may be combined with any standard measure incentives

Measure Category		MEASURE NAME	MENU PATH INCENTIVE	BUNDLED PATH INCENTIVE	MINIMUM EFFICIENCY REQUIREMENTS
Envelope	Wall Insulation	Cavity Insulation	\$0.55/SF	\$0.65/SF	R-23 Cavity Insulation
		Continuous Insulation	\$1.25/SF	\$1.50 /SF	R-23 Cavity Insulation plus R-3 Continuous Insulation
		WILDFIRE RESILIENCY BONUS: Fire Resistant Continuous Insulation	\$100/DU¹		Class A fire-resistant mineral wool or polyiso continuous insulation with an R-value of R-4 or higher in all exterior walls
	Attic Insulation	10% Better Than Code	\$0.60/SF	\$0.70/SF	Insulation Entirely Above Deck - maximum U-0.028 Metal Building - maximum U-0.033 Attic - maximum U-0.019
		20% Better Than Code	\$0.90/SF	\$1.00/SF	Insulation Entirely Above Deck - maximum U-0.026 Metal Building - maximum U-0.030 Attic - maximum U-0.017
		WILDFIRE RESILIENCY BONUS: Unvented Attic	\$100/DU¹		Air seal attic at roofline so entire attic is within the thermal boundary
		WILDFIRE RESILIENCY BONUS: Fire Resistant Attic Insulation	\$100/DU¹		Class A fire-resistant mineral wool or polysio insulation with minimum R-49 or fill attic space
	Windows	Windows U-0.3 – 0.28	\$8/sf	\$9/sf	Minimum Efficiency: U value 0.3 - 0.28
		Windows U-0.27 - 0.25	\$9/Sf	\$10/Sf	Minimum Efficiency: U value 0.28 - 0.25
		Windows U ≤ 0.24	\$10/SF	\$11/SF	Minimum Efficiency: U value 0.24 or lower
		WILDFIRE RESILIENCY BONUS: Triple Pane Windows	\$100/DU¹		50% or more of the windows must be triple paned with an area weighted average U-value of U-0.22

¹ Rural, Wildfire Resiliency and Smart Home bonus incentives may be combined with any standard measure incentives

Measure Category		MEASURE NAME	MENU PATH INCENTIVE	BUNDLED PATH INCENTIVE	MINIMUM EFFICIENCY REQUIREMENTS
DHW	In–Unit Heat Pump Water Heater	NEEA Tier 1	\$1,350/each	\$1,500/each	Heat pump water heaters must be an eligible model in NEEA’s Northern Climate Specification Tier 1 or EF 2.0 or better.
		NEEA Tier 3	\$1,800/each	\$2,000/each	Heat pump water heaters must be an eligible model in NEEA’s Northern Climate Specification Tier 3 or EF 2.6 or better.
		NEEA Tier 4	\$2,000/each	\$2,300/each	Heat pump water heaters must be an eligible model in NEEA’s Northern Climate Specification Tier 4 or EF 3.0 or better.
	Central Heat Pump Water Heater	Central HPWH	\$1,350/DU ²	\$2,300/DU ²	Central HPWH EF 2.0 or better.
Appliances	Energy Star Appliances	ENERGY STAR Refrigerators	\$125/each	\$140/each	Installation of ENERGY STAR certified refrigerator
		ENERGY STAR Clothes Washers (Common Area & In-Unit)	\$160/DU	\$180/DU	Installation of ENERGY STAR certified clothes washer. May be common area or in-unit
		ENERGY STAR Dishwasher	\$45/each	\$50/each	Installation of ENERGY STAR certified dishwasher
Tailored Measure			\$1.00/kWh	Must be an energy efficiency equipment not covered by standard incentives. Preapproval required. Contact program staff for guidance.	

*Wildfire resiliency and Smart Home bonus incentives may be combined with any standard measure incentives

² Central HPWH incentives are capped at the installed cost

NC - Menu Path

General Requirements

The menu path is targeted for projects only interested in specific equipment measures.

The project team must meet the following requirements to qualify for incentives:

- ◆ Participants must choose at least **one** energy efficiency upgrades to qualify for Menu Path incentives. The list of eligible measures listed in Figure 11 *New Construction Measure Table*. These predefined measures are proven cost-effective measures with deemed savings already associated with each measure. Savings calculations are not required in this pathway.
- ◆ Each measure has specific minimum efficiency requirements. All requirements must be met to qualify for incentives
- ◆ Incentives are capped at \$200,000 per project.

Incentives

Each measure in the *New Construction Menu Path* is assigned incentives. The program has determined the incentives for each measure based on the measure unit defined relative to the savings and costs of each measure.

Example: A Menu Path project with twenty (20) apartment units is installing new efficient ductless heat pumps and Tier 3 heat pump water heaters in each apartment unit. The project is eligible for incentives totaling \$74,000.

MEASURE	QUANTITY	INCENTIVES PER UNIT	TOTAL INCENTIVE
DHP HSPF >=11	20 tons	\$1,900	\$38,000
HPWH: NEEA Tier 3	20 each	\$1,800	\$36,000
MENU PATH TOTAL			\$74,000

Figure 12: Example New Construction Menu Path Incentive

NC - Bundled Path

General Requirements

The Bundled Path is targeted for projects interested in multiple measure upgrades.

The project team must meet the following requirements to qualify for incentives:

- ◆ Participants must choose at least **three** energy efficiency upgrades to qualify for Bundled Path incentives. The list of eligible measures listed in Figure 11, *New Construction Measure Table*. These predefined measures are proven cost-effective measures with deemed savings already associated with each measure. *Note: OR-MEP recommends projects interested in larger scopes of work follow the Whole Building Path.*
- ◆ Each measure has minimum efficiency requirements. All requirements must be met to qualify for incentives.
- ◆ Incentives are capped at \$200,000 per project.

Incentives

Each measure in the *New Construction Measure Table* is assigned incentives. The program has determined the incentives for each measure for the measure unit defined relative to its savings and costs.

Example: A Bundled Path project with fifty (50) apartment units is pursuing the following measures installed in each unit. The project is eligible for incentives totaling \$82,250

MEASURE	QUANTITY	INCENTIVES PER UNIT	TOTAL INCENTIVE
Attic Insulation; 10% Better Than Code	5,000 sf	\$0.70	\$3,500
Central HPWH	50 DU	\$1,500	\$75,000
Efficient Bathroom Exhaust Fans	50 each	\$75	\$3,750
BUNDLED PATH TOTAL			\$82,250

Figure 13: Example New Construction Bundled Path Incentive with No Bonus

Example: A Bundled Path project with fifty (50) apartment units is pursuing the following measures installed in each unit including a bonus measure. The project is eligible for incentives totaling \$87,250.

MEASURE	QUANTITY	INCENTIVES PER UNIT	TOTAL INCENTIVE
Attic Insulation; 10% Better Than Code	5,000 sf	\$0.70	\$3,500
Central HPWH	50 DU	\$1,500	\$75,000
Efficient Exhaust Fans	50 each	\$75	\$3,750
Fire Resistant Attic Insulation	50 DU	\$100	\$5,000
BUNDLED PATH TOTAL			\$87,250

Figure 14: Example New Construction Bundled Path Incentive with a Bonus Incentive

NC - Whole Building Path

General Requirements

The Whole Building Path is targeted for projects only interested in comprehensive energy upgrades and in need of a whole building energy assessment to identify energy efficiency measure opportunities.

The project team must meet the following requirements to qualify for incentives:

- ◆ Participants must work with an independent third party, hired at the discretion of the Participant, to complete energy savings calculations through an approved energy modeling software.
- ◆ The baseline energy use modeled should follow the energy code version accepted at time of permit approval.
- ◆ OR-MEP can only provide incentives for design improvements that contribute to electric savings.
- ◆ **NEW:** All known electric savings measures must be documented in the Energy Efficiency Plan regardless of if OR-MEP incentives are being pursued.
- ◆ **NEW:** To be eligible for the Whole Building path, a project must include a measure from each of the following measure type:
 - **Primary Heating Equipment:** Improved primary heating equipment must be a heat pump (no electric resistance or radiant heating)
 - **Water Heating Equipment:** Improved domestic hot water equipment must be a heat pump water heater
 - **Envelope:** There must be improvements to an envelope component
- ◆ OR-MEP can only provide incentives for improvements that contribute to electric savings, **excluding:**
 - Thermostats (smart or 7-day programmable)
 - Low flow fixtures
- ◆ Incentives are capped at \$200,000 per project.

Incentives

There are three incentive tiers in the Whole Building Path. Each tier is based on percent electric savings over existing conditions. The higher the savings achieved, the higher the incentive the project is eligible for.

The incentive tiers are as follows:

TIER	SAVINGS THRESHOLD	INCENTIVE
Tier 1	≥ 20% kWh savings compared to code baseline	\$0.80 /kWh saved
Tier 2	≥ 25% kWh savings compared to code baseline	\$0.90 /kWh saved
Tier 3	≥ 30% kWh savings compared to code baseline	\$1.00 /kWh saved

Figure 15: New Construction Whole Building Path Incentive Tiers

Example: A Whole Building Path project with eighty (80) apartment units is achieving 96,000 kWh in total savings, equivalent to 20% kWh saving compared to existing conditions. The project is eligible for Tier 1 incentives. The project is eligible for incentives totaling \$76,800.

TIER	% SAVINGS	kWh SAVINGS	INCENTIVE per KWH	TOTAL INCENTIVE
Tier 1	20%	96,000	\$0.80	\$76,800
WHOLE BUILDING PATH TOTAL				\$76,800

Figure 16: Example New Construction Whole Building Path Incentive

Technical Reviews Quality Assurance Process

The intent of the Technical Review is to provide a thorough review of the submittal documents and verify the project's projected energy savings. Projects that do not meet the minimum energy savings targeted outlined in Figure 15, the *New Construction Whole Building Path Incentive Tiers* cannot be incentivized through the Whole Building Path and can opt to participate in either the Menu or Bundled Path.

OR-MEP Energy Advisors will work with the Participant's Energy Consultant to complete the Technical Review. If a submittal is not accepted, the OR-MEP Energy Advisor will provide comments in a review document identifying the issues of each submittal revision. The Energy Consultant should review all comments and find and correct the errors causing each identified issue or explain why an identified issue is justified. OR-MEP Energy Advisors are available to provide one-on-one technical support with the Participant's Energy Consultant to discuss and resolve any issues identified in the Technical Review.

It is the Energy Consultant's responsibility to identify any modeling issues causing the identified issues and to resolve them. OR-MEP staff are available to provide any needed technical assistance if the Energy Consultant is having difficulties.

All participating projects are expected to review their work and to submit a high-quality model along with fully completed tools and documents. If at any time during the Technical Review process the OR-MEP Energy Advisor deems the submittal as incomplete or missing information, the submittal will be rejected and sent back to the Participant/ Energy Consultant to resubmit.

Appendix A: Bonus Enhancement Incentives

New Construction and Existing Buildings projects that qualify for incentives through the Menu, Bundled, or Whole Building Paths are eligible to add Bonus Enhancement Incentives to incorporate smart homes and wildfire resiliency components to their buildings.

Rural DHP

Rural areas in are slower to adopt newer energy saving technology due to several challenges. First, there is often a shortage of expertise in the work force to install the equipment as demand is low. Second, the cost to deliver the equipment to the rural areas, often from the urban centers, introduces an added cost. The challenges result in consistent higher cost to install less common technologies.

To alleviate some of the added costs associated, OR-MEP is offering a \$500 bonus to the installation of Ductless Heat Pumps in rural areas. Rural projects are defined in [OHCS' QAP 2022, p. 12-13](#) for "Balance of Non-Urban/Rural" region.

Smart Homes

Smart technologies are quickly changing the way people interact with their homes, particularly to automate energy saving behaviors that used to require some expertise and substantial effort to sustain. Recent and ongoing advancements in smart controls have lowered the cost of smart technologies, while also diminishing the learning curve, making them more accessible to a wider range of individuals.

Energy Monitor

Home energy monitoring equipment displays real-time electric consumption data and, in some cases, smart capabilities to identify opportunities to reduce energy use. These devices are typically connected to the electric panel and display consumption information in a designated display. Home energy monitoring reduces energy consumption by 10-15%.

To qualify for this bonus, projects must install an energy monitoring device that monitors the electric consumption of the whole unit in real time and displays consumption data on a hardwired display that is easily accessible by the tenants.

Wildfire Resiliency

Oregonians have had to face historic environmental challenges in recent years that have amplified the need to bolster the health and resiliency of homes. In 2020, Oregon faced one of the most devastating wildfire seasons in its history, with over a million acres burned and 4,000+ homes destroyed in its wake. The health of countless Oregonians was likewise impacted by the diminished air quality during the five-month long wildfire season and has spurred initiatives to mitigate these risks moving forward. These wildfire-focused measures and bonus incentives are designed to help address the health and resiliency needs of Oregonians considering the wildfire risks we continue to face.

Indoor air quality (IAQ) is one of the most critical features of a healthy home. Poor IAQ is not only associated with serious short and long-term risks to occupants' health, but also contributes to issues such as mold which can threaten a building's integrity. In Oregon, the challenge of maintaining IAQ is exacerbated by wildfires, which are projected to become more frequent in years to come. Heat and Energy Recovery Ventilators are not only invaluable in improving IAQ year-round but can be particularly effective at filtering out smoke during peak wildfire season when equipped with an appropriate HEPA filter.

The resiliency of the building structure itself – its ability to withstand extreme heat conditions and prevent smoke infiltration – is also of paramount importance in securing the health and safety of Oregonians and their homes. Unvented attics, triple pane windows, and fire-resistant insulation are some of the measures that can be taken to protect against smoke infiltration and mitigate the greatest risks to a building and its occupants in the event of a wildfire.

ERV/HRV with HEPA Filter

High Efficiency Particulate Air (HEPA) filters are designed to remove 99.97% of any airborne particles with a size of 0.3+ microns, including dust, pollen, mold, bacteria etc. They are also the most effective air cleaning tool for removing smoke particulates, making them the ideal choice when compared to other types of air purifiers on the market. HEPA filters installed as part of an ERV/HRV assembly offer these advanced air purification capabilities with the added benefit of energy savings associated with a balanced air recovery system. Moreover, the heat and humidity balancing functions of ERVs serve as excellent ventilators and deterrents for air-quality related health risks.

For an **Existing Building** project to qualify for this bonus incentive, the existing conditions must include mechanical ventilation of 1.4 CFM/W or less, and the new ERV/HRV installed must be compatible and equipped with a HEPA filter (H13-H14 grade or Minimum Efficiency Reporting Value (MERV) ≥ 17). Filters with H grades H12 or lower (MERV 16 or lower) and products marketed as “HEPA-like” or “HEPA-style” do not meet the same efficiency standards and do not qualify for this bonus incentive. Project teams will be responsible for verifying that the ventilator selected is compatible with HEPA filters; this is typically specified in the product’s spec sheet.

For a **New Construction** project to qualify for this bonus incentive, the ERV/HRV installed must be compatible and equipped with a HEPA filter (H13-H14 grade or MERV ≥ 17). Filters with H grades H12 or lower (MERV 16 or lower) and products marketed as “HEPA-like” or “HEPA-style” do not meet the same efficiency standards and do not qualify for this bonus incentive. Project teams will be responsible for verifying that the ventilator selected is compatible with HEPA filters; this is typically specified in the product’s spec sheet.

Triple Pane Windows

Triple pane windows provide an improved barrier between the interior and exterior of a home, decreasing air leakage and significantly improving energy conservation. The inclusion of tempered glass in the assembly has the added benefit of making windows up to four times more resistant to breakage due to radiant heat, flame exposure, and wind-blown embers.

For an **Existing Building** project to qualify for this bonus incentive, existing conditions must include single or double pane windows, and the project must install triple paned windows.

For a **New Construction** project to qualify for this bonus incentive, 50% or more of the windows installed must be triple paned with an area weighted average U-value of U-0.22.

Fire Resistant Attic Insulation

Where some insulation may melt and allow smoke to pass through into the house in the event of a fire, various types of fire-resistant options have been developed to withstand these extreme conditions without compromising on the energy efficiency benefits of insulation year-round. Two of the most promising materials in this effort are mineral wool and Polyisocyanurate (Polyiso) insulation. Both materials are known for their excellent fire-resistant properties.

For an **Existing Building** project to qualify for this bonus incentive, the existing attic insulation must be R-18 or less, and new Class A fire-resistant mineral wool or polyiso insulation with minimum R-49 (or fill attic space) must be installed.

For a **New Construction** project to qualify for this bonus incentive, Class A fire-resistant mineral wool or polyiso insulation with minimum R-49 (or fill attic space) must be installed.

Vented to Unvented Attic

Attic entry points for embers and flames are the greatest source of risk to a building during wildfires. Unvented attics not only mitigate the risk of embers entering through vents, but also greatly improve the energy efficiency of a building by moving the thermal boundary to the roof, allowing attic ductwork to operate in a conditioned space and greatly reducing the energy demands of HVAC systems. The air barrier created through attic sealing likewise reduces humidity by preventing warm moist air from units below from entering the attic and condensing on the sheathing. As such, attic sealing is an excellent measure for hardening properties against wildfires and protecting occupants from humidity (i.e., mold) and air quality (i.e., smoke infiltration) related health risks.

For an **Existing Building** project to qualify for this bonus incentive, the attic must be converted from vented to unvented; it must be air sealed at the roofline so that it is within the thermal boundary of the building.

For a **New Construction** project to qualify for this bonus incentive, the attic must be air sealed at the roofline so that it is within the thermal boundary of the building.

Fire Resistant Continuous Wall Insulation

Where some insulation may melt and allow smoke to pass through into the house in the event of a fire, various types of fire-resistant options have been developed to withstand these extreme conditions without compromising on the energy efficiency benefits of insulation year-round. Two of the most promising materials in this effort are mineral wool and Polyisocyanurate (Polyiso) insulation. Both materials are known for their excellent fire-resistant properties.

For an **Existing Building** project to qualify for this bonus incentive, Class A fire-resistant mineral wool or polyiso continuous insulation with an R-value of R-4 or higher must be installed in all exterior walls.

For a **New Construction** project to qualify for this bonus incentive, Class A fire-resistant mineral wool or polyiso continuous insulation with an R-value of R-4 or higher must be installed in all exterior walls.