

# Summary Report for Executive Order 17-20 Action Item 5A

## Executive Summary

On November 6, 2017, Governor Kate Brown issued **Executive Order 17-20: Accelerating Efficiency in Oregon's Built Environment to Reduce Greenhouse Gas Emissions and Address Climate Change**. This Executive Order 17-20 (EO 17-20) established directives regarding energy efficiency leadership in state buildings, increasing energy and water efficiency in new construction, and increasing energy efficiency through retrofits of existing buildings. One specific approach to achieving more energy savings in existing buildings was highlighted in directive 5a, Energy Trust of Oregon (Energy Trust) Pilot Programs.

### *Excerpt from EO 17-20*

#### **5. Increasing Energy Efficiency through Retrofits of Existing Buildings Across the State**

A. *Energy Trust of Oregon Pilot Programs. Oregon Public Utility Commission (PUC) is directed to work with Energy Trust of Oregon and interested stakeholders to expand meter-based savings pilot programs, including pay-for-performance pilot programs, by January 1, 2019. PUC shall consider inclusion of pilot programs, which do not significantly raise energy efficiency delivery costs, and that focus on existing single family homes, multi-family residential buildings, commercial buildings, and methods to incentivize energy efficiency in building stock that is significantly below current building code requirements.*

This memo describes how this directive from EO 17-20 has been met to date in 2018 with:

- 1) The evaluation and modification of Energy Trust's currently available commercial pay for performance pilot program and
- 2) Design of a 2019 residential meter-based savings pilot targeting improvements to residential efficiency project installation practices. The term "meter-based" is synonymous with a performance based approach such as pay for performance.

The PUC plans to continue to work with Energy Trust throughout 2019 to improve these offerings and explore new ways to address program design barriers such as energy efficiency cost- effectiveness and offer length. The combination of findings from these two pilots are anticipated to inform how Energy Trust deploys meter-based programs in the future throughout their portfolio of offerings as strategies to increase savings.

## Background

The PUC provides oversight of the operations of Energy Trust to ensure that ratepayer funds directed towards Energy Trust for energy efficiency and small scale renewable projects are deployed most efficiently and effectively. Since 2002, Energy Trust has implemented energy efficiency incentive programs for investor-owned electric and gas utilities across all customer sectors (residential, commercial and industrial) resulting in the acquisition of 670 aMW and 57.9 million therms of cost-

effective energy savings<sup>1</sup>. The majority of the programs delivered by Energy Trust are designed to encourage customers to choose efficient energy equipment and usage practices. The strategy of lowering the project cost with cash incentives paid at project completion based on forecasted energy savings has been an effective approach to encouraging customer action but Energy Trust is continually reviewing current approaches and new ideas to ensure that their programs remain relevant to customers and continue to lead to acquisition of all cost effective efficiency to keep utility system costs low for all customers.

### **Commercial Pay for Performance**

In 2012, various contractors in the market introduced the concept of a Pay for Performance (PfP) pilot offering to the Oregon Public Utility Commission (PUC). Although PfP has many different definitions in the market, all include incentives paid at year-end for a building's demonstrated energy performance in a given year. The PUC and Energy Trust saw potential in the PfP design because it shifts performance risk away from ratepayers to the customer or contractor receiving the incentive by ensuring that savings are realized prior to payment.

In 2014, Energy Trust released a request for project proposals under the PUC Docket No. UM 1678. The PfP program pilot (Phase I) included the following design elements:

- Participants receive an incentive payment at the end of each of three years.
- Incentive payments are based on energy savings verified by regression analysis of pre- and post-implementation billing data. The regression analysis is used to adjust for variables that impact energy consumption, such as weather.
- Requires that customers work with a selected contractor to an agreed upon scope that meets Energy Trust program requirements.
- Includes both O&M and Capital savings measures.
- Requires a minimum of three years of customer commitment.

Only one project, a large commercial building in downtown Portland, was selected for the pilot and the three-year contract was completed in 2017. The project was successful in reducing site energy consumption by nearly 20% in the first year of PfP participation and much of the savings persisted into the second and third years. Following this initial pilot, Energy Trust staff and contractors launched Phase II of the commercial PfP offer in 2017 to achieve deeper persistent savings and expand customer interest and participation. The expanded effort provided additional contractor training on program requirements, including offering energy modeling tools and standard calculation methodology developed by Energy Trust.

### **Residential Pay for Performance**

A parallel but related focus for Energy Trust in 2017 was to explore the use of a new service that applied analytic tools to residential energy consumption using meter data. In May of 2017 Energy Trust issued a solicitation for an Automated Meter Data Analytics provider, ultimately selecting [Open Energy Efficiency Meter](#) (Open EE) to develop a software-based solution to perform impact evaluations on existing

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<sup>1</sup> Energy Trust's 2017 Annual Report [https://www.energytrust.org/wp-content/uploads/2018/04/2017.Annual.Report.OPUC .pdf](https://www.energytrust.org/wp-content/uploads/2018/04/2017.Annual.Report.OPUC.pdf)

deemed measures, and to explore the feasibility of applying these methods to a Residential PfP program.

## 2018 Pilot Activity

The Phase II Pilot of the Commercial PfP received limited engagement from energy service providers eligible to deliver the offering and, to date, has not been successful in identifying PfP project candidates. Given this limited interest, Energy Trust engaged their Conservation Advisory Council and other stakeholders in August 2018<sup>2</sup> to share lessons learned from a third party evaluation of the Phase II PfP Pilot and to receive feedback. In addition, Energy Trust staff engaged a targeted group of stakeholders to provide their perspective on potential changes to the PfP offer in 2019.

The evaluation suggests that customers are not interested in the current offering for the following reasons:

- The technical requirements to estimate savings and screen projects for cost-effectiveness before a customer can commit are onerous and limit project eligibility.
- The lack of up-front incentives and the long-term payment structure are difficult for PfP Allies to sell and may not align with typical customer capital budgeting and financing schedules.
- The overlap with existing offers for commercial customers to pursue capital projects with up-front incentives through the Custom and Standard track incentives limits applicability.
- Many large commercial customers are already enrolled in the Commercial Strategic Energy Management (SEM) offer that specifically addresses energy savings opportunities related to operations, maintenance and behavior activities with meter-based energy savings and incentives paid to the customer after the end of an engagement year.

As for the Residential PfP, Energy Trust spent much of 2018 researching and helping to develop the Open EE platform so that it could be used in Oregon to support a future Residential PfP pilot in 2019.

## Meter- Based Program Actions for 2019

### Commercial PfP Phase III Modifications

Due to the limited group of stakeholders that have provided feedback to date, Energy Trust is proposing a more formal engagement process in Q1 2019 that brings together customers as well as industry representatives to modify the PfP offer by considering the following six actions.

To increase customer and contractor activity:

1. Expand customer and building eligibility to include smaller energy users and revise baseline energy use requirements
2. Reopen the contractor eligibility application process to provide additional time and training to interested contractors
3. Consider alternative approaches to lead generation for PfP projects

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<sup>2</sup> Energy Trust's August 2018 presentation to the CAC on Phase II <https://www.energytrust.org/wp-content/uploads/2018/07/CAC-Packet-August.pdf>

To achieve deeper and persistent savings:

4. Consider a whole building approach to cost-effectiveness for PfP projects
5. Revise length of program engagement.
6. Develop alternative payment structures for capital projects

PUC Staff plans to work closely with Energy Trust as they re-engage stakeholders on the redesign. Proposed action four will require Commission approval to move from current measure level analysis. This redesign will be transparent and open to stakeholder input.

### **Commercial Strategic Energy Management (SEM)**

Energy Trust will continue delivering commercial Strategic Energy Management (SEM) to participants using the current meter-based energy modeling and regression approach to determine savings and incentives. Energy Trust staff will continue to explore opportunities to expand the offer to additional commercial customers, including smaller energy users.

### **Residential PfP Exploration**

EO 17-20 also directs the PUC to work with Energy Trust on meter-based savings pilots in other customer sectors in addition to commercial. Bolstered by this direction, in 2018, Energy Trust built upon their work with Open EE in measure evaluation and designed an adaptation of PfP which may augment the current residential efficiency portfolio.

Unlike the commercial pilot where site specific incentives are based upon analyzed savings at that site, this pilot builds upon site specific analysis to determine an aggregate savings and incentive outcome derived from multiple residential efficient equipment installations. Three current Energy Trust trade allies who provide energy efficiency services utilizing Energy Trust's residential energy efficiency incentives will be selected by Energy Trust to become "aggregators" for the pilot. Each aggregator will be distinguished on the project type they deliver; the first will be principally HVAC measures, the second will be weatherization measures and the third will examine sites with multiple measures, referred to as deep energy retrofits.

PfP savings will be considered whole-home savings, determined by analysis of 12 months of pre-treatment and 12 months post-treatment meter data. Each residential customer will receive the same incentives otherwise available. Aggregators will enroll projects in the pilot by selecting the sites they believe deliver maximum cost effective savings. At the conclusion of the 12 month performance period, any savings in excess of the deemed values previously claimed at project submission will be tabulated and an incentive will be paid to aggregators on a per kWh or therm unit basis.

These learnings will be applied to future portfolio project submissions, with the goal of examining whether or not PfP enables feedback mechanisms for trade allies that improve the savings and cost-effectiveness of measures. The pilot is anticipated to launch in April 2019 and span three years, covering two years of site collection and the post-treatment performance periods. There will be an interim, mid-pilot assessment.

## Conclusion

The PUC plans to continue to work with Energy Trust throughout 2019 to improve these offerings and explore new ways to overcome PfP program design barriers. The combination of findings from these two pilots are anticipated to inform how Energy Trust deploys meter-based programs throughout their future portfolio of offerings, leading to increased savings.