

## Appendix A: Existing Buildings

### 1. Introduction

Energy Trust of Oregon (Energy Trust) launched the Existing Buildings (EB) program in Oregon in February 2003. The Oregon program provides financial and service incentives to participants to improve the energy efficiency of existing buildings and facilities served by Portland General Electric (PGE) and Pacific Power (PAC) for electric incentives and/or NW Natural Gas (NWN) including NW Natural Schedule 360 Demand Side Management (NWN DSM), Cascade Natural Gas (CNG), and Avista for gas incentives. Eligible facilities include all commercial building types including office, educational, retail, foodservice, lodging, healthcare, governmental facilities and (beginning in 2021) multifamily buildings, which receive service via qualifying rate schedules.

This appendix provides an overview of the Existing Buildings program services and how these approaches are envisioned to evolve beginning in 2021, as the Existing Buildings program begins delivery of the Existing Multifamily customer services and offerings as described in [Appendix C: Existing Multifamily](#) and the program's lighting delivery services shift to a Business Lighting PDC as described in [Appendix E: Business Lighting](#).

### 2. Overview of the Current Program

The Existing Buildings program generates energy efficiency savings through a variety of program tracks and delivery channels. Respondent may propose changes, enhancements or efficiencies to tracks or to any delivery mechanisms and channels that will enhance the program's operational efficiency, lower delivery costs or improve the customer experience. Proposed changes should include an analysis of savings potential and estimated delivery and incentive cost.

The program maintains a network of distributors, contractors, engineering companies and manufacturers throughout the state who provide equipment, engineering analysis, installation or other services to facilitate implementation of energy-efficiency measures (EEMs), such as heating, air conditioning, refrigeration, building controls, electric motors, insulation and foodservice equipment.

### 3. Overview of Program Offerings

The [Appendix I: Existing Buildings + EPM + Existing Multifamily—Oregon Measure Build-Up](#) template provides additional (non-lighting) measure and incentive information.

#### A. Standard Track

The Standard track is designed as a prescriptive or semi-prescriptive (calculator tool) approach for simple non-lighting measures. Standard track incentives are typically set based upon deemed savings. Participation tends to be driven primarily by trade allies, marketing, referrals from utility representatives and PMC direct outreach.

Prescriptive incentives are available for electric and gas measures including, but not limited to, heating and cooling, insulation, lodging and foodservice equipment. To view current prescriptive non-lighting measures available through the program, see the [Existing Buildings Standard Incentive Booklet](#).

Respondent is encouraged to propose additional measures that are emerging technologies with quantifiable potential for savings. Any proposed new measure should be verifiable through industry studies, technical papers or other efficiency programs.

## **B. Custom Track**

The Custom track is primarily driven through the Technical Analysis Studies (TAS) performed by the PMC's subcontracted pool of Existing Buildings program allied technical assistance contractors (ATACs) (see Section 4.C. Technical Analysis Studies below). The program averages approximately 300 custom projects in process at any given time and closes out approximately 200 custom projects per year. While the ATAC model and approach has worked effectively and has been responsible for significant gas and electric savings, respondents may propose changes or redesign of the Custom track delivery. Any proposed changes shall include estimates of savings and cost of delivery and incentives.

This track offers custom incentives for more complex and site-specific measures that require energy analysis. The Custom track is available for capital investments in energy efficiency measures, multi-measure projects, and retro-commissioning (RCx) and direct digital control (DDC) tune-up measures that do not fall under the Standard track's prescriptive offerings. Examples of custom projects range from complex commercial HVAC projects to energy management systems. Custom measures must be able to show specific and verifiable energy savings and costs, typically developed by a third-party energy analysis firm. Currently, most complex custom measure analysis is performed by ATACs; these are third-party energy analysis firms qualified by and subcontracted to the Program Management Contractor (PMC) to provide measure analysis for qualifying projects.

The PMC pays ATACs for TAS work using service incentives, which are currently included in the program's incentive budget as opposed to being included in the PMC delivery budget. Cost-effective measures that meet Existing Buildings program requirements and improve a participant's electric or gas energy efficiency are eligible.

Support is provided to participants and their contractors in key aspects of the decision and installation process. PMC Account Managers help participants assess their energy-efficiency options and risks and help them sell the purchase decision within their organizations. The PMC reviews proposals that participants receive from their selected contractor(s) and vendor(s) in order to verify whether the energy measure description and savings estimates appear accurate and meet program requirements to receive incentives.

Identification of participants suited for Custom track participation may come from trade allies and ATACs, from utility account representative referrals, and through direct PMC outreach. The

PMC will review energy analysis studies and perform project quality control (QC) and verification. Custom measure implementation and installation is the responsibility of the participant.

There is no minimum savings threshold for custom non-lighting measures, but all measures are subject to Energy Trust cost-effectiveness requirements. Currently, the levels of Energy Trust incentives available for qualifying custom non-lighting measures are as follows:

- Electric-only projects: \$0.22/kWh, not to exceed 60% of total eligible project cost
- Gas-only projects: \$3.00/therm, not to exceed 75% of total eligible project cost
- Dual-fuel projects: \$0.22/kWh and \$3.00/therm, not to exceed 75% of total eligible project cost

Examples of custom non-lighting measures include chillers, HVAC, direct digital controls (DDC) systems and DDC tune-ups.

Energy Trust also has incentives for solar electric projects installed at eligible commercial sites. The PMC coordinates with Energy Trust's Solar program staff to identify and assist interested customers with applying to Energy Trust for solar project incentives.

All custom non-lighting projects are reviewed by the PMC to determine whether savings estimates are appropriate for the measures identified. The PMC's engineering team utilizes various tools to perform a technical analysis study (TAS) review. Lighting projects fall under a separate quality control (QC) path.

The PMC utilizes many different techniques and tools to verify savings calculations done by ATACs. The analysis for each measure is checked for baseline and measure assumptions, mathematical errors and use of appropriate engineering calculations and methodology. This may involve recalculating energy engineering that is not explicitly stated, performing minor simulation and modeling using hand calculations or software calculations, and questioning the assumptions and engineering methodology under which the study was performed. The PMC utilizes several industry-standard and in-house Energy Trust shared tools and calculators to perform a thorough review. At a minimum, these calculations are based on equipment capacity, efficiency and hours of operation. The analyses are also verified against the PMC's experience and understanding of current state code.

When the PMC is satisfied with the energy savings calculations and estimated costs, the PMC runs each energy-efficiency measure (EEM) through cost-effectiveness analysis to determine whether the measure qualifies for financial incentives.

Review of the TAS is documented in the cost-effectiveness calculator and incentive estimate, which describes all EEMs studied, estimated savings and incentives, and any pertinent measure qualities (e.g., equipment efficiencies or set points). This review and documentation of assumptions provides the quality control needed to ensure that savings and project cost estimates are as accurate as possible and identifies measures eligible for financial incentives.

Custom measures that have been identified by the PMC through its review and approval of an Energy Trust-sponsored technical analysis study (TAS) and/or PMC-reviewed and accepted technical analyses, and that pass the utility cost test (UCT) and total resource cost (TRC) test, are eligible for an incentive.

### **C. Energy Performance Management**

Energy Trust has offerings geared toward larger customers that provide approaches for comprehensive and behavioral energy savings for businesses, public sector and multifamily customers. Offerings include Strategic Energy Management (SEM), Pay for Performance (PfP) and incentives for trainings that support energy saving practices, such as Building Operator Certification. See [Appendix B: Energy Performance Management](#) for details.

### **D. Direct Install**

In previous years Energy Trust, through its Existing Buildings and Existing Multifamily programs, has implemented certain direct-install efforts for pre-approved measures such as LED lamps, faucet aerators, showerheads, shower wands, plug load sensors and other Energy Trust approved measures. Delivery of these measures has typically been by either the PMC or PMC subcontractor selected to install, or in some cases leave behind, such measures for qualifying participants. Payment for the direct-install equipment and services has typically been through a fixed per-unit service incentive under the program.

Energy Trust would prefer a single implementor for direct-install projects that include both lighting and non-lighting measures. In locations where lighting measures are the majority of the proposed direct install offering, they should be implemented by the Business Lighting PDC. If the respondent proposes a direct install offering as the PMC, they should address coordination with the Business Lighting PDC (see [Appendix E](#)).

In locations where respondent proposes a direct install offering, respondent must include proposed approaches, clearly indicating proposed delivery structure and incentive costs. For more information on multifamily approaches to direct install, see [Appendix C](#).

### **E. Midstream and Buy-downs**

Energy Trust expects to sunset the LED buy-down in 2020 with the intended launch of a midstream approach for common lighting measures. This effort will be run through the Business Lighting PDC.

Existing Buildings and Existing Multifamily currently offer a limited number of distributor-focused midstream offerings, such as the Emergency Generator Block Heater distributor incentive, as well as distributor incentives for certain multifamily appliances. For more information on multifamily offerings, see [Appendix C](#).

### **F. Business Lighting**

Although the PMC will not have lighting savings goals, the PMC Account Managers will be the primary outreach support for commercial customers on all energy efficiency measures including lighting. Close coordination with the Lighting PDC will be required to ensure customers are maximizing their efficiency potential. See [Appendix F: Coordination and Collaboration](#) for more details on lighting projects collaboration and coordination.

#### **4. Energy Analysis Services Offered**

The program provides technical assistance and financial incentives for improving the efficiency of existing commercial buildings. These services include assistance to identify and quantify the energy savings potential for installation of EEMs. The PMC's outreach team works one-on-one with larger customers (key accounts). Many of these participants have in-house engineering capabilities and/or work directly with trade allies or engineering firms once projects are identified. For small and medium customers, the PMC either directs participants to trade allies early in the process, or works with them individually to determine existing opportunities, referring them to trade allies as appropriate. For all customers, the PMC's role is to help identify measures and to have the customer work with trade allies to select appropriate solutions.

The program provides the following technical services, at no cost, to participants:

##### **A. Walk-through Surveys (WTS)**

This service is provided by the PMC for small and mid-sized participants that do not meet the utility usage threshold for a technical analysis study (TAS). Walk-through surveys (WTS) are performed by PMC Account Managers with a focus on identifying Standard track efficiency replacements or upgrades for individual measures. The goal of the WTS is to identify standard energy-efficient measures for which the participant can apply in the program. The PMC, as appropriate, helps the participant identify trade allies that can assist the participant through the Existing Buildings (EB) trade ally network. Note: the current Existing Multifamily program provides customers with WTS services as well, and it is anticipated that this service will continue as part of the Existing Building program. Refer to [Appendix C](#) for details on how WTS operate within the multifamily environment.

##### **B. Site Evaluation**

A site evaluation (SE) is performed for facilities with higher energy usage where the participant does not have specific measures in mind. A SE may use a whole-building approach and typically looks at all facets of a building. This service is more in-depth than a WTS. A SE report provides rough savings estimates and budgetary information for potential custom measures, as well as listing standard incentive measures. EB has typically provided up to a maximum of \$6,000 in incentive funding per SE based on building criteria: facility size, energy usage, building complexity and measure complexity. If a participant already knows which measures its organization would like to implement, the PMC may choose to skip a SE and go straight to a technical analysis study (TAS).

##### **C. Technical Analysis Studies (TAS)**

Any participant can submit an energy analysis study for a custom project from their in-house staff, a vendor or a trade ally for review by the PMC's engineering team. If additional information is needed, the PMC works with the participant and/or the trade ally to obtain the needed information for providing an estimate of the savings and incentives. When appropriate, based on potential savings, the PMC contracts with energy experts to examine how a participant's facility uses energy and to identify opportunities for efficiency improvements. These experts, known as allied technical assistance contractors (ATACs), are designated to produce a TAS. These services are paid by the PMC directly to the ATAC, using incentive funding, typically at no cost to the participant. The studies are reviewed by the PMC's engineering team. If the cost of the study is greater than the amount EB can or will fund, the customer has an option to pay the unfunded amount directly to the ATAC. EB has typically provided up to \$20,000 in incentive funding per TAS based on building criteria: facility size, energy usage, building complexity and measure complexity. To manage program costs, the PMC assesses or estimates each project's potential for being cost-effective. If cost estimates indicate the project will be cost-effective and achieve a minimum savings threshold, a paid study will be provided.

## 5. Energy Engineering, Technical Analysis and Review

### A. Project Oversight

The PMC reviews the TAS and evaluates contractor proposals to ensure that energy savings calculations in the study appear to be accurate, the project meets Energy Trust's cost-effectiveness criteria, and that product and installation costs are reasonable.

### B. Post-installation Verifications (PIV)

The PMC conducts post-installation verifications (PIV) to maintain a high standard of quality for the trade ally network and to ensure that incented measures are installed and operating as intended.

### C. SB 1149 Schools Coordination

ATACs play an important role in schools projects where the electric service is provided by PGE or Pacific Power. The Oregon Department of Energy (ODOE) administers a schools program that is similarly funded by public purpose charge collections. Energy Trust and ODOE coordinate on schools projects so that ATACs subcontracted to the Existing Buildings PMC to perform TAS for schools projects must additionally be on ODOE's approved Qualified Energy Audit Firm list (see <https://www.oregon.gov/energy/energy-oregon/Pages/Schools-Audit-Firms.aspx>). Additional coordination and requirements apply to school projects as Energy Trust and ODOE work together with the school districts to calculate potential coordinated funding amounts, as well as certain additional information sharing procedures that must be followed. See [Appendix F](#) for more detail.

## 6. Program Outreach

### A. Structure

Due to the expansive and diverse customer base served by the Existing Buildings program, the outreach team has been organized into subgroups that specialize in their approach to the

market. These include private sector, public sector, small and medium business, and regional customers.

Key producing markets in the private sector include: large office and property managers, data centers, grocery and retail, healthcare, lodging, and private higher education. Our largest public sector markets include K-12 schools, public higher education, cities, counties, federal and special districts.

The PMC currently serves small businesses throughout Energy Trust territory with campaign–style, focused outreach efforts for specific custom and standard measures or specific commercial sectors and regions. A campaign’s outreach tactics may include in-person visits, phone calls and emails, vendor/contractor coordination and possible collateral development to support these tactics. Trade Ally (TA) management is segmented based on offering type: insulation, HVAC, boilers, foodservice, refrigeration, etc.

Regional account managers work with customers from all sectors (public and private) as well as with small businesses. They often integrate more directly with their local TAs as well.

## **B. Common Activities**

These outreach groups all perform common tasks, including:

- Organizing and prioritizing the market
- Calling on customers
- Attending networking events
- Attending conferences
- Coordinating with TAs and ATACs
- Updating customers on program changes and bonuses
- Building awareness in the customer base through presentations and events
- Coordinating closely with assigned lighting counterpart
- Managing project forecasts
- Managing prospect forecasts for projects on the horizon
- Ushering projects through custom and standard paths
- Collecting customer information and application forms
- Delivering incentive estimates and incentive offers with a technical description of the project requirements
- Updating customers on status of projects
- Providing feedback on how to better serve customers. This can come in the form of measure ideas, ways to streamline the process, customer specific changes, etc.
- Working with ATACs to bring in projects and negotiate study fees
- Providing customer guidance on best path for savings including Standard, Custom, SEM and Lighting
- Coordinating and collaborating with SEM coaches to support key account relationships
- Attending site walk-throughs to discover and pre-vet potential projects
- Coordinating study presentations with the customer and ATACs

### **C. Group-specific Activities**

Each of the outreach subgroups also carries out specific tasks for its customer base. These tasks help them engage most appropriately and effectively with the unique customer base they have.

- Small and Medium Business (SMB) and Trade Ally (TA) Outreach Team
  - SMB
    - Respond to the majority of incoming call center calls and emails
    - Organize quarterly campaigns for outreach to specific markets
    - Host sector-focused events
    - Assist with outreach to specific communities
  - TA
    - Support periodic technical and informational forums for TAs
    - Check in regularly with TAs
    - Enroll new TAs into the program
    - Track TA participation in the program
    - Update TAs on program changes
- Regional Outreach Team
  - Manage key accounts
    - Hold monthly meetings or calls
    - Track projects
  - Attend board or project planning meetings
    - Work with TAs and ATACs
    - Make regular in-person visits
    - Make program presentations
    - Assist with incentive paperwork and questions
  - Coordinate and deploy mini-campaigns including day-long door-to-door outreach efforts targeting small towns or high-density commercial areas
  - Hold community events including “lunch and learn”-style events that are open to customers and TAs and facilitate networking and building a community presence
  - Work in conjunction with the lighting team on special efforts or initiatives
- Public Sector Outreach Team
  - Create and maintain list of public sector customers – K-12, cities, counties, federal, special districts
  - Track contact and outreach to customers
  - Hold regular meetings with key customers
  - Provide input into procurement language to ensure Energy Trust’s involvement in projects
  - Assist with project planning and decision-making
  - Integrate into bond planning teams. This includes working closely to include and coordinate with New Buildings program counterparts.
  - Coordinate closely with ATACs on SB 1149 Energy Trust/ODOE schools collaboration
- Key Market Outreach Team

- Coordinate and hold customer “lunch and learns”
- Provide program presentations at customer events and networking events to ensure they are well-informed on options among Standard, Custom, and/or EPM approaches to achieve savings and incentives
- Hold sector-specific events
- Hold regular customer meetings or calls with largest accounts
- Manage customer list specific to the sector
- Work with regional account managers to assist in engaging with sector customers
- Keep abreast of sector-specific changes
- Collaborate and coordinate with SEM coaches

#### **D. Trade Allies**

Trade allies (TAs) can include installation contractors, equipment distributors, manufacturer representatives, energy service companies and designers. TAs are a central component of the program marketing and savings acquisition strategy and working with trade allies has proven to be an effective way to reach all sectors of the commercial market. The program relies on trade allies to deliver savings by installing both standard and custom measures. Trade allies can use the program to promote and encourage energy-efficiency measures (EEM) along with driving business sales for their respective companies.

The PMC builds relationships with trade allies through relationship management, periodic program communications, events, training, and co-op marketing efforts. Additionally, new trade allies are recruited to expand the technical depth and market reach of the program. An important function of the PMC is to establish and review trade ally qualifications and performance.

Trade ally activities include:

- Pursuing potential projects on behalf of the program
- Liaising with program participants and the PMC during projects
- Promoting program incentives for all applicable projects
- Attending training on potential energy-saving measures
- Installing standard and custom measures
- Investigating referrals from the PMC

It is the responsibility of the PMC to manage trade ally project enrollment documents and to verify the accuracy of savings and payments.