2020 Annual Report to the Oregon Public Utility Commission & Energy Trust Board of Directors

ENERGY TRUST OF OREGON
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From the executive director

Unprecedented. That is the word we've heard over and over to describe 2020, from the disruptions to daily life to the threats to our health to the response required from all levels of governments and the economic effects that so many families and businesses are still facing. It's cliché to say, but it's true: 2020 was unprecedented.

Given all the challenges associated with the pandemic, promoting energy efficiency and renewable energy may not seem like an obvious priority. But job losses and economic uncertainty have a direct impact on customers' ability to pay energy bills. Within a few months, some of our utility partners saw dramatic increases in the number of customers falling behind on their bills and the money they owed, while community action agencies reported similar spikes in requests for energy assistance. Energy Trust of Oregon's offers for residential customers this year provided some much-needed bill savings at home. And for businesses struggling to hang on, lower utility bills could be the difference between outlasting the pandemic and closing for good.

To help customers manage through the challenges of 2020, we redesigned program offers, launched bonuses and new virtual delivery options, and pivoted marketing and outreach efforts. Behind the scenes, we adapted quickly to keep project applications and incentive payments to customers and contractors flowing. Our work was helped by invaluable collaborations with our utility partners and community-based organizations, along with our network of trade ally contractors who continued to deliver services to customers.

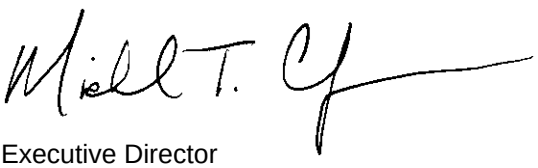
While COVID-19 affected our ability to fully realize our goals across all utility territories, our energy-efficiency programs met the overall annual goal for electric savings, exceeded the annual goal for natural gas savings and far exceeded the annual goal for electric generation. We did this while keeping levelized costs low and limiting our administrative and program support costs as required by the Oregon Public Utility Commission. We are still seeing COVID-19 impact customers' energy project decisions, and we had to lower some incentive levels in 2021 after receiving an unusually high volume of incentive applications in late 2020 and early 2021 in the business programs.

As we reflect on 2020, we are mindful some people and businesses were impacted more severely than others. Low-wage workers experienced a greater risk of contracting the virus at work and greater economic risks if they chose to stay home. Communities of color were disproportionately sickened. Thousands of Oregonians, mostly in rural parts of the state, face rebuilding following devastating wildfires and floods. These communities were already among the most vulnerable to economic disruptions. Energy Trust had been working to prioritize outreach and service to these customers, but 2020 added urgency to this work.

While we all hope 2021 will bring more stability, we know working with customers and communities to recover requires us to become more flexible—to understand and respond faster to customer needs and local efforts to build community health and well-being. We must work with community partners to better understand when customer and community objectives align with energy efficiency and renewable energy. We need to invest in rebuilding efforts that deliver valuable benefits to utilities and their customers. These include energy and cost savings, carbon reduction, improved air quality, jobs and small business income.

Thank you to all who helped us achieve our 2020 results, including all of our customers, the OPUC, Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas, Avista, Northwest Energy Efficiency Alliance, Oregon Department of Energy, Oregon Housing and Community Services, trade ally contractors, cities, counties and community organizations.

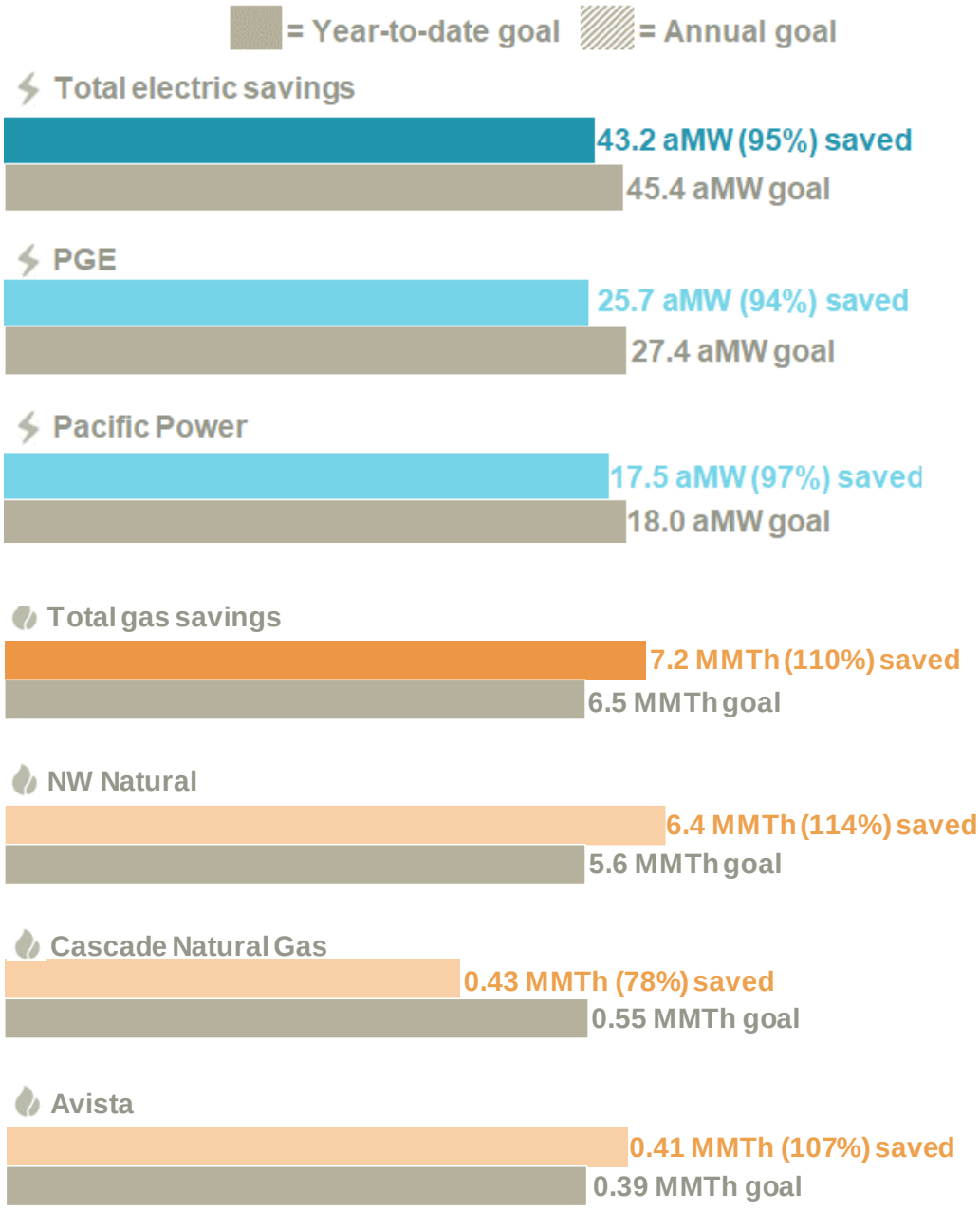
Michael Colgrove



Executive Director

I Results at a glance0[1],1[2]

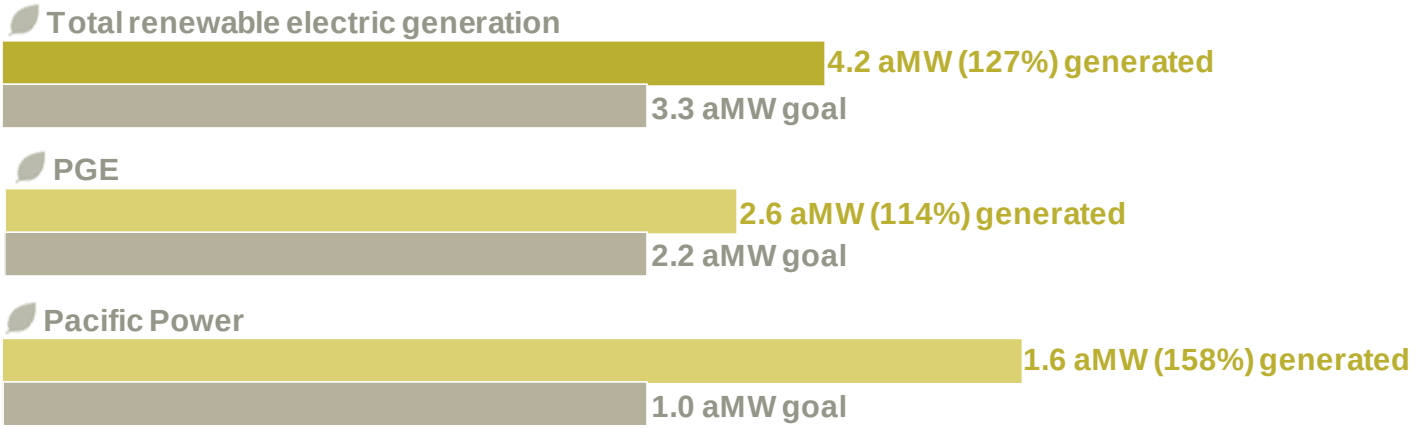
Savings



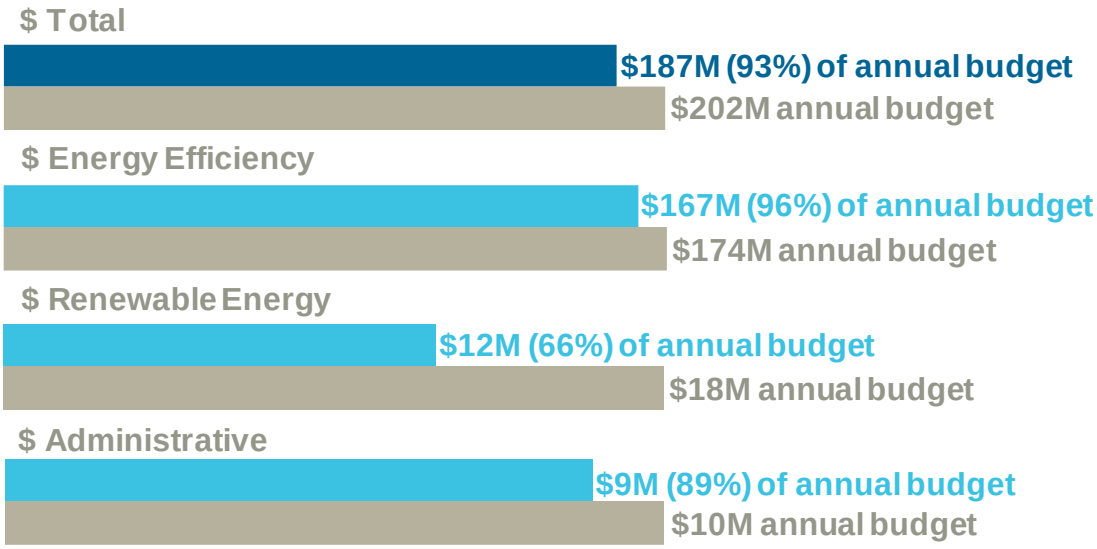
[1] This document reports gross savings. Previous annual reports reported net savings, which are adjusted gross savings based on results of current and past evaluations. As determined in consultation with OPUC and stakeholders in 2019, Energy Trust reports savings in gross terms in 2020 and going forward.

[2] Note that aMW indicates average megawatts, MMTh indicates million therms and MM is million.

Generation

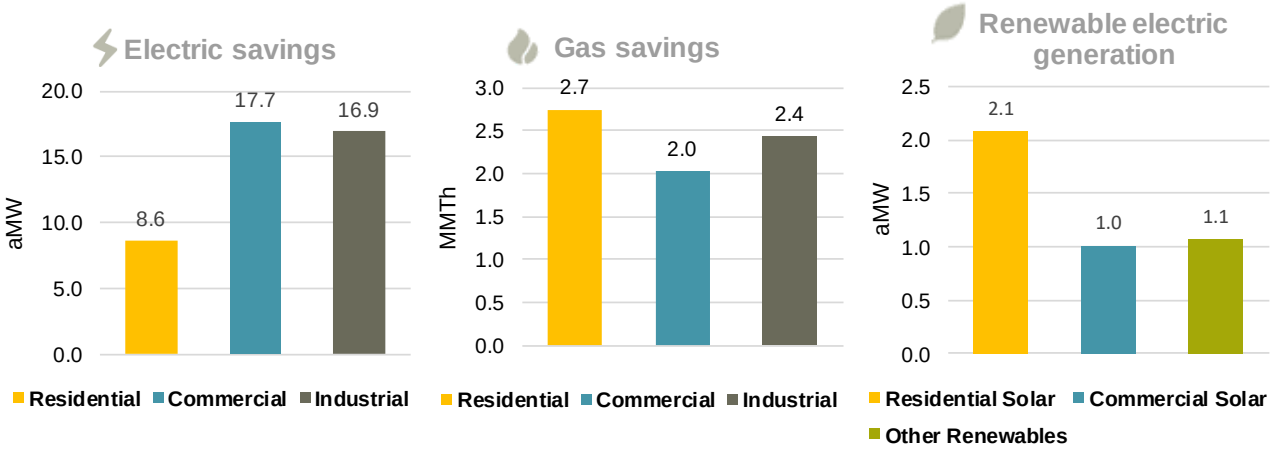


Oregon public purpose charge expenditures[3]



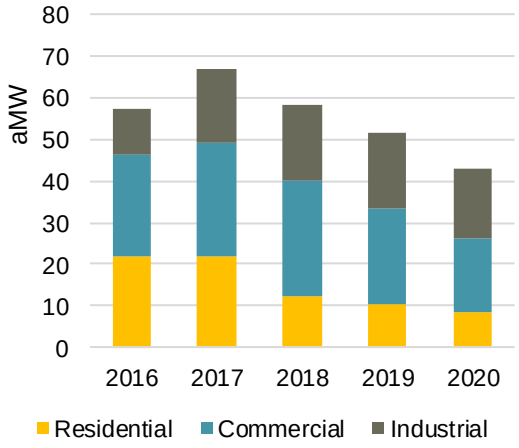
[3] Renewable energy spending appears low due to the cancellation of a biopower project that did not comply with the terms of its funding agreement, which resulted in $1.4 million returned to Energy Trust. For more information, see page 24.

2020 savings and generation by sector

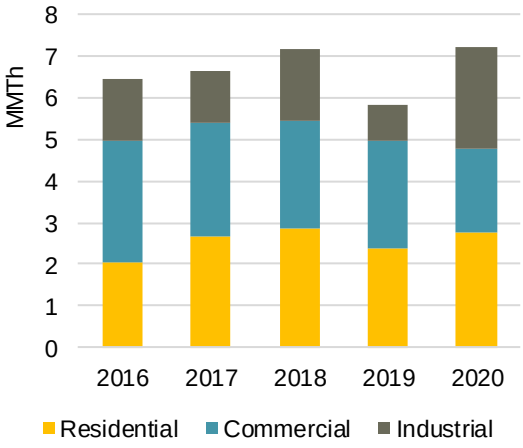


Savings and generation by sector over time[4]

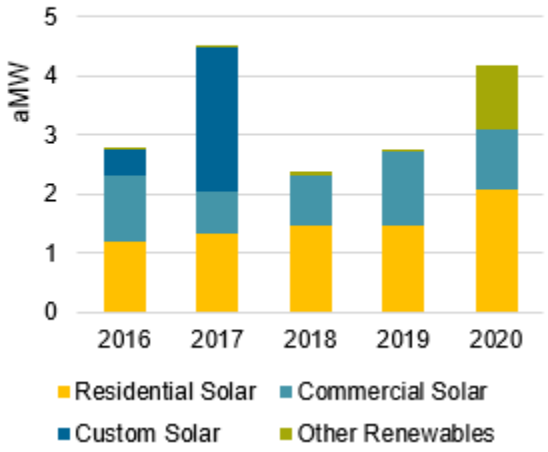
Electric savings by sector (2016-2020)



Gas savings by sector (2016-2020)

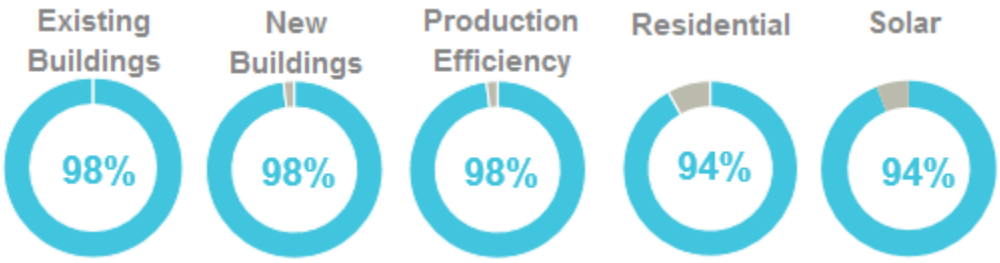


Renewable electric generation by program (2016-2020)

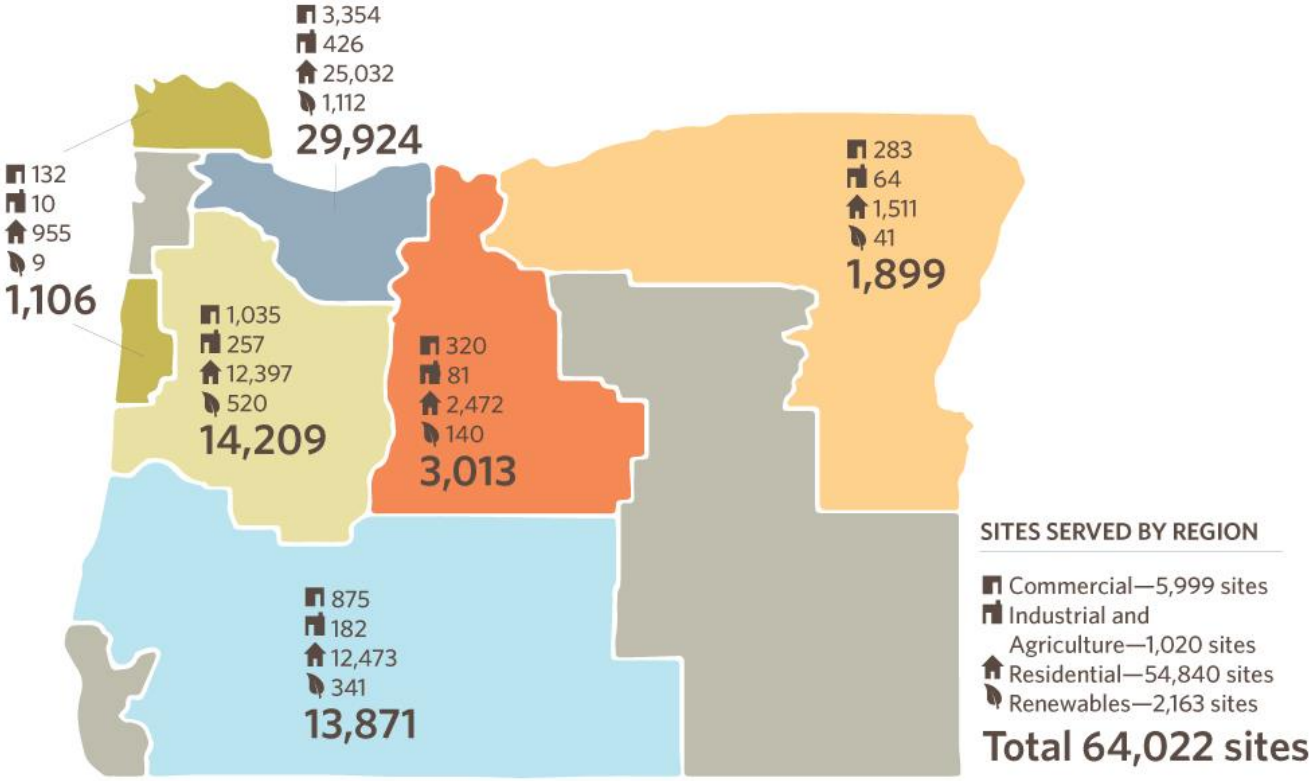


[4] Energy Trust's electric efficiency goals and savings are trending down due to lower resource potential. See page 11 for more information.

Customer satisfaction[5]



Sites served by region[6,7]



[5] Energy Trust surveyed 1,031 residential customers and 1,106 non-residential customers in Oregon who received an incentive or discount from Energy Trust in 2020. New Buildings satisfaction data is from 2018. See Appendix 3 for more information.
[6] This document reports on Energy Trust services to Oregon customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista. Areas in gray are not served by these utilities.
[7] Residential sites served increased about 7,500 from 2019 to 2020, mostly due to increases in distribution of smart thermostats and Energy Saver Kits.

Progress to annual organization goals

This table provides an at-a-glance update on Energy Trust's 2020 organization goals, which were set as part of Energy Trust's 2020 Budget and 2020-2021 Action Plan and approved by the board of directors. These goals reflect the organization's priorities for the year and guided staff decision-making regarding allocation of resources. For more detail on activities related to 2020 goals, see Section VII.

Goal	Status
Meet savings and generation targets, create future opportunities	Met goal
Develop guidelines for resource investments in community efforts, engage stakeholders for input	Met goal
Provide information to policymakers, agencies and implementers	Met goal
Strengthen internal innovation capabilities, develop new proposals	Met goal
Make operational improvements	Met goal

II Executive summary

The body of this report includes only activity funded by Oregon electric utility customers of PGE and Pacific Power under state law and by Oregon natural gas customers of NW Natural, Cascade Natural Gas and Avista through regulatory agreements between the OPUC and each natural gas utility. The total organization results appendix reports energy savings, generation, expenditures and revenue for all Energy Trust activity, including activity in NW Natural territory in Southwest Washington, Energy Trust's subcontract to deliver the Oregon Community Solar Program and other activity.

A. Annual results[8,9]

Energy Trust met its annual electric and natural gas savings goals (coming within the accepted range of +/- 5 percentage points) while sustaining low costs.

- Electric efficiency improvements completed in 2020 **saved 43.2 average megawatts** of electricity, about 5% less than the 2020 goal of 45.4 aMW, at a levelized cost[10] of 4.0 cents per kilowatt hour, a slight increase from 2019.
- Natural gas efficiency improvements completed in 2020 **saved 7.2 million therms** of natural gas, about 10% more than the 2020 goal of 6.5 million therms, at a levelized cost of 32.6 cents per therm, a decrease from 2019.
- Energy Trust exceeded goal in NW Natural and Avista territories and met goal by coming within the accepted range in Pacific Power territory at 97%. It fell short of goal in PGE and Cascade Natural Gas territories at 93% and 78%, respectively.
- Market transformation through Northwest Energy Efficiency Alliance resulted in 8% of Energy Trust's electric savings and achieved 97% of Energy Trust's 2020 NEEA goal.

43.2
AVERAGE MEGAWATTS SAVED

7.2
MILLION ANNUAL THERMS SAVED

- **The renewable energy sector exceeded its annual renewable electric generation goals for both PGE and Pacific Power territories.**
  - Total renewable energy systems installed in 2020 will **generate 4.17 aMW** of electricity, 27% more than the 2020 goal.

4.17
AVERAGE MEGAWATTS GENERATED

- Savings and generation achieved in 2020 represent **270,000 tons of carbon dioxide** kept out of the atmosphere, the equivalent of removing 57,000 cars from Oregon roads for a year.
- **Energy Trust achieved most of its 2020 OPUC performance measures.**
  - It received consistently high customer satisfaction ratings of 96% overall and 98% for interactions with program representatives.
  - It was out of compliance with performance measures related to staffing costs, projects completed with minority-owned trade

270,000
TONS OF CO_2 AVOIDED

[8] This document reports gross savings. Previous annual reports reported net savings, which are adjusted gross savings based on results of current and past evaluations. As determined in consultation with OPUC and stakeholders in 2019, Energy Trust reports savings in gross terms in 2020 and going forward.
[9] This report includes the best available energy savings data as of the date of submission. Energy savings reported here for periods prior to January 1, 2020, may be different than previously reported as a result of applying updated evaluation factors to Energy Trust savings and generation in Oregon through the annual true up process. Previous true up reports are available online at www.energytrust.org/reports.
[10] Levelized cost is Energy Trust's total cost to save or generate each unit of energy over the life of the measure (which ranges from one to 20 years or more).

allies, funds invested in renewable project development assistance and savings in Cascade Natural Gas territory. All were due to disruptions related to COVID-19.

B. Notable activities and trends

- Electric savings goals and results have been trending down in recent years because Energy Trust succeeded in working with the market to acquire the most cost-effective electric savings, including helping to transform the lighting market. Programs must now acquire harder-to-reach savings, including by reaching previously underserved customers such as small businesses and households with low incomes.
    - Future savings forecasts show there is significant cost-effective electric savings potential in these more expensive projects and emerging technologies that will need to be accessed via innovative program approaches and offers.
    - Gas efficiency opportunities have not diminished.
    - Renewable energy opportunities are growing due to increased capacity of solar systems and increased demand for residential solar.
- At the start of the pandemic, Energy Trust projected it would achieve 80 to 90% of its energy-saving goals. Staff made fast and targeted program and operation changes that kept applications and payments flowing and motivated customers to take on projects amid economic uncertainty. By the end of the year, Energy Trust met or came close to achieving its energy-saving goals in most utility territories.
- To support vulnerable residential customers, Energy Trust promoted low- and no-cost offers by partnering with community-based organizations and utilities to **deliver free energy-saving solutions, including 50,000 LED bulbs** and more than 5,000 smart thermostats to low-income and rural customers.
- Energy Trust increased incentive levels and expanded eligibility for Savings Within Reach offers, which are higher incentives for income-qualified customers, to include any customer receiving unemployment benefits or other financial assistance as a result of the pandemic.
- When social distancing requirements prevented direct installations at multifamily properties, staff developed kits with energy-saving LEDs, low-flow water devices and advanced power strips for property managers to distribute at no cost to tenants that helped them save energy and money. The offer reached 6,300 units in just over six months.
- To help commercial and industrial customers facing project and shipping delays, limits on in-person activities and economic uncertainty, Energy Trust launched bonuses and increased incentives that motivated businesses to install upgrades, generated business for trade allies and even helped restart some stalled projects.
    - This resulted in an unusually high pipeline of commercial and industrial electric efficiency projects that completed in early 2021, which led Energy Trust to explore funding strategies to support additional projects and savings for the remainder of 2021. See page 12 for more information.
- As businesses looked for no- and low-cost ways to reduce their energy use, Energy Trust adapted its Strategic Energy Management offer to virtual delivery and increased incentives for participants.

50,000

LED BULBS DISTRIBUTED TO COMMUNITY PARTNERS

- Energy Trust expanded access to solar energy for low- and moderate-income households. Launched in late 2019, Solar Within Reach incentives helped 86 income-qualified households install solar panels, while a new offer launched in late 2020 will help tribes, nonprofits and affordable housing providers invest in renewable energy.
- Staff responded quickly to support communities and customers affected by wildfires and floods in 2020, providing information and resources to support housing recovery that incorporates energy efficiency while surfacing lessons on how to assist customers and trade allies following natural disasters.
- Energy Trust awarded new program management and program delivery contracts to deliver the Existing Buildings program including multifamily offers and business lighting offers starting in 2021. The new contracts expand Energy Trust's commitment to diversity, equity and inclusion by prioritizing diversity in subcontracts and program design. Changes to program structures, designed to improve efficiency and cost-effectiveness, are **expected to save more than $1 million in 2021.**
- Energy Trust welcomed two members to its board of directors who have experience serving rural customers and six members to its Diversity Advisory Council who represent communities of color and rural parts of the state.
- Energy Trust supported local governments in a variety of renewable energy projects, from investments that lower costs for taxpayers to planning for energy projects that support community resiliency.
- Energy Trust advanced targeted load management efforts that aim to change how and when customers use energy, focusing on reducing demand during periods of peak energy use and helping utilities avoid disruptive infrastructure upgrades.
    - A targeted load management effort with NW Natural entered Phase II, which included increased incentives within current cost-effectiveness parameters; marketing efforts are planned to raise awareness of increased incentives and drive participation. Staff is developing the Phase III approach that will launch in August 2021 and incorporate a localized avoided cost value.
    - A targeted load management project with Pacific Power in Phoenix and Talent ended in 2020. These areas were heavily impacted by wildfires in September 2020. Closeout evaluation and reporting activities are underway.

$1M

ESTIMATED 2021 SAVINGS FROM NEW CONTRACTS

C. Updates requested by the OPUC

This section provides information requested by the OPUC in comments on Energy Trust's 2020 Budget and 2020-2021 Action Plan, plus other information requested by OPUC staff.

Provide information on 2020 forecasting and 2021 budget impacts:

- Bonus incentives launched in quarter two were designed to provide a stimulus to the market, support customers and trade allies and help Energy Trust reach savings goals as customers faced pandemic-related barriers to energy-efficiency projects. Late in 2020, there was a steep increase in bonus participation among business customers, resulting in an unusually high pipeline of commercial and industrial electric efficiency projects completing in early 2021, more than anticipated in the 2021 Budget and 2021-2022 Action Plan. Energy Trust took swift action to manage its budget by ending bonuses

and pausing new incentive reservations for some offers in November and December 2020.

- As a result, a smaller portion of budget is available for new commercial and industrial electric projects in 2021 than in typical years. Additional funding strategies are needed to continue to offer incentives for Existing Buildings, industrial (standard and custom tracks) and business lighting offers for the duration of 2021 and capture all budgeted electric savings plus additional electric savings.
- Energy Trust collaborated closely with the OPUC, PGE and Pacific Power to identify additional strategies to support new commercial and industrial electric projects and achieve even more cost-effective electric savings than budgeted for 2021. Strategies include reducing electric incentive levels for impacted programs, shifting funds from Energy Trust operations to program incentives, acquiring incremental utility funding through rates, using a portion of Energy Trust's reserve funds and adopting a line of credit to be used only in case of an emergency.
- In May 2021, Energy Trust will amend its 2021 Budget and 2021-2022 Action Plan with these proposed funding strategies, invite comments from the public and stakeholders during a two-week public comment period, and present the amended budget to the board of directors to consider for adoption at its May 19 public meeting.
- To more closely monitor and manage pipelines in an unpredictable market, Energy Trust has implemented several program requirements and controls for 2021. These include monthly forecasting instead of quarterly, project and incentive caps and giving trade allies more visibility into remaining available incentive funds for the year.

Focus on decreasing transaction costs for high-volume activities, such as expediting the rollout of electronic signatures and automated form processing:

5,000
TRANSACTIONS COMPLETED USING DOCUSIGN

- **More than 5,000 digital transactions were completed with electronic signature using DocuSign**. More than half were completed in less than a day and the remainder were completed in a week or less, a significant reduction from pre-DocuSign completion times of one to two weeks.
- Staff launched 35 new workflows that use DocuSign, many of which supported the rapid transition to a remote work environment, allowing key financial processes to continue for internal staff and external partners like trade allies.
- Staff integrated DocuSign into Energy Trust's project tracking system to support virtual processing of customer applications.

Complete the measure development automation project in 2020:

- Staff completed the project to move from a paper-based to a digital process in quarter one, resulting in streamlining the measure maintenance process, improving data accessibility and reducing staff time per measure maintenance request by 50%. The electronic process was critical to continuing measure maintenance in a remote work environment and freed up staff time for other critical work.

Report on diversity, equity and inclusion initiative progress:

- Staff developed diversity, equity and inclusion goals for 2021, building on the successes and lessons learned under Energy Trust's first Diversity, Equity and Inclusion Operations Plan, which ended in 2020.
    - See Appendix 2 for goal outcomes and lessons learned.
- Staff created an internal web-based Diversity, Equity and Inclusion Lens for staff use to improve approaches and achieve more equitable outcomes, replacing a paper-based form that was underutilized. The tool is intended to be used in the development of any Energy Trust system, project, process or program to ensure increased opportunities for underserved communities.
- Energy Trust created an affinity group for staff members who identify as people of color to connect with each other and peers at stakeholder organizations and an anti-racist affinity group for white employees to connect and further develop individual awareness of racism and biases.
- Energy Trust began hosting monthly events called Diversity First Thursdays highlighting the history and experiences of marginalized groups, including Black Americans, LGBTQ people and women, to promote understanding and discussion among staff and stakeholders.

Prioritize the future of the residential and multifamily sectors through activities such as pilot studies and program redesign:

- Staff redesigned the Existing Multifamily program to better align program strategies and improve the long-term viability and cost-effectiveness of multifamily offers.
- Energy Trust's Manufactured Home Replacement Pilot **replaced eight aging manufactured homes with energy-efficient models and initiated the replacement of 27 additional homes.**
- Staff developed and launched a residential ductless heat pump control pilot in coordination with PGE to be evaluated in late 2021. The pilot will investigate the efficiency and demand response capabilities of advanced, Wi-Fi-enabled smart controls for ductless heat pumps.
- Staff continued the residential Pay for Performance Pilot that tests the viability of incorporating site-specific meter data analysis into the design of residential energy efficiency programs.

REPLACED EIGHT MANUFACTURED HOMES AND INITIATED REPLACEMENT OF 27 MORE

Report quarterly on complementary funds activities, tracking the status of co-funding opportunities and the outcomes of those arrangements:

- Staff worked to establish co-funding of manufactured home replacements with Oregon Housing and Community Services' subsidy program (HB 2896) and Energy Trust's Manufactured Home Replacement Pilot when customers are eligible for both programs (owner-occupants who meet income requirements and live in Energy Trust's service territory). The first co-funded replacement project closed in quarter one of 2021.
- Energy Trust co-funded projects at 86 sites through collaboration with the community action organization in Washington County, contributing $293,504 incentives and saving 336,800 kilowatt hours. This allowed more customers to benefit than would have without the collaboration.
    - Energy Trust received OPUC approval to expand co-funding for electric measures in Washington County through 2021 and with up to four additional community action agencies. It also has approval to

negotiate with all three gas utilities to develop proposals to co-fund gas measures with community action agencies.

- Energy Trust continued work with the Farmers Conservation Alliance to connect irrigation districts and farmers with tools to invest in modern irrigation infrastructure and generate clean renewable energy.
    - Energy Trust's $11 million project development assistance and programmatic investments in irrigation modernization since 2015 have secured more than $167 million in additional funding for districts and these projects. For more information, see Appendix 5.
- For information on Energy Trust's work with Portland General Electric on a battery storage pilot to study demand response, see Appendix 1.

Update on co-funding with Oregon Housing and Community Services Multifamily Energy Program:

- Energy Trust co-funded projects at 133 affordable housing sites through collaboration with Oregon Housing and Community Services, saving 1,126,400 kWh and 12,100 therms. Energy Trust contributed $276,064 in incentives.

Complete the implementation of the budget tracking tool:

- Staff transitioned to Prophix, an online platform for budgeting that incorporates planning, data analysis and reporting and that can accommodate more data than previous software for more accurate forecasts. Prophix was used for development of Energy Trust's 2021 budget.

Identify and prioritize the organizational review recommendations that quantifiably either save costs or add flexibility:

- Staff resources were prioritized through a business planning process as recommended in the 2018 Organizational Review. Business planning assures the organization maintains critical work while investing in strategic initiatives and innovation projects. 14 strategic initiatives and 60 innovation projects were prioritized through the business planning process for 2021.
    - Strategic initiatives were selected based on their ability to help the organization achieve organizational goals and focus areas in the 2020-2024 Strategic Plan.
    - Business planning also helps identify and track staff time spent on innovative work that is core, adjacent or transformational for the organization.
- Energy Trust supported a culture of innovation through coaching from the Innovation Team, an internal group formed in 2019 to develop a systematic approach to generating and developing new ideas. A focus on innovation processes was recommended in the 2018 Organization Review to support adaptation to a more complex energy future.
    - In 2020, the **team supported 10 efforts by facilitating working sessions to explore a problem or potential solution and coaching staff** on collaboration tools or innovation approaches.
    - Staff is encouraged to consult customers before developing solutions to create more relevant and impactful offers.
    - All staff members who worked with the Innovation Team reported their expectations were met or exceeded.

INTERNAL EFFORTS SUPPORTED BY THE INNOVATION TEAM

Report on updates and progress toward new offerings under the New Buildings program cost-effectiveness exceptions:

- Staff worked with stakeholders including NEEA and Oregon Department of Energy to align Energy Trust's whole building offers including Path to Net Zero with the 2019 Oregon commercial energy code. This involved extensive efforts to determine costs for baseline buildings and for buildings that exceed code by varying degrees across different building types, sizes and locations.
    - In 2019, the OPUC provided an exception through 2021 to meeting measure-level cost-effectiveness requirements for the Total Resource Cost test for whole building and Market Solutions projects due to challenges in completing measure-level savings analysis under the latest code update.

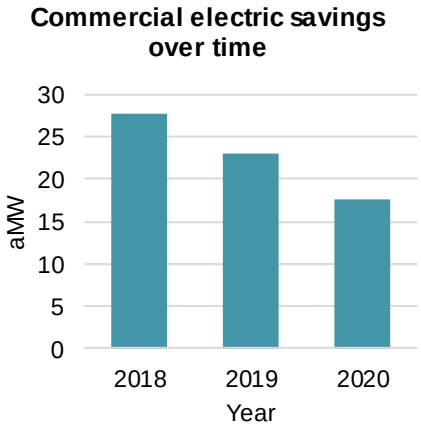
D. Cumulative results

- From 2002 to 2020 in Oregon, Energy Trust has:
    - Saved 820 aMW, equivalent to powering 700,000 Oregon homes. This total includes 25 aMW of savings from self-direct customers.
    - Saved 76 million annual therms, equivalent to providing gas heat to 150,000 Oregon homes.
    - Generated 136 aMW, equivalent to powering 116,000 Oregon homes.
- The net economic benefits of Energy Trust 2002-2020 expenditures, energy savings and renewable energy generation added $9.5 billion to the local economy, including $3 billion in wages, $499 million in small business income and employment equivalent to 7,500 full-time jobs lasting a decade.
- Through 2020, air quality improvements stemming from Energy Trust investments have kept 36.2 million tons of carbon dioxide out of the atmosphere, equivalent to removing 7 million cars from Oregon roads for one year.
- Since 2003, Energy Trust has invested more than $23.5 million in energy-efficiency projects at more than 1,090 public and private K-12 Oregon schools and facilities and provided more than $4 million in funding for 84 solar electric and wind energy systems at 75 public and private K-12 schools.
- Energy Trust investments in energy efficiency and solar generation will save utility customers nearly $8.9 billion on their utility bills over the lifetime of those investments. Participating customers have already saved more than $4.6 billion on their energy bills since 2002.

III Program and operations activity

A. Commercial sector highlights

In 2020, the commercial sector was comprised of three programs: Existing Buildings, Existing Multifamily and New Buildings, delivered by Program Management Contractors ICF International, TRC (formerly Lockheed Martin) and CLEAResult, respectively. The Existing Buildings program offers incentives for energy-efficient improvements in existing commercial buildings of all sizes. The Existing Multifamily program serves existing multifamily structures with two or more dwelling units, including market-rate housing, affordable housing, assisted living facilities, campus housing facilities, homeowners' associations and individual unit owners. The New Buildings program supports design and construction of high-performance commercial buildings and major renovations of all sizes and building types.

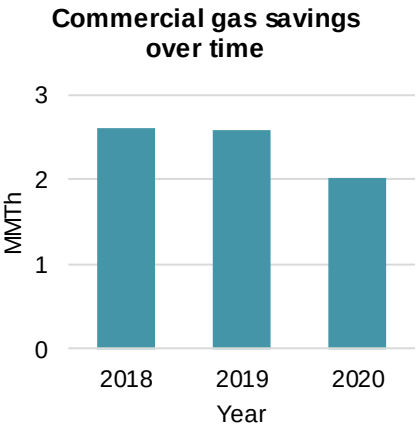


- The sector fell short of its electric and gas savings goals and goals in all utility territories as customers faced pandemic-related disruptions that affected projects and savings.
    - These included construction delays, shipping delays, labor shortages and economic uncertainty that made customers hesitant to invest in efficiency projects. Although all customers were impacted, retail, restaurants and small customers and rural customers were hit particularly hard.
- Energy Trust increased incentives for lighting projects, direct-installation lighting offers and Strategic Energy Management (SEM). Bonuses for new construction projects helped to drive electric savings.
- Foodservice equipment and insulation projects at existing buildings, SEM and multifamily new construction projects drove gas savings.
- To help customers, Energy Trust launched bonuses starting in the spring including New Buildings design bonuses and Existing Buildings and Existing Multifamily custom and standard bonuses. In addition to motivating customers, bonuses were helpful in attracting contractors in rural parts of the state who were not previously engaged in Energy Trust programs.
    - Bonuses drove 45% of the sector's electric savings and more than 30% of gas savings for the year.
    - As bonuses led to more activity than expected late in the year, the sector reduced or discontinued some bonuses in quarter four to manage costs and avoid paying more in incentives than needed to move the market. Many of these bonus-inspired projects are expected to complete in 2021. For more information, see page 12.
- Staff developed and launched an offer providing free kits to multifamily property managers to distribute to tenants containing LEDs, low-flow water devices and advanced power strips. **The program provided kits to about 140 properties in 2020, serving about 6,300 units.** This helped customers achieve instant energy savings when social distancing requirements prevented in-person direct installations.

6,300

MULTIFAMILY UNITS THAT RECEIVED FREE ENERGY SAVING DEVICES

- Starting in quarter two, Energy Trust expanded eligibility for a residential fixed-priced promotion for ductless heat pumps to include small multifamily rental customers. Energy Trust enrolled 35 trade allies who collectively completed 156 installations.
    - The promotion was designed to increase installations in small multifamily sites and drive down installation costs for owners and utility costs for renters. The promotion led to a nearly 40% increase in multifamily installations compared to 2019.
    - For fixed-price offers, Energy Trust provides an incentive to trade ally contractors who agree to offer equipment to customers at a reduced price.
- Energy Trust supported the Portland-based nonprofit Community Energy Project to deliver 18 virtual do-it-yourself cooling workshops for tenants of affordable multifamily housing and provide 60 kits that included box fans and draft stopping supplies to attendees. Energy Trust funded the workshops, translation costs for materials and cooling kits.
- To support businesses searching for low- and no-cost ways to save energy, Energy Trust turned to virtual engagement for SEM participants, which helped increase enrollment compared to previous years. To further motivate participants, Energy Trust increased the incentive for the businesses to hire an intern focused on SEM, added milestone incentives and delivered market-specific webinars for participants.
- The New Buildings program transitioned from in-person to online training and saw a 50% increase in participation compared with 2019. Among those who provided geographic and demographic information, 39% were from outside the Portland area. Participation among women increased by 19% and participation among people of color increased by 65% compared with 2019.
- Energy Trust helped public agencies including K-12 schools complete projects by retrofitting buildings while they were largely unoccupied due to the pandemic. Working with Oregon Department of Energy, which also funds energy-efficiency projects at schools, **Energy Trust supported 141 projects at schools that saved a combined 7,500,000 kWh and 300,000 therms.**
    - Energy Trust and ODOE completed administrative changes in 2019 to make it easier for schools to receive public purpose charge funding from both entities for such projects, which helped drive 2020 results.
- Commercial savings from NEEA activities comprised 5% of the sector's annual savings in PGE territory, 5% in Pacific Power territory, and less than 0.1% in NW Natural territory, Cascade Natural Gas territory and Avista territory.
    - Electric savings were driven by NEEA's influence on federal standards for walk-in coolers and fluorescent ballasts and the adoption of the state's commercial energy code.
    - Gas savings were driven by NEEA's condensing rooftop unit program.



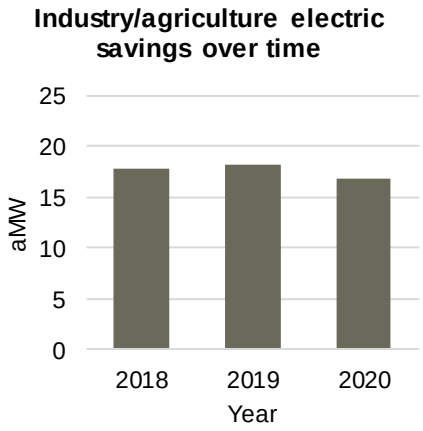
HELPED SCHOOLS RETROFIT BUILDINGS WHILE CLASSROOMS WERE EMPTY

B. Industry and agriculture sector highlights

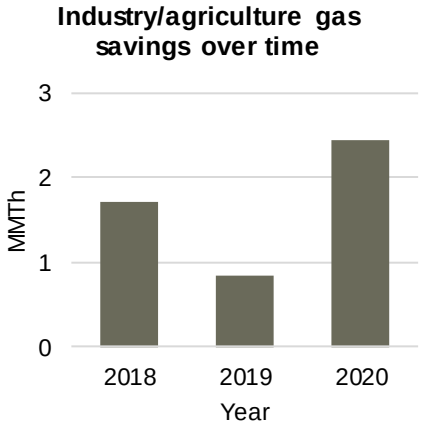
This sector provides energy-efficiency solutions for all sizes and types of eligible industrial, agricultural, municipal water and wastewater customers. Services and incentives are provided through three primary delivery tracks: standard, custom

and energy performance management. Production Efficiency is designed and managed in-house by Energy Trust staff and is delivered to customers through the support of Program Delivery Contractors and other market actors.

- The sector fell short of its electric savings goal amid pandemic-related disruptions and far exceeded its gas savings goal thanks to a single large project. It met goal in PGE and Cascade Natural Gas territories, exceeded goal in NW Natural and Avista territories and fell short of goal in Pacific Power territory.
- Energy Trust's bonuses for custom and lighting projects drove electric savings, as did SEM as customers shifted focus to lower-cost savings opportunities. The savings shortfall was due to pandemic-related shipping and equipment delays; savings from delayed projects are expected in 2021.
    - A lighting bonus drove 30% of industrial lighting savings in PGE territory and nearly 40% of industrial lighting savings in Pacific Power territory, while bonuses for standard industrial and agriculture projects drove nearly 30% of the sector's electric savings.
    - Bonuses for lighting and standard projects helped create a strong pipeline of 2021 projects.
    - Similar to the commercial sector, the industrial sector adjusted bonus offers in quarter four to manage costs. For more information, see page 12.



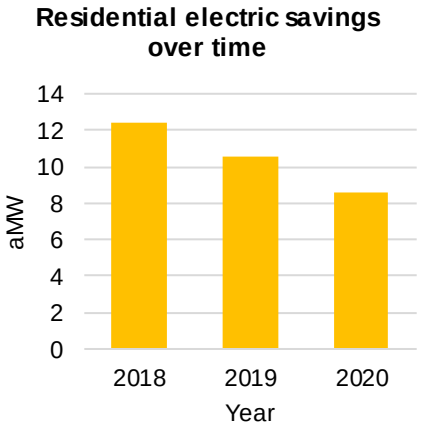
- Custom projects, SEM and a large regenerative thermal oxidizer project drove gas savings. The regenerative thermal oxidizer captures heat from exhaust to reduce air pollutants, integrating energy efficiency into environmental remediation.
- Amid COVID-19, many customers delayed or abandoned capital projects and shifted their attention to low- or no-cost operations and maintenance opportunities, which can provide ongoing energy and financial savings. In response, Energy Trust launched an operations and maintenance bonus and began testing a new approach that simplifies customer participation and provides higher incentives for operations and maintenance projects that achieve greater energy savings.
- Staff identified and implemented improvements to SEM to support customers amid the pandemic. These included virtual recruitment and engagement and modified measurement and verification protocols, all of which helped increase participation and energy savings. Energy Trust also increased its industrial SEM incentives in quarter two.
- Energy Trust helped eight industrial customers in Southern Oregon upgrade to tubular LED lighting under a no-cost promotion for small customers in the Phoenix area and Klamath and Lake counties. The offer was part of Energy Trust's efforts to increase industrial customer participation among small and medium businesses in rural areas, one of the organization's diversity, equity and inclusion goals for 2020.
- Projects at greenhouses were down in 2020 as growers focused on meeting increased demand for landscaping and gardening plants during the pandemic, leaving less time for energy-efficiency projects.
- A no-cost direct-installation offer for steam-pipe insulation launched in quarter one underperformed due to limits on in-person activity, although 10 trade allies are now eligible to deliver this offer and there is a strong pipeline of 2021 projects.
- Cannabis grow projects accounted for 38% of overall lighting savings.



- The sector did 11% more studies in 2020 compared to the average of 2018 and 2019 thanks to a streamlined technical study process introduced in late 2018. These studies identify energy and cost saving opportunities for customers.
    - In response to COVID-19, the sector also changed requirements for on-site data logging and vendor quotes and extended deadlines to allow studies to continue despite limits on in-person activity.
- Industrial savings from NEEA activities comprised approximately 4% of the sector's annual savings in PGE territory and 4% in Pacific Power territory. Savings were driven by NEEA's influence on federal standards for the electric motor market.

C. Residential sector highlights

Energy Trust's residential sector provides energy-efficiency solutions for residential customers of single-family homes, manufactured homes and newly constructed homes through its EPS™ initiative. The program is delivered through Program Management Contractor CLEAResult and Program Delivery Contractor TRC. Incentives are available for smart thermostats, energy-efficient HVAC and water heating equipment, lighting, appliances, weatherization upgrades and whole home improvements in new construction.



- The residential sector exceeded its annual electric and gas savings goals and goal for all utility territories by prioritizing low- and no-cost offers for customers affected by the pandemic and increasing incentives.
- Energy Trust's promotions of retail lighting, LED giveaways, Energy Saver Kits, smart thermostats and optimization, and EPS new construction drove electric savings. Many of these areas performed better than expected due to Energy Trust's targeted marketing and work with partners to promote offers.
- Smart thermostats, EPS new construction and Energy Saver Kits, all of which performed better than expected, drove gas savings.
- Energy Trust worked with food pantries, community action agencies and other service providers to distribute 50,000 LED bulbs to their low-income clients. While the market shows signs of broad adoption of LEDs, this approach ensured LEDs reach all customers, including low-income customers.
- **Energy Trust coordinated with Pacific Power to distribute 5,150 smart thermostats at no cost to customers** and 5,000 Energy Saver Kits to lower-income customers who received energy assistance and to rural customers, two groups that were vulnerable to economic effects of the pandemic.
- In addition to heavily discounting smart thermostats, Energy Trust made it easier for customers to get these devices online with instant discounts to lower the cost.
    - Energy Trust also supported a PGE online offer for instant discounts on smart thermostat purchases as part of its demand-response program.
    - Through partnership and targeted delivery methods, Energy Trust has seen consistent growth in the number of smart thermostats delivered to customers in recent years, topping 16,000 in 2020.
- Energy Trust increased incentive levels and expanded eligibility for Savings Within Reach offers, which are higher incentives for income-qualified customers, to

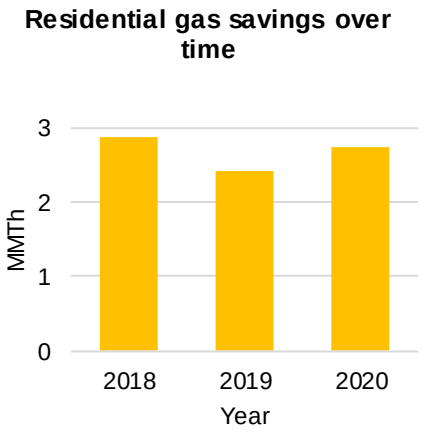
DELIVERED NO COST SMART THERMOSTATS WITH PACIFIC POWER

include any customer receiving unemployment benefits or other financial assistance as a result of the pandemic. Energy Trust also created a gas furnace bonus for Savings Within Reach customers to support those facing emergency replacements.

- Bonuses helped customers complete larger projects, such as an insulation bonus to support customers focused on home comfort and improvements while spending more time at home. Bonuses also helped create a strong pipeline of HVAC and weatherization projects for 2021.
- Amid high housing demand in many parts of the state, Energy Trust continues to motivate builders to construct more efficient EPS homes; more than a third of all new homes constructed in Energy Trust territory participated in EPS in 2020.
- Staff launched a **Community Partner Funding pathway through which nonprofits and agencies serving communities of color, rural customers, customers with low-to-moderate incomes, people with disabilities and veterans can offer higher incentives to their clients for energy-saving upgrades.** Incentives remain within cost-effectiveness guidelines. Six organizations enrolled in 2020 and completed 59 projects.
- Energy Trust completed a successful pilot co-funding projects with the community action organization in Washington County, helping 86 low-income households make home improvements that save on energy and costs. Combining Energy Trust incentives with funding from Oregon Housing and Community Services, another public purpose charge administrator, reaches more customers and more benefits.
- Energy Trust is supporting housing recovery following wildfires, which impacted many low-income residents and residents of manufactured home communities.
    - To help customers build energy-efficient new homes in Jackson County, Energy Trust's third-party local building expert is offering free analyses that predict a home's energy use and is verifying installation of efficient features such as heating systems, insulation or lighting. This helps more homebuilders achieve savings and qualify for Energy Trust incentives.
    - In Southern Oregon, Energy Trust helped fund a new position at the Housing Authority of Jackson County dedicated to replacing affordable housing, including manufactured homes. Energy Trust's support is expected to yield engagement and energy savings opportunities in the future.
- Energy Trust's Manufactured Home Replacement Pilot helped replace eight aging manufactured homes with energy-efficient models and initiated the replacement of 27 additional homes, including a park-wide redevelopment in partnership with the Confederated Tribes of the Umatilla Indian Reservation. Staff continued to provide support to OHCS as the agency develops a home replacement program under HB 2896.

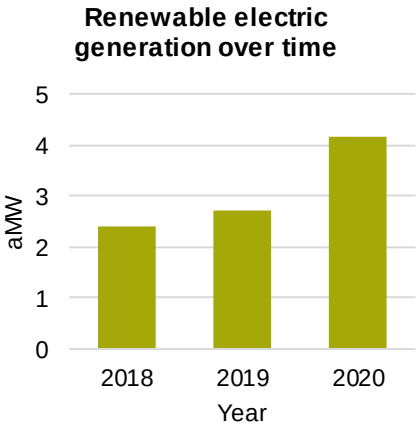
CREATED FUNDING PATHWAY FOR NONPROFITS TO OFFER HIGHER INCENTIVES

- Staff collaborated with Northwest Energy Efficiency Alliance, select trade ally contractors and online retailers on a limited-time heat pump water heater promotion that supported installation of more than 750 water heaters in 2020.
    - The promotion featured a 65% reduced sale price thanks to incentives from both organizations. Energy Trust also provides trade allies with aggregated data and marketing resources to promote the offer.
- Staff developed a new retail lighting strategy targeting lagging LED markets in 2021 that focuses on retailers, such as dollar stores or small hardware stores, that serve low-income customers and rural communities while greatly reducing incentives at big box stores.
- Residential savings from NEEA activities comprised approximately 21% of the sector's annual savings in PGE territory, 20% in Pacific Power territory, less than 0.5% in NW Natural territory, 1% in Cascade Natural Gas territory and 0.5% in Avista territory.
    - Electric savings were driven by NEEA's retail product portfolio, which uses midstream incentives to influence retail stocking practices for consumer products, and NEEA's influence on energy code adoption for single-family and multifamily homes in Oregon.
    - Gas savings were driven by NEEA's work to increase adoption of energy-efficient advanced building practices for single-family homes, and work to develop efficient gas water heating products.



D. Renewable energy sector highlights

The renewable energy sector is comprised of two programs delivered in-house by Energy Trust staff: Solar and Other Renewables. The Solar program offers standard incentives for smaller-scale distributed systems for residential, business, public sector and nonprofit customers. Starting in 2019, the program focused on improving equitable access to solar for lower-income customers and expanding innovative applications of solar that provide greater value to communities or the grid. The Other Renewables program supports renewable energy projects up to 20 megawatts in nameplate capacity that generate electricity using biopower, geothermal, hydropower and community-scale, municipally owned wind technologies. The goal of the program is to support a range of renewable energy technologies and improve market conditions for their development by providing project development assistance incentives and installation incentives.



- The sector exceeded its energy generation goals in PGE and Pacific Power territories thanks to residential solar and a large biopower project.
- Two-thirds of new solar generation came from residential systems, which continue to generate more energy than similar sized systems just a few years ago. The average residential system now generates more than 10,000 kilowatt-hours a year, nearly all the annual electric consumption of an average Oregon home. Involving mostly outdoor construction, solar installations were largely uninterrupted by pandemic-related restrictions in Oregon.

- In light of economic uncertainty in 2020, staff paused incentive reductions to support customers and contractors. This helped the industry attract customers, with more than **20% growth in incentive applications and installations compared with 2019.**
    - In typical years, Energy Trust reduces solar incentives over the course of the year based on demand and other factors. In 2020, it shifted funds from Other Renewables, where projects were delayed and funds were returned, to support solar.
    - The residential market appears to have recovered from a period of lower sales following the expiration of Oregon's Residential Energy Tax Credit at the end of 2017 and is staged for record volume in 2021.
- Energy Trust's investments in reaching underserved customers are achieving results. Its Solar Within Reach offer, which launched in late 2019 and covers about half the cost for income-qualified homeowners to install solar, received 180 applications and supported 86 installations in its first full year on the market.
- In late 2020, Energy Trust launched a new solar incentive for tribes, affordable housing providers and nonprofits that provide services for underserved communities. The offer was well received and 2020 funds for qualifying projects in Pacific Power territory were fully reserved within two weeks.
- Despite pandemic-related delays, the City of Salem achieved commercial operation of a 1,176-kilowatt net-metered cogeneration project on time and on budget at its Willow Lake Water Pollution Control Facility. Energy Trust provided project development assistance early in this project's planning phase and a $3 million installation incentive, helping Salem control wastewater treatment costs for its ratepayers.
    - The combined heat and power system burns biogas from wastewater solids to produce electricity and heat, with renewable energy offsetting half the facility's electricity use.
    - The project also received financial support from PGE customers through its Renewable Development Fund.
- Energy Trust supported a 30-kilowatt pressure reduction valve hydropower project that achieved commercial operation at the City of Hillsboro's Gordon Faber Recreation Complex. This net-metered hydropower project uses excess pressure in the city's water delivery system to generate more than 170,000 kilowatt-hours per year for the recreation complex. The project also received financial support from PGE customers through its Renewable Development Fund.
- Energy Trust assisted 11 municipalities and state agencies in exploring ways to improve energy resilience during emergencies with solar + storage projects by tapping funding from the federal government. This is a new use of federal emergency funds and will be critical to developing and installing these solar + storage projects. Staff provided technical expertise and support to these communities, three of which submitted full federal applications: City of Portland, City of Tigard and the state's Department of Public Safety, Standards and Training.
- Staff supported city officials in Astoria, Bend and Portland in investigating how food waste and wastewater solids could be used for renewable electricity generation, turning material management challenges into energy and financial assets. Staff also helped the City of Gresham assess opportunities to increase generation or produce renewable natural gas at its existing wastewater treatment facility by incorporating food waste into its wastewater digesters.

20%

GROWTH IN SOLAR INCENTIVE APPLICATIONS AND INSTALLATIONS

- Energy Trust's work on irrigation modernization with Farmers Conservation Alliance **engaged five irrigation districts and ditch companies in 2020 for a total of 25 districts enrolled since 2015.** Agricultural producers served by these districts represent 54% of land irrigated with surface water not on farms in Oregon.
    - Energy Trust's work in funding district-wide assessments enabled the program to leverage an additional $58 million in 2020, bringing the total leveraged to $167 million in federal, state and private funds.
    - Six irrigation districts were engaged in piping project construction in 2020: Wallowa Lake, Rogue River, Tumalo, Swalley, Central Oregon and East Fork.
    - Since 2015, the program has uncovered more than 100 potential hydropower projects including on-farm applications with a combined generating capacity of more than 32 megawatts.
- In 2020, Energy Trust canceled a funding agreement for the JC Biomethane facility near Junction City, which was an anaerobic digestion renewable energy generation facility that began commercial operation in 2013. Shell New Energies acquired the site in 2018 and converted it to a renewable natural gas project in 2019, ceasing all generation. This change violated the terms of the funding agreement, and Energy Trust was returned $1.4 million in 2020 as required by the terms of the agreement.

ENGAGED MORE DISTRICTS IN IRRIGATION MODERNIZATION

E. Internal operations highlights

Energy Trust's internal operations teams support all program and organizational functions including communications (sharing organizational news, information and milestones, public reporting and public relations); customer service (providing customers with online and phone assistance); general marketing (educating customers and stakeholders through advertising, web content, social media and other marketing efforts); Trade Ally Network management (engaging and supporting Energy Trust's network of contractors and trade allies statewide); general outreach (providing regional and statewide support to customers, trade allies, partners, utilities and community organizations); IT and business systems (maintaining and improving Energy Trust's technology and business infrastructure); and planning and evaluation (estimating costs and savings of efficiency programs, developing long-range savings forecasts and evaluating effectiveness and impact of offerings).

HOSTED FIRST ALL VIRTUAL TRADE ALLY FORUM

Trade Ally Network management:

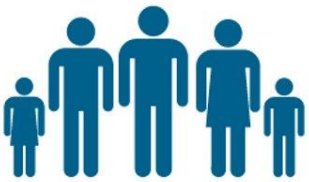
- Energy Trust surveyed trade allies to understand how COVID-19 was affecting their businesses and added personal protective equipment to the list of qualifying items for reimbursement through trade ally business development funds.
- Staff **hosted the first fully virtual Trade Ally Forum** in 2020. This was an opportunity for residential, multifamily and solar trade allies to learn about 2021 incentives and market trends and ask staff questions. The event had more than 230 participants and included an optional session on indoor air quality where participants could earn a continuing education credit.

- Staff added tracking fields in trade ally data systems to identify languages served and race of business owner. Data on owner race will be used internally to track efforts to diversify the Trade Ally Network.

General outreach:

SUPPORTED COMMUNITY RECOVERY FROM WILDFIRES AND FLOODS

- Outreach staff **supported Umatilla County residents and officials recovering from floods in early 2020**, helping inform proposals for the governor's flood recovery funding packages and integrating Energy Trust programs into rebuilding opportunities.
- In the fall, staff held a virtual outreach workshop with residents of the city of Umatilla, working with the local school district and city government, to enhance work with that community and inform Energy Trust's approach to serving all rural communities.
- Following **wildfires that devasted many communities in Energy Trust service territory**, staff provided information and energy-related resources to communities; established contact points with community leaders and groups; participated in statewide and community-based discussions; and tracked on related code development and resilient building technologies.
- Outreach staff helped establish Lake County Resources Initiative as a contractor to provide information on Energy Trust offers to local commercial and agricultural businesses and residents. LCRI was also helpful in connecting Lakeview businesses with Energy Trust's no-cost tubular LED offer.
- Energy Trust **supported potential project applicants and nonprofits applying to the newly developed Portland Clean Energy Community Benefits Fund** (PCEF). Staff held an informational webinar for nonprofits considering applying to the fund and responded to requests for information from nonprofits during the program's first funding cycle. PCEF was passed by voters to support Portland's communities of color, low-income residents, women, veterans and other disadvantaged populations left out of the clean energy transition.

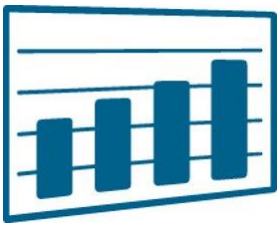


HELPED PCEF APPLICANTS LEVERAGE ADDITIONAL FUNDING

- Energy Trust sponsored and supported Oregon Solar + Storage Industries Association's (formerly Oregon Solar Energy Industries Association) annual Oregon Solar Energy Conference. The three-day conference was fully online and provided training and essential information for trade allies and interested stakeholders.
- Outreach and program staff supported the Hood River Energy Plan, which was developed locally as a roadmap for understanding current and future energy use and generation. As part of that, the City of Hood River and Hood River County signed participation agreements with Energy Trust to evaluate the city's high energy use facilities.
    - Energy Trust engages in community planning efforts to provide communities with information and support for energy projects that can deliver savings and generation for the benefit of utility customers.
- Staff participated in in-person and virtual events to engage underserved communities, including those hosted by the Affiliated Tribes of Northwest Indians, Native American Chamber of Commerce, Union County, Hermiston Chamber of Commerce, League of Oregon Cities, Association of Oregon Counties, Rural Development Initiatives, Union County Chamber of Commerce, Eastern Oregon University, Juneteenth Oregon, Wallowa Resources and 350 Deschutes.

Communications, general marketing and customer service:

- Staff developed a small grants program for nonprofit community-based organizations to support their clients who are underserved Energy Trust customers. Grants, which will be offered in 2021, are designed to help recipients build their organization's capacity and engage customers in future energy-saving and renewable generation opportunities.
- Energy Trust's public relations and work with new reporters resulted in hundreds of articles on Energy Trust programs, services and customer benefits that had a media value of nearly $2 million—what it would have cost to purchase the equivalent advertising space and airtime. This is more than double the total value for 2019.
- To help parents and students adjust to remote learning, staff created a website with energy-related lessons and activities.
- Energy Trust's website received more than 650,000 visitors in 2020, generating 1.8 million pageviews. Nearly 85% of visitors were new visitors. Top landing pages for new visitors were the residential incentives page (137,477 views) and the Energy Saver Kit order page (185,067 views). Most were referred to these pages by organic search, with the exception of the Energy Saver Kit page, which benefited from a combination of organic search and targeted email marketing.
- The majority of web visitors were located in the Portland area (71%), followed by the Central Valley (11%), Southern Oregon (9%) and Central Oregon (4%). The remaining visits originated from Eastern Oregon and the coast. Mobile traffic to the site was steady in 2020 with 52% of users accessing the site on their phone or tablet.



LAUNCHED TECHNOLOGY UPGRADES TO ENABLE WORK TO CONTINUE REMOTELY

IT and business systems:

- **Energy Trust launched direct deposit electronic payments for trade allies and vendors.** (Not all trade allies receive payments from Energy Trust. Most incentives are paid directly to the customer.)
- Staff introduced **new tools for remote collaboration and virtual meetings**, such as Slack and Zoom. Both were rolled out just as Oregon's stay-at-home order went into effect, assisting in the transition to remote working.
- Staff upgraded remote desktop software, distributed laptops and other equipment and added features to the phone system to allow staff to make calls on their cell phone as if they were in the office using their desk phone.
- Staff made improvements to its Project Tracking software to improve system performance, saving time on data entry and making forecast data more easily accessible for analysis.
- Staff processed 84,477 customer projects in Energy Trust systems, including 73,757 submitted through web applications.

Planning and evaluation:

- Energy Trust completed and posted 20 evaluation and research reports to its website. These are primarily third-party evaluations that assess the efficacy of programs and services.
- Staff provided energy efficiency forecasts for PGE, Pacific Power, NW Natural and Avista to use in their integrated resource planning processes.
- Staff published 83 new Measure Approval Documents and approved 1,504 requests for product versions used to book savings and pay incentives in Energy Trust's Project Tracking system based on measures approved in Measure Approval Documents.
- Staff monitored, provided information and in some cases submitted public comment on OPUC regulatory matters, including the agency's response to

Governor Brown's Executive Order 20-04 on reducing greenhouse gas emissions and on regulatory dockets, including the "Investigation into the effects of the COVID-19 pandemic on utility customers" (UM 2114) and "Investigation into Distribution System Planning" (UM 2005).

IV Progress to 2020 OPUC performance measures

Each year, the Oregon Public Utility Commission establishes minimum performance measures for Energy Trust in a variety of categories. Minimum savings and generation figures for energy-efficiency programs and renewable energy programs are set at an aggregated level rather than at an individual program or sector level. This allows Energy Trust to pursue different program strategies in the residential, commercial and industrial sectors as market forces and technologies change. Electric and gas efficiency performance targets are set at 85% of Energy Trust goals as defined in annual budgets. The following OPUC minimum performance measures apply to Energy Trust 2020 results.

Category	Measure	Result
Electric efficiency	PGE: • Save at least 23.3 aMW • Levelized cost not to exceed 4.1 cents/kWh Pacific Power: • Save at least 15.3 aMW • Levelized cost not to exceed 4.3 cents/kWh	PGE: ✓ **Exceeded**, with 25.7 aMW saved ✓ **Within requirement**, levelized cost at 3.9 cents/kWh Pacific Power: ✓ **Exceeded**, with 17.5 aMW saved ✓ **Within requirement**, levelized cost at 4.2 cents/kWh
Natural gas efficiency	NW Natural: • Save at least 4.7 million annual therms • Levelized cost not to exceed 43 cents/therm Cascade Natural Gas: • Save at least 0.46 million annual therms • Levelized cost not to exceed 55 cents/therm Avista: • Save at least 0.33 million annual therms • Levelized cost not to exceed 41 cents/therm	NW Natural: ✓ **Exceeded**, with 6.4 million annual therms saved ✓ **Within requirement**, levelized cost at 31.8 cents/therm Cascade Natural Gas: ■ **Out of compliance**, with 0.43 million annual therms saved ✓ **Within requirement**, levelized cost at 42.2 cents/therm Avista: ✓ **Exceeded**, with 0.41 million annual therms saved ✓ **Within requirement**, levelized cost at 36 cents/therm
Renewable energy	For project and development assistance (part 1), deploy at least $1.99 million in non-solar project development assistance incentives. Maintain a non-solar project development assistance pipeline in excess of 25 projects. Report number of projects served, total dollars spent, and summarize project progress through development stages.	■ **Out of compliance**, paid $1.48 million and committed $1.64 million in project development assistance to 30 projects. The program exceeded the benchmark for number of projects in the pipeline but was short of the benchmark for dollars deployed. This is attributed to a slowdown in irrigation modernization efforts as a result of the pandemic. In addition, for several irrigation districts, the amount of dollars deployed for development assistance was reduced because of limited hydropower potential in those districts. See additional details in Appendix 5.

	For project and market development assistance (part 2), report annual results, including number of projects supported, milestones met and documentation of results from market and technology perspective. Obtain at least 1.9 aMW of installed generation of standard net-metered Solar program projects. For solar projects funded outside of the Solar program's standard, net-metered incentive offer, report sources of funding for projects and the criteria for selection.	✓ **In compliance**, see Appendix 5 ✓ **In compliance**, with 3.09 aMW of installed generation from standard solar projects ✓ **In compliance**, program did not dedicate funds for custom solar projects in 2020
Financial integrity	Receive an unmodified financial opinion from an independent auditor on annual financial statements.	✓ **In compliance**, with an unmodified financial audit opinion for 2020
Administrative/ program support costs	Keep administrative/program support costs below 8% of annual revenues (no more than $14,189,583). Administrative/program support cost growth limited to 10% year-over-year increase (no more than $1,322,542).	✓ **In compliance**, with 2020 administrative and program support costs of 6.7% of annual revenues ($11,771,712) ✓ **In compliance**, with administrative/program support cost growth of 7% year-over-year ($771,297)
Staffing expenditures	Staffing cost growth is limited to 9% year-over-year increase (no more than $1,262,428).	■ **Out of compliance**, with staffing cost growth of 9.8% year-over-year ($1,323,250) due to unused vacation time liability resulting from COVID-19 restrictions. Energy Trust proactively identified this issue in discussions with the OPUC and has put a management plan in place to bring vacation liability down in 2021.
Customer satisfaction	Demonstrate greater than 85% satisfaction rates for interaction with program representatives and overall satisfaction.	✓ **In compliance**, with a 98% satisfaction rate for interaction with program representatives and a 96% overall satisfaction rate. Results for major programs are averaged to determine satisfaction rates. See Appendix 3.
Benefit/cost ratios	Report utility system and total resource perspective annually. Report significant mid-year changes as warranted in quarterly reports.	✓ **In compliance**, with no mid-year changes, see table below
NEEA and market transformation	Report annually: • Savings and costs • Savings strategies • Show Energy Trust direction to NEEA through committee membership • Summary of Energy Trust direction to NEEA • Summary of NEEA initiatives Energy Trust opts out of and why	✓ **In compliance**, see section VIII

Diversity, equity and inclusion	Implement the data enhancement project as outlined in the 2020 Budget and Action Plan and deliver a minimum of four reports to the Diversity Advisory Council.	✓ **In compliance,** completed the data enhancement project and gave three reports to the Diversity Advisory Council. (A fourth report did not occur given limited meeting time and other topics needing to go before the council; OPUC staff was informed of this challenge in mid-2020.) For project achievements, see Appendix 2.
	Implement and publish the "DEI Lens" project as outlined in the 2020 Budget and Action Plan and approved by the Diversity Advisory Council.	✓ **In compliance,** completed the DEI Lens project that was approved by the Diversity Advisory Council in December 2020
	Complete 1,000 projects with trade allies that are minority-owned businesses in 2020.	■ **Out of compliance,** completed 723 projects with minority-owned trade allies in 2020. Many contractors experienced disruptions due to COVID-19 and wildfires; OPUC staff was informed of this in mid-2020. For details on Energy Trust efforts to increase projects completed by minority-owned trade allies, see Appendix 2.
	Implement a rural-focused workshop as outlined in the 2020 Budget and Action Plan.	✓ **In compliance,** held a virtual workshop with residents of Umatilla in October 2020

Benefit/cost ratios

- Report benefit/cost ratios for larger conservation acquisition programs for both utility system and total resource perspective

2020 Utility Cost and Total Resource Cost by program[11]

Program	Combined Utility Cost Test benefit/cost ratio	Combined Total Resource Cost Test benefit/cost ratio
Residential	1.8	1.8
Existing Buildings, including Multifamily	1.4	1.1
New Buildings	2.0	1.3
Production Efficiency	2.4	1.9

[11] Some benefit/cost ratios were updated in November 2022 after staff identified errors in the original calculations. All programs were cost-effective before and after the update.

V Revenues and expenditures tables[12,13,14]

A. Oregon public purpose charge revenues and expenditures results

- Revenues totaled $175.6 million, 1% below what was budgeted.
- Expenditures totaled $186.8 million; of which $103.4 million or 55% was for incentives.[15]
- Electric efficiency expenditures were 4% below budget.
- Gas efficiency expenditures were 9% below budget.
- Renewable energy expenditures were 34% below budget.[16]
- Administrative costs were $8.5 million, 11% below what was budgeted.
- Administrative and program support costs as defined by the OPUC were $11.8 million. This figure includes program costs in the following areas: program management, program delivery, program incentives, program payroll and related expenses, outsourced services, planning and evaluation services, customer service management and Trade Ally Network management.

B. Oregon public purpose charge revenues

Source		Annual actual revenues		Annual budgeted revenues
Portland General Electric	$	38,502,823	$	38,961,842
PGE Incremental	$	47,834,756	$	48,674,804
Pacific Power	$	27,551,117	$	27,771,831
Pacific Power Incremental	$	32,310,188	$	32,300,550
NW Natural	$	19,893,003	$	20,358,144
NW Natural Industrial DSM	$	4,181,586	$	4,185,586
Cascade Natural Gas	$	3,230,028	$	3,043,738
Avista	$	2,073,292	$	2,073,292
Total	**$**	**175,576,793**	**$**	**177,369,786**

[12] Columns may not total due to rounding.
[13] Gas savings do not include results for NW Natural in Washington. These results are available in the total organization appendix.
[14] Revenues and expenditures include public purpose revenue and incremental electric revenue authorized under SB 838 to support capturing additional cost-effective electric efficiency savings above the amount supported by funding through SB 1149.
[15] Energy Trust spent $10.3 million in net assets (reserves) in 2020 to cover the difference between revenue and expenditures.
[16] Renewable energy spending appears low due to the cancellation of a prior funding agreement, which resulted in $1.4 million being returned to Energy Trust; for more information, see page 24. In addition, completion and payments for a hydropower project with the Three Sisters Irrigation District were delayed from 2020 to 2021 while a large biopower project with the City of Salem completed later in 2020 than expected, resulting in less funding being paid to that project in 2020. Last, project development assistance in the Irrigation Modernization program was not deployed to several districts without hydropower potential (see Appendix 5). This reduced incentive spending also led to less spending on non-incentive allocated costs.

C. Oregon public purpose charge expenditures

Source		Annual actual expenditures		Annual budgeted expenditures
Portland General Electric	$	91,327,503	$	100,727,014
Pacific Power	$	67,348,043	$	69,837,814
NW Natural	$	19,941,124	$	21,082,438
NW Natural Industrial DSM	$	4,052,336	$	4,743,953
Cascade Natural Gas	$	2,172,822	$	3,361,082
Avista	$	1,984,070	$	1,871,446
Total	**$**	**186,825,898**	**$**	**201,623,746**

D. Oregon public purpose charge expenditures by sector and program[15, 17]

	Commercial		Annual actual expenditures		Annual budgeted expenditures	Budget variance
Commercial	Existing Buildings	$	45,660,649	$	50,124,957	9%
	Existing Multifamily	$	9,274,450	$	9,444,652	2%
	New Buildings	$	17,645,409	$	17,887,323	1%
	NEEA Commercial	$	2,977,823	$	3,372,174	12%
	Commercial total	**$**	**75,558,331**	**$**	**80,829,105**	**7%**
Industrial	Production Efficiency	$	37,808,251	$	40,940,719	8%
	NEEA Industrial	$	36,639	$	429,621	91%
	Industrial total	**$**	**37,844,891**	**$**	**41,370,339**	**9%**
Residential	Residential	$	49,155,714	$	48,265,387	-2%
	NEEA Residential	$	4,161,440	$	3,966,534	-5%
	Residential total	**$**	**53,317,154**	**$**	**52,231,921**	**-2%**
	Energy efficiency total	**$**	**166,720,376**	**$**	**174,431,365**	**4%**
Renewables	Solar	$	8,918,657	$	10,132,676	12%
	Other Renewables	$	2,646,219	$	7,495,126	65%
	Renewable generation total	**$**	**11,564,876**	**$**	**17,627,802**	**34%**
	Administration	**$**	**8,540,646**	**$**	**9,564,579**	**11%**
	Total	**$**	**186,825,898**	**$**	**201,623,746**	**7%**

E. Incentives paid

Qtr	PGE efficiency	Pacific Power efficiency	NW Natural efficiency	Cascade Natural Gas efficiency	Avista efficiency	PGE generation	Pacific Power generation	Total
Q1	$ 5,580,213	$ 4,103,630	$ 2,880,466	$ 193,953	$ 71,170	$ 523,516	$ 669,645	$14,022,593
Q2	$ 8,499,559	$ 6,425,756	$ 2,248,167	$ 291,711	$ 225,009	$1,457,679	$ 996,914	$20,144,794
Q3	$10,570,367	$ 7,431,809	$ 3,255,486	$ 267,255	$ 209,970	$1,149,134	$ 994,797	$23,878,818
Q4	$22,792,713	$14,953,462	$ 5,040,782	$ 384,662	$ 525,929	$ 224,098	$1,388,025	$45,309,670
Total	**$47,442,851**	**$32,914,657**	**$13,424,901**	**$1,137,581**	**$1,032,078**	**$3,354,427**	**$4,049,381**	**$103,355,876**

[17] Underspending in the Solar program was due to project delays that shifted payments from 2020 to future years.

VI Savings and generation tables[18,19,20,21]

A. Savings and generation by fuel[22]

	Annual savings/generation	Annual goal	Percent Achieved	Levelized Cost
Electric savings	43.2 aMW	45.4 aMW	95%	4.0 ¢ per kWh
Natural gas savings	7,209,444 therms	6,526,799 therms	110%	32.6 ¢ per therm
Electric generation	4.17 aMW	3.27 aMW	127%	2.6 ¢ per kWh

B. Progress toward annual efficiency goals by utility

	Annual savings	Levelized cost	Annual goal	Percent achieved YTD	Annual IRP target	Percent achieved YTD
Portland General Electric	25.7 aMW	3.9 ¢ per kWh	27.4 aMW	94%	30.5 aMW	84%
Pacific Power	17.5 aMW	4.2 ¢ per kWh	18.0 aMW	97%	19.2 aMW	91%
NW Natural	6,368,334 therms	31.8 ¢ per therm	5,591,966 therms	114%	6,018,697 therms	106%
Cascade Natural Gas	426,714 therms	42.2 ¢ per therm	547,244 therms	78%	621,804 therms	69%
Avista	414,395 therms	36.0 ¢ per therm	387,588 therms	107%	313,420 therms	132%

[18] Columns may not total due to rounding.
[19] Electric savings also include transmission and distribution savings.
[20] The gas savings do not include results for NW Natural in Washington. These results are available in the total organization appendix.
[21] Energy Trust reports 100% of generation and capacity for renewable energy installations supported by Energy Trust's cash incentives. While some of these projects have additional sources of funding, Energy Trust enabled project completion.
[22] The overall gas levelized cost came in below what was budgeted due to significantly lower levelized cost for industrial gas savings.

C. Electric savings by sector and program

		Annual savings aMW	Annual goal aMW	Percent achieved	Levelized cost per kWh
Commercial	Existing Buildings	10.9	13.1	83%	5.0¢
	Existing Multifamily	1.4	1.5	93%	6.2¢
	New Buildings	4.5	4.8	95%	3.7¢
	NEEA Commercial	0.9	0.7	129%	6.3¢
	Commercial total	**17.7**	**20.0**	**88%**	**4.7¢**
Industrial	Production Efficiency	16.2	17.1	95%	2.8¢
	NEEA Industrial	0.7	0.8	87%	0.1¢
	Industrial total	**16.9**	**17.9**	**94%**	**2.7¢**
Residential	Residential	6.9	5.5	125%	5.5¢
	NEEA Residential	1.8	1.9	91%	2.3¢
	Residential total	**8.6**	**7.4**	**116%**	**4.9¢**
	Total electric savings	**43.2**	**45.4**	**95%**	**4.0¢**

D. Natural gas savings by sector and program[23]

		Annual savings therms	Annual goal therms	Percent achieved	Levelized cost per therm
Commercial	Existing Buildings	1,323,749	1,757,530	75%	46.2 ¢
	Existing Multifamily	178,180	204,919	87%	60.5 ¢
	New Buildings	527,596	548,061	96%	35.1 ¢
	NEEA Commercial	610	456	134%	8,266.5 ¢
	Commercial total	**2,030,135**	**2,510,966**	**81%**	**45.9 ¢**
Industrial	Production Efficiency	2,433,764	1,514,698	161%	10.8 ¢
	NEEA Industrial	-	-	-	-
	Industrial total	**2,433,764**	**1,514,698**	**161%**	**10.8 ¢**
Residential	Residential	2,735,103	2,478,903	110%	38.8 ¢
	NEEA Residential	10,442	22,232	47%	882.9 ¢
	Residential total	**2,745,545**	**2,501,135**	**110%**	**41.1 ¢**
	Total natural gas savings	**7,209,444**	**6,526,799**	**110%**	**32.6 ¢**

[23] This was the first year Energy Trust reported NEEA gas savings. Levelized costs for NEEA gas savings appear high as NEEA costs represent current and future focused research and development activities while savings are on a first-year basis only.

E. Renewable electric generation by utility

	Annual generation aMW	Annual goal aMW	Percent achieved YTD
Portland General Electric	2.55	2.25	114%
Pacific Power	1.61	1.02	158%
Total	**4.17**	**3.27**	**127%**

F. Renewable electric generation by program

	Annual generation aMW	Annual goal aMW	Percent achieved YTD
Solar	3.09	2.24	138%
Other Renewables	1.07	1.03	105%
Total generation	**4.17**	**3.27**	**127%**

G. Incremental utility SB 838 expenditures[24,25]

Utility	Q4 SB 838 Expenditures	Total Annual SB 838 Expenditures
Portland General Electric	$284,856	$1,084,024
Pacific Power	$625,482	$1,149,920
Total	**$910,338**	**$2,233,944**

[24] Reflects expenditures by Pacific Power and PGE in support of utility activities described in SB 838. Reports detailing these activities are submitted annually to the OPUC.
[25] Pacific Power's reported SB 838 expenditures for quarter three were adjusted slightly following publication of Energy Trust's quarter three report.

VII Progress to 2020 organization goals

This section provides updates on Energy Trust's progress toward meeting its 2020 organization goals, which are set as part of Energy Trust's 2020 Budget and 2020-2021 Budget and Action Plan approved by the board of directors. For more information, see program sector highlights.

Goal	Status and highlights
Meet savings and generation targets, create future opportunities: • Serve more diverse customers • Support higher value renewable energy and energy efficiency • Sustain services for efficiency programs where cost-effectiveness is becoming a challenge • Push new construction beyond code	Met goal: • Energy Trust met goal for electric savings, exceeded goal for gas savings and far exceeded goal for electric generation thanks to mid-year bonuses and program changes. • Staff prioritized services to diverse customers as part of COVID-19 response plan (see Appendix 2) and quickly mobilized to support rural customers rebuilding from wildfires and floods. • Energy Trust awarded Existing Buildings and business lighting contracts that prioritize diversity in subcontracts and program design and improve efficiency and cost-effectiveness, with expected savings in 2021 of more than $1 million. • Staff developed new solar incentives designed to benefit underserved communities.
Develop guidelines for resource investments in community efforts, engage stakeholders for input: • Coordinate with utility efforts in communities • Build capacity in communities and community-based organizations • Strengthen internal capabilities to support community efforts • Develop toolkits and templates	Met goal: • Guidelines were developed and published internally to support community engagement as an essential strategy for meeting Energy Trust's goals for energy savings and generation. • Advisory councils, three rural community-based organizations and Pacific Power staff were consulted during the development of the guidelines. • Staff will be trained on how to utilize the guidelines in early 2021.
Provide information to policymakers, agencies and implementers • OPUC • Portland's Clean Energy Community Benefits Fund • State carbon policy development • Communities forming clean energy objectives	Met goal: • Staff provided objective information and analysis to policymakers, agencies and implementers with a focus on OPUC requests, state greenhouse gas policy development and communities developing clean energy plans and objectives. • Staff attended weekly Portland Clean Energy Community Benefits Fund (PCEF) committee meetings, submitted public comment on portions of the in-development program, organized a July open house for prospective grant applicants to learn about opportunities to collaborate with Energy Trust and provided information and support to nonprofits submitting applications for projects serving low-income Portlanders and communities of color. • Staff participated in OPUC workshops on the impact of COVID-19 on low-income utility

Goal	Status and highlights
	customers, providing information for the energy term sheet on cost-effectiveness, low-income initiatives and co-funding approaches. • Staff provided early information to the Oregon Department of Energy on its long-range strategic plan and reviewed portions of the agency's biennial energy report.
Strengthen internal innovation capabilities, develop new proposals • Establish an Innovation Team and resource initiatives • Develop an innovation approach • Adopt a framework, processes and tools	Met goal: • Energy Trust's Innovation Team supported 10 efforts by facilitating working sessions to explore a problem or potential solution and coaching staff on collaboration tools or innovation approaches. • Staff time was dedicated as planned to work on core and adjacent innovation projects.
Make operational improvements • Budgeting tools • Forecasting • Staff development • Alignment of systems, data and reporting • Collaborations	Met goal: • Staff completed the transition to the Prophix system for budgeting and forecasting and used it to create the 2021 budget. • Energy Trust implemented program requirements and controls for 2021 to monitor and manage pipelines. These include monthly forecasting instead of quarterly, communication protocols with trade allies and project and incentive caps.

VIII Northwest Energy Efficiency Alliance activities and results

To deliver low-cost energy for customers, Energy Trust has been working with the Northwest Energy Efficiency Alliance (NEEA) since 2002 to increase the availability and adoption of energy-efficient electric products, equipment and practices. In 2015, natural gas equipment was added; 2020 was the first year Energy Trust reported gas savings.

By pooling resources at a regional level to work with manufacturers, distributors and retailers, NEEA accelerates the development, testing and distribution of new energy-saving equipment and approaches. NEEA identifies and refines new high-efficiency products, services and practices and helps bring them to market. Once products are ready and available, Energy Trust creates and implements programs to support broad market adoption in Oregon.

Utility customers benefit by seeing a greater choice of higher-efficiency products available through contractors and at stores, through improved pricing and quality for efficient products, and through improvements to building codes and equipment and product standards that will save energy.

NEEA savings noted here are forecasted. Updated savings results will be available late in the second quarter of 2021 through NEEA's annual report.

A. NEEA savings[26,27]

	Annual savings aMW	Annual energy target aMW	Percent achieved	Levelized cost per kWh
Commercial	0.9	0.7	129%	6.0¢
Industrial	0.7	0.8	87%	0.1¢
Residential	1.8	1.9	91%	2.2¢
Total	**3.3**	**3.4**	**97%**	**2.5¢**

	Annual savings therms	Annual energy target therms	Percent achieved	Levelized cost per therm
Commercial	610	456	134%	7,888.6¢
Industrial	-	-	-	-
Residential	10,442	22,232	47%	842.5¢
Total	**11,052**	**22,688**	**49%**	**1,081.6¢**

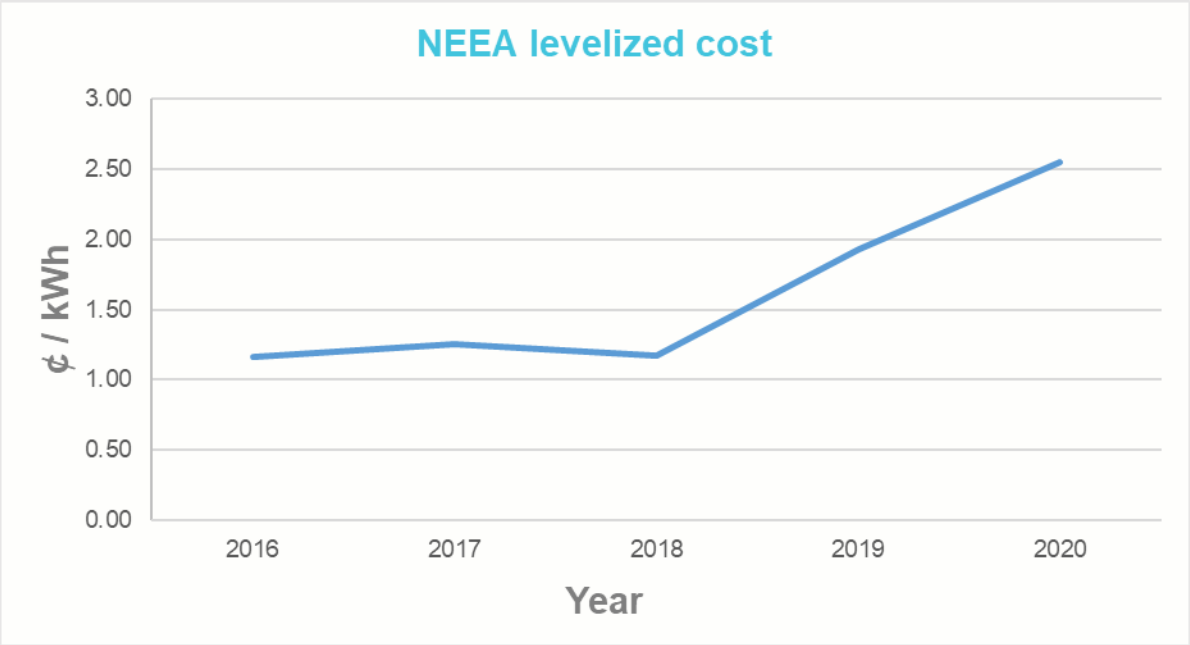
[26] Levelized costs in Table A do not include gas costs or administrative costs. Elsewhere in the report, levelized costs are calculated using administrative costs.
[27] Levelized costs for NEEA gas savings appear high as NEEA costs represent current and future focused research and development activities while savings are on a first-year basis only.

B. NEEA expenditures

	Annual actual expenditures	Annual budgeted expenditures	Budget variance
Commercial	$3,120,474	$3,541,569	12%
Industrial	$38,395	$447,238	91%
Residential	$4,360,791	$4,173,266	-4%
Total	**$7,519,659**	**$8,162,073**	**8%**

C. NEEA electric levelized cost

NEEA costs and savings are not realized in the same year. Savings in 2020 reflect costs from prior years, and costs from 2020 will lead to savings in subsequent years. For this reason, levelized costs are included for the past five years.



In the last business cycle (2015-2019), NEEA's electric savings were inexpensive due to large amounts of savings from early iterations of codes and standards along with NEEA's TV and lighting initiatives. While costs have remained consistent, savings for 2020 were lower than previous years. This reflects where NEEA is at in its product development cycle, investing in a broad array of initiatives and emerging technologies with the expectation that they will transform product markets. NEEA forecasts higher electric savings in 2022-2024 and decreasing year-over-year levelized costs. However, Energy Trust does not expect to see annual levelized costs at similar levels as the previous business cycle.

D. NEEA electric market transformation long-term goals and strategies

Below are NEEA's long-term goals and strategies as outlined in NEEA's 2020-2024 Business Plan. More information on NEEA's market transformation strategies, processes and performance metrics is available in NEEA's 2020-2024 Business Plan and recent annual or quarterly reports.[28]

Goal 1: Sustain a portfolio of initiatives and support functions that enable more cost-effective efficiency to occur sooner, in larger amounts and/or at lower cost than otherwise expected. Key strategies:

[28] Available online at neea.org.

- Routinely scan for, assess and report on the potential for newly identified efficiency products, services and practices and test the field performance of the most promising opportunities.
- Implement the prioritized portfolio of initiatives, routinely evaluate progress and adapt as necessary to achieve accelerated and sustained market adoption.
- Influence development and support successful implementation of building codes and equipment efficiency standards and test methods to materially improve efficiency outcomes.
- Selectively support dialogue and coordinate activities among stakeholders interested in accelerating energy efficiency through market transformation in the Northwest.
- Research, analyze and provide actionable insight to support identification and pursuit of efficiency opportunities and results reporting.

Goal 2: Continuously improve organizational culture and performance efficacy, ensure accountability and transparency and strive for innovation in service to the benefit of all stakeholders. Key strategies:

- Engage funders and other qualified advisors to identify, develop and sustain a portfolio of efficiency-enabling initiatives and activities that are consistent with the alliance's purpose.
- Establish Board-determined policies to assure equitable allocation and appropriate prioritization of efforts.

E. Energy Trust membership on NEEA committees and direction to NEEA

Energy Trust provides regular guidance to NEEA through Executive Director Michael Colgrove's service as vice president of the NEEA board of directors, chair of its strategic planning and end use load research committees and as a member of its natural gas committee and through Energy Trust staff's participation on NEEA's advisory committees.

Committee	Energy Trust staff member
Regional Portfolio Advisory Committee	Fred Gordon, director of planning and evaluation
Cost-effectiveness and Evaluation Advisory Committee	Phil Degens, evaluation manager Peter Schaffer, senior planning project manager
Regional Emerging Technology Advisory Committee	Phil Degens, evaluation manager
Natural Gas Advisory Committee	Phil Degens, evaluation manager
Residential Building Stock Assessment Working Group	Dan Rubado, evaluation project manager
Regional Smart Thermostat Study Working Group	Dan Rubado, evaluation project manager
Products Coordinating Committee	Thad Roth, residential sector lead
Integrated Systems Coordinating Committee	Oliver Kesting, commercial sector lead
End Use Load Research Steering Committee	Michael Colgrove, executive director
End Use Load Research Working Group	Sarah Castor, program manager for evaluation & engineering Erika Kociolek, senior evaluation project manager

Energy Trust staff provided the following direction to NEEA through committees:

- Helped NEEA staff and board assess opportunities in the Midwest and California in accordance with the NEEA Business Plan and the Strategic Planning Committee charter.
- Voted to approve a new initiative for variable speed heating, cooling and ventilation systems, which focuses on building national support for a more reliable climate-specific efficiency rating system.
- Provided direction on the plan for analysis of Home Energy Metering Study data.
- Provided guidance and support on the development of NEEA gas technologies portfolio.

- Provided input and support on emerging technologies research focused on residential and commercial HVAC and water heating.
- Provided input and support with pilots for integrated lighting and HVAC initiatives.
- Provided input on the design of the 2022 Residential Building Stock Assessment study, helped select a contractor to conduct the study, and helped organize funders to reinstate multifamily buildings as a component of the study and fund over-samples across the region.
- Provided input on the design of the regional smart thermostat study and helped select a contractor to conduct the study.

APPENDIX 1: Total organization results

This appendix provides information on Energy Trust's energy savings and generation results as well as revenue and expenditures for programs beyond those funded by Oregon utility customers of PGE and Pacific Power under state law and by natural gas utility customers of NW Natural, Cascade Natural Gas and Avista through regulatory agreements between the OPUC and each natural gas utility. This includes activity in NW Natural territory in Southwest Washington, Energy Trust's subcontracts to deliver the Oregon Community Solar Program and support PGE's Smart Battery Pilot and expenditures for a grant from the U.S. Department of Energy to increase access to solar energy for low- and moderate-income communities. Energy Trust also receives revenue from investments and spends on business development.

Highlights of this work include:

- Energy Trust helped the Oregon Community Solar Program launch at the start of 2020. Nearly a year later, the OPUC approved the first three projects, which are located in Clackamas and Marion counties, to begin commercial operation.
    - Energy Trust advised on program design and leads project certification, customer service and consumer protection activities under a contract with Energy Solutions.
    - Outside of this program, Energy Trust offers incentives to help local community organizations navigate the financial and technical hurdles of a typical community solar project.
    - Generation does not count toward Energy Trust renewable energy generation.
- Energy Trust subcontracted with PGE to help deliver its Smart Battery Pilot, which launched in fall 2020. PGE will provide bill credits and incentives for storage systems and enroll up to 525 residential customers with qualifying batteries that PGE can access.
    - Energy Trust is managing customer outreach, contractor education, quality management and incentive processing. Customers may also choose to install solar with their batteries, which could qualify for an Energy Trust solar incentive.
    - The pilot to study energy storage solutions and support grid modernization extends through July 2025.

A. Total organization revenue[29]

Source	Annual actual revenues	Annual budgeted revenues
Oregon PPC programs	$175,576,793	$177,369,786
NW Natural Washington	$2,552,283	$2,556,283
Oregon Community Solar Program	$492,773	$546,896
Low- and moderate-income grant	$9,221	$-
PGE Smart Battery Pilot	$29,402	$-
Revenue from investments	$546,451	$1,000,000
Total	**$179,206,923**	**$181,472,965**

[29] Energy Trust received a grant from the U.S. Department of Energy to collaborate with the Oregon Department of Energy to increase access to solar energy for low- and moderate-income communities.

B. Total organization expenditures

Source	Annual actual expenditures	Annual budgeted expenditures
Oregon PPC programs	$186,825,898	$201,623,746
NW Natural Washington	$2,363,539	$2,579,667
Oregon Community Solar Program	$281,427	$352,716
Low- and moderate-income grant	$9,221	$-
PGE Smart Battery Pilot	$21,419	$-
Business development	$7,722	$-
Total	**$189,509,226**	**$204,556,129**

C. Total organization expenditures by activity[30,31]

		Annual actual expenditures	Annual budgeted expenditures	Budget variance
	Oregon PPC programs	**$178,285,252**	**$192,059,167**	**7%**
Other	NW Natural Washington programs	$2,255,491	$2,458,634	8%
	Oregon Community Solar Program	$268,562	$337,205	20%
	Low- and moderate-income grant	$8,842	$-	N/A
	PGE Smart Battery Pilot	$20,439	$-	N/A
	Business development	$7,722	$-	N/A
	Other Total	**$2,561,056**	**$2,795,839**	**8%**
	Administration	**$8,662,918**	**$9,701,123**	**11%**
	Total expenditures	**$189,509,226**	**$204,556,129**	**7%**

D. Total organization savings and generation by fuel

	Annual savings/generation	Annual goal	Percent Achieved
Electric savings	43.2 aMW	45.4 aMW	95%
Natural gas savings	7,529,614 therms	6,866,130 therms	110%
Electric generation	4.17 aMW	3.27 aMW	127%

[30] Business development funds went toward the PGE Smart Battery Pilot.
[31] The LMI solar federal grant funded project is complete. Minor cost adjustments may continue through the balance of the year. Expenditures excluding administration are higher than when administration is included due to a negative administration cost.

E. Total organization progress toward annual efficiency goals by utility

	Annual savings	Levelized cost	Annual goal	Percent achieved YTD	Annual IRP target	Percent achieved YTD
Portland General Electric	25.7 aMW	3.9 ¢ per kWh	27.4 aMW	94%	30.5 aMW	84%
Pacific Power	17.5 aMW	4.2 ¢ per kWh	18.0 aMW	97%	19.2 aMW	91%
NW Natural	6,368,334 therms	31.8 ¢ per therm	5,591,966 therms	114%	6,018,697 therms	106%
Cascade Natural Gas	426,714 therms	42.2 ¢ per therm	547,244 therms	78%	621,804 therms	69%
Avista	414,395 therms	36.0 ¢ per therm	387,588 therms	107%	313,420 therms	132%
NW Natural Washington	320,170 therms	59.0 ¢ per therm	339,331 therms	94%	N/A	N/A

F. Total organization renewable energy generation by utility

	Annual generation aMW	Annual goal aMW	Percent achieved YTD
Portland General Electric	2.55	2.25	114%
Pacific Power	1.61	1.02	158%
Total	**4.17**	**3.27**	**127%**

APPENDIX 2: Progress toward diversity, equity and inclusion goals

Energy Trust developed 10 diversity, equity and inclusion goals to improve and enhance offers for underserved customers. Goals were finalized at the end of 2018 using baseline data through 2017 unless otherwise noted. Progress reports were provided in Energy Trust's Q2 2019, 2019 annual and Q2 2020 reports to the OPUC. This appendix reflects activities and progress made from January 2019 through December 2020 unless otherwise noted. Energy Trust identifies underserved customers (people of color, people with low incomes and people in rural areas) based on census tract characteristics.

Highlights of this work and key lessons learned include:

- Since the launch of its first Diversity, Equity and Inclusion Operations Plan in 2018, the organization has formed a Diversity Advisory Council with members who represent communities of color and rural Oregonians.
- Energy Trust hired a diversity, equity and inclusion lead, a full-time senior management position, to work with that council, manage an internal staff committee and help Energy Trust incorporate diversity, equity and inclusion into all aspects of its work.
- Staff began hosting monthly events called Diversity First Thursdays to highlight the history and experiences of marginalized groups designed. The events are designed to broaden staff's awareness and promote conversations among staff and stakeholders.
- As the COVID-19 pandemic unfolded, Energy Trust prioritized development and delivery of low- and no-cost offers for people disproportionately impacted, including communities of color, customers with low incomes and those who lost jobs as a result of the pandemic.
- Also in 2020, staff worked closely with rural customers who were impacted by wildfires and floods, surfacing lessons on how to better support customers and trade allies in the face of adversity from natural disasters.
- The Solar program launched incentives and grant offers to help connect income-qualified customers with solar energy, whether through rooftop solar at single-family or multifamily homes or community solar projects developed by public agencies and nonprofits.
- In 2020, Energy Trust set new diversity, equity and inclusion goals for 2021 with new targets to increase customer participation, deepen relationships with community partners, work with minority-, women- and service-disabled veteran-owned trade allies and more.
- In 2021, Energy Trust will engage stakeholders to inform its next set of diversity, equity and inclusion goals and objectives. Staff will seek input from community-based organizations, customer advocates, community leaders, business and trade groups in the planning process to guide development of goals and strategies that meet the needs of underserved customers.
    - Staff will develop metrics and methods for data collection that support meaningful reporting on progress and will do additional research and analysis as needed to continue to learn from and adjust program strategies to meet diversity, equity and inclusion goals.
    - Energy Trust will implement a supplier diversity tracking system and track how much Program Management Contractors and Program Delivery Contractors spend with minority-, women- and service-disabled veteran-owned businesses as well as professional service contracts generated by Energy Trust staff.

Key

Goal achieved	Goal not achieved

Goal 1: Increase customer participation in energy efficiency programs for all underserved populations by 20% by the end of 2020.

Goal 1A: Increase residential participation rate by 20% in communities of color by the end of 2020.[32]

Baseline	Results	2020 Target	Status
50,185 total participants from communities of color through 2017 (24% participation rate)	5,350 new participants in 2020 for a total of 65,658 participants from communities of color (31.4% participation rate)	60,593 total participants from communities of color through 2020 (a 20% increase to participation rate)	Goal achieved

- As the pandemic unfolded, Energy Trust focused on serving those who were disproportionately impacted. Offers included promoting free Energy Saver Kits; coordinating with Pacific Power on no-cost smart thermostat and Energy Saver Kit distribution to rural customers and those who received energy assistance; distributing more than 50,000 free LEDs through food pantries, churches and other community-based groups that serve vulnerable clients; and expanding eligibility for higher Savings Within Reach incentives.
- The OPUC approved Energy Trust expanding co-funding efforts with agencies that serve low-income Oregonians after an initial effort with the community action agency in Washington County resulted in reaching more customers and achieving additional savings.
- In 2020, Energy Trust launched Community Partner Funding, a suite of higher incentives for nonprofits and community agencies that serve communities of color, rural customers, customers with low incomes, veterans and/or people experiencing disabilities. Six organizations enrolled in Community Partner Funding including Verde, Community Energy Project, Community Action in Washington County and Portland Community Reinvestment Initiatives, Inc. Energy Trust distributed more than $350,000 in incentives with them in 2020.
    - Incentives helped fund home energy assessments and installation of heat pump water heaters, ductless heat pumps, smart thermostats and other energy-saving products.
    - Higher incentives significantly reduce customer costs for energy-efficiency upgrades. For example, with funding from Energy Trust and other sources, Verde reduced the average customer cost of a new ductless heat pump from $4,000 to $428.
    - Participating organizations collected demographic information from participants, indicating that these offers are reaching low-income customers, people of color and people with disabilities.

Going forward:

- COVID-19 is having a disproportionate effect on communities of color and customers with lower incomes; out-of-pocket costs, already a strain for many, are now a more significant barrier for these customers. Working with community-based organizations to provide low- and no-cost upgrades will be essential to increasing participation in these communities.
- Energy Trust will create and build on relationships with community-based organizations, especially those that support rural areas and Black customers.
- In some cases, the program design or offer that best meets the needs of an underserved customer did not result as new projects or participants that count toward this goal. Reaching communities of color should not be limited to select census tracts and should not require collecting customer-specific data.

[32] A stretch goal of 66,128 participants was created in 2020 and achieved at 97%.

Goal 1B: Increase participation in Existing Buildings program for small and medium business customers and business customers in very rural areas by 20% by the end of 2020.

Baseline	Results	2020 Target	Status
1,200 participating small/medium businesses per year on average (7% cumulative participation rate for small/medium business)	1,989 participating small/medium businesses (8% cumulative participation rate for small/medium businesses)	3,000 additional participating small/medium businesses in 2019 and 2020 (9% cumulative participation rate for small/medium businesses)	Goal not achieved
50 participating very rural businesses (7% cumulative participation rate for very rural businesses through 2017)	129 participating very rural businesses (10% cumulative participation rate for very rural businesses)	120 additional participating very rural businesses in 2019 and 2020 (7% cumulative participation rate for very rural businesses)	Goal not achieved

- Energy Trust worked with community service, community-based and culturally specific organizations, rural chambers and economic support organizations to reach business customers and increase participation. Efforts included:
    - Hosting an event for small foodservice businesses to promote commercial foodservice equipment upgrades. Information was offered in English and Spanish.
    - Enlisting bilingual and multicultural outreach staff member to support Spanish and English-speaking Latino customers.
    - Partnering with LatinoBuilt to host events for Latino contractors to learn about Energy Trust.
    - Launching HVAC, water heating and foodservice offers to help small and medium business customers make upgrades beyond lighting.
- In 2020, Energy Trust restructured its Existing Building and Multifamily programs and business lighting offers. Starting in 2021, TRC will manage Existing Buildings, which will include multifamily offers. TRC proposed using new strategies to increase participation among minority- and woman-owned businesses and community-based organizations, including developing a network of community-based liaisons focused on communities of color, low-income and rural communities.
- COVID-19 significantly impacted small businesses, particularly for restaurants and foodservices that were ordered to close, which limited their ability to do projects in 2020 and made this goal difficult to reach.

Going forward:

- As businesses look to recover from the pandemic and wildfires in Oregon, Energy Trust will need to streamline its support. Outreach should be coordinated across Energy Trust programs to reduce confusion and increase participation.
- Energy Trust will consider ways to expand access to multilingual and multicultural support. Adding multilingual staff and working with non-English speaking partners helped improve outreach and complete projects, particularly with Spanish-speaking contractors and customers.
- Given that Russian is the third most spoken language in the state, Energy Trust should invest resources in reaching this community through Russian language media outlets.

Goal 1C: Increase customer participation in Production Efficiency for small and medium businesses in rural territories by 20% by the end of 2020.

Baseline	Results	2020 Target	Status
413 total small/medium sites served through 2017	752 total small/medium sites served through 2020	495 total small/medium sites served through 2020	Goal achieved

- To support industrial and agricultural customers affected by COVID-19, Energy Trust launched bonuses, increased incentives for Strategic Energy Management (SEM) and rolled out virtual project verifications. These changes helped customers achieve savings despite disruptions related to COVID-19.
    - Not all business sectors were equally affected by COVID-19 as originally expected. While paper, food processing/distribution/storage for grocery stores, wineries and cannabis businesses largely remained stable or grew in 2020, other sectors such as aerospace, food production and distribution for hospitality were strained and less likely to engage in energy-saving projects.
- A no-cost tubular LED installation offer for small commercial and industrial customers launched in 2019 in Eastern Oregon and in Southern Oregon in 2020. However, supporting lighting offers in rural areas is challenging when there are few local trade ally contractors and many were focused on renewable and residential activity.
- The standard industrial track had a field staff person focus attention in Southern Oregon, which resulted in an increase of five projects compared to 2019.

Going forward:

- Energy Trust will consider ways to coordinate metrics and activities for small, medium and rural businesses and business owners across its commercial and production efficiency programs to engage more customers and better serve communities.

Goal 2: Increase customer participation in solar projects for low-income, rural and racially diverse communities by 20% by the end of 2020.

Baseline	Results	2020 Target	Status
33% of 2017 residential solar projects sited in low-income, rural and racially diverse communities (597 out of 1,831 projects)	32% of 2020 residential solar projects sited in low-income, rural and racially diverse communities (522 out of 1,618 projects)	38% of 2020 residential solar projects sited in low-income, rural and racially diverse communities	Goal not achieved

- Energy Trust created higher incentives for income-qualified customers. Solar Within Reach incentives, which are five times the standard residential solar incentive and cover about half of the cost of a solar system, exceeded the first-year targets for applications and installations, achieving 180 applications and 86 installations.
    - As part of its COVID-19 response, Energy Trust allocated additional funding for Solar Within Reach incentives.
    - The offer was effective at making progress toward this goal but not enough to meet it given the requirement that projects be sited in low-income, rural and racially diverse communities. While all Solar Within Reach projects support the intent of the goal, not all counted toward its progress.
- Energy Trust awarded $80,000 in grants to community-based organizations exploring innovative solar project models benefiting underserved customers, including residential and community solar projects.
- Energy Trust introduced and enrolled 14 projects in its Community Solar Development Assistance offer for community groups, nonprofits and municipalities interested in participating in the Oregon Community Solar Program. This helps community solar projects that will benefit underserved customers—including low- and

moderate-income customers, communities of color, tribes, renters and rural customers—do early design and financial planning that increases the likelihood of success.
- In 2020, Energy Trust introduced a new solar incentive offer targeting affordable multifamily properties and nonresidential projects by nonprofits and tribes that will benefit underserved communities.

Going forward:
- Metrics should capture all renewable energy activities and benefits beyond energy generation, such as non-energy benefits for underserved populations and non-residential projects.
- Energy Trust can only offer incentives to cover the above-market cost of renewable energy installations. When demand exceeds the program's budget, Energy Trust will consider ways to prioritize projects with additional benefits.

Goal 3: Increase participation in the Trade Ally Network by minority- and women-owned businesses by 50% each by the end of 2020.

Baseline	Results	2020 Target	Status
25 total minority-owned businesses enrolled as of 2017	12 new minority-owned businesses enrolled (total of 44)	13 new minority-owned businesses enrolled as of 2020 (total of 38)	Goal not achieved
15 total women-owned businesses enrolled as of 2017	6 new women-owned businesses enrolled (total of 37)	8 new women-owned businesses enrolled as of 2020 (total of 23)	Goal not achieved

- Energy Trust increased memberships and activities with trade organizations to spread awareness of its Trade Ally Network and offers, including with the Oregon chapter of the National Association of Minority Contractors (NAMC), Oregon Tradeswomen, LatinoBuilt and Professional Business Development Group (PBDG).
    - Energy Trust held two outreach events with LatinoBuilt in 2020 focused on the benefits of joining the Trade Ally Network and highlighting bonus incentive offers for commercial customers.
    - Energy Trust co-hosted an inaugural community resource fair with NAMC in 2020 to increase awareness in Black and Latino communities. (A similar event was held online in January 2021 with NAMC and Portland Housing Bureau.)
- Staff held monthly meetings to align efforts and share lessons from Energy Trust outreach staff working to reach trade allies and customers.
- Staff worked with Gaucha Translations to translate trade ally enrollment forms into Spanish.
- While Energy Trust fell just short of this goal, staff expects increased outreach efforts to promote benefits of the Trade Ally Network will continue to support trade ally enrollment in the coming years working closely with trade organizations.

Going forward:
- Some business owners need help seeing the benefits of getting into the energy-efficiency field and incorporating energy-efficient upgrades into their businesses. This is support Energy Trust should offer.
- Energy Trust will support minority- and women-owned businesses seeking certification from Oregon's Certification Office of Business Inclusion and Diversity (COBID) to ensure they get access to opportunities associated with certification while enabling better tracking of Energy Trust's trade ally diversity efforts. This also supports Energy Trust's transition away from allowing self-identification to requiring COBID certification for targeted offers to certain trade allies with increased incentives.

Goal 4: Increase the number of projects completed by minority- and women-owned trade allies by 15% by the end of 2020.

Baseline	Results	2020 Target	Status
1,150 projects completed by minority-and women-owned businesses in 2017	1,976 projects completed by minority- and/or women-owned businesses in 2020	1,323 projects completed by minority- and women-owned businesses per year in 2019 and 2020	Goal achieved

- Energy Trust completed 723 projects with minority-owned businesses and 1,574 projects with women-owned businesses in 2020. There was some overlap with projects by businesses that are both minority- and women-owned.
- Peak Heating and Air, a minority-owned business, went from 16 projects in 2019 to 104 projects in 2020 thanks to an LED direct-install offer and duct testing projects.
- Energy Trust met the target for 2019, completing 1,678 projects with minority- and/or women-owned businesses along with an additional 664 direct install lighting projects. (Direct install lighting projects are included in the 2020 results above.)

Going forward:

- To increase the percentage of incentives paid through minority- and women-owned business contractors, Energy Trust should explore targeted offers that provide value for trade allies while supporting customer leads and savings. Energy Trust has received feedback from trade partners that providing leads to minority-owned contractors could help drive project volume and remove barriers to participation in our programs.
- Energy Trust's bonuses to support customers amid the pandemic were announced and launched quickly to help support economic activity, which was challenging for certain trade allies. In the future, Energy Trust should offer additional resources and engagement to build a pipeline of contractors ready to promote offers as soon as they launch.
    - A contractor development pathway within the Existing Buildings program launching in 2021 will provide technical support, one-on-one training and other benefits for contractors that are certified or will become certified through the pathway.

Goal 5: Increase the number of contracts executed with minority- and women-owned businesses by 15% by the end of 2020.

Baseline	Results	2020 Target	Status
48 contracts with businesses identified as diverse from 2016 to 2018	109 businesses that identified as diverse since 2016	104 total contracts with businesses identified as diverse since 2016	Goal achieved

- Staff was made aware of the need to contract with minority-, women- and service-disabled veteran-owned businesses and community-based organizations and encouraged to seek out new firms when entering in contracts for services, supplies or sponsorships. Energy Trust also did more communications and outreach to promote contracting opportunities.
- In the competitive bid process for commercial and industrial programs, bidders had to show an ability to successfully partner with minority-, women- and service-disabled veteran-owned subcontractors to deliver services and submit a plan for subcontracting including the expected dollar value of subcontracts.
- Diverse contractor requirements and language were included in contracting processes for the planning and evaluation and marketing writer pools in 2020.

Going forward:

- Better systems are needed to comprehensively track how funds flow through contractors to subcontractors and to what extent contracts for smaller dollar amounts are going to minority-, woman- and service-disabled veteran-owned businesses.

Goal 6: Increase overall market awareness and understanding of underserved populations through the engagement and deepening of relationships with 50 culturally specific/culturally responsive organizations by the end of 2020.

Baseline	Results	2020 Target	Status
80 existing relationships with organizations in 2017	20 new relationships and 30 deeper relationships	25 new relationships and 25 deeper relationships with organizations	Goal not achieved

- Starting in 2019, Energy Trust staff members were assigned and trained as relationship managers to develop or deepen relationships and learn about the communities and customers they serve. This led to new partnerships and program offers that provide mutual benefits and expanded services to customers:
    - Verde hired dedicated staff to support its collaboration with Energy Trust and is seeking funding from outside sources to further supplement the costs of program delivery.
    - Energy Trust supported Spark Northwest's Energize South Coast Campaign that resulted in 53 ductless heat pumps installed in 2020 at about half the cost for customers.
- These partnerships aren't just a way to drive program participation. Instead, staff found working with community-based organizations provided insight into customers, barriers and gaps in Energy Trust offers.
- Staff advanced efforts to reach new customers through partner organizations with the introduction of Community Partner Funding, which allows community-based organizations to offer increased incentives for residential projects.
- COVID-19 stretched organizations' capacity and limited their ability to work with Energy Trust in 2020. COVID-19 also disrupted operations, with some groups—including the City of Hermiston's Hispanic Advisor Committee and Latino Business Network in Eastern Oregon—not meeting for the majority of 2020.

Going forward:

- More opportunities exist to engage groups in rural communities and communities of color, establish formal and equitable processes for funding, tailor legal documents for work with community agencies and consult with members of the Diversity Advisory Council.
- Energy Trust should develop more marketing efforts with community-based organizations and materials in Spanish.
- Relationship management training will continue. As more staff members and contractors engage with community-based organizations, coordination is needed to ensure working with Energy Trust is easy to navigate.

Goal 7: Increase the diversity in recruitment and hiring of employees by 25% by the end of 2020.

Baseline	Results	2020 Target	Status
7.5% of staff identified as people of color at the end of 2017 (8 staff identified as people of color out of 107 total staff)	12% of staff identified as people of color (13 staff identified as people of color out of 109 total staff)	Increase diversity of staff and applicants to be more reflective of Portland demographics (28% of Portlanders identify as non-white)	Goal not achieved
	40% of applicants who voluntarily self-reported identified as people of color		Goal achieved
27% of new hires in 2017 identified as people of color (4 new hires identified as people of color out of 15 total new staff hired)	29% of new hires identified as people of color (8 new hires identified as people of color out of 28 total new staff hired)	34% of new hires identify as people of color	Goal not achieved

- Energy Trust contracted with Garcia and Associates, an Oregon-based human resources consulting firm focused on diversity and inclusion, to do a comprehensive recruiting strategy. A subsequent effort, launched in 2020, seeks to produce a similar strategy for retaining employees.
- Recruiting and hiring strategies resulted in more people of color advancing to final stage interviews and being hired. These included:
    - Requiring hiring panels have qualified applicants of color in consideration throughout the hiring process (as tracked and monitored by human resources).
    - Asking members of the Diversity Advisory Council to sit on all hiring panels.
    - Requiring hiring managers and hiring panel participants to attend an implicit bias training prior to interviews.
    - Sharing interview questions with applicants prior to interviews to give applicants with little or no industry experience time to prepare.
- Energy Trust partnered with agencies and internship placement programs with successful recruiting strategies to help attract and retain diverse talent. Currently, 62% of interns at Energy Trust identify as people of color (these are not included in the figures above).
- Metrics reflect progress since 2018. Since demographic information is disclosed voluntarily, staff information can change as staff self-disclose.

Going forward:

- Diversity, equity and inclusion training opportunities for hiring managers and hiring panels should be expanded.

- Energy Trust should focus on managing and mitigating the effect of COVID-19 on hiring.
- Since agency contractors and interns make up a critical pipeline of qualified applicants for open staff positions, agency partners and internship placement programs must have their own successful recruiting strategies to help attract and retain diverse talent.
- Energy Trust's recruiting strategies should be evaluated on an annual basis.

Goal 8: Develop systems and support needed to collect, track, analyze and report demographic information related to program participation, program delivery and trade ally network members by the end of 2018.

2018 Target	Status
Data, baseline and participation analysis is used to refine diversity, equity and inclusion goals and track and report progress to achieving those goals	Goal achieved

- Energy Trust surveyed residential and multifamily customers (including program participants and non-participants) for its 2020 Customer Insights Study with an intentional oversample of key demographic groups. This survey, given every two years, provides the most detailed insight into program efforts, allowing Energy Trust to track progress serving specific groups (e.g., specific race or ethnic groups).
    - Results revealed differences between demographic groups in awareness, information sources, attitudes, barriers and motivations for completing energy-efficiency projects and using Energy Trust services.
- In 2020, Energy Trust expanded its Fast Feedback survey, which is given on a rolling basis to recent program participants, to include more demographic questions for residents, business owners and decision-makers.
- Staff gave presentations on survey results to the Diversity Advisory Council at its 2020 meetings in February, July and November.

Going forward:

- Energy Trust will continue to engage stakeholders, the Diversity Advisory Council and community-based organizations to understand what data is meaningful and should be collected.
- Certain program participation goals for 2020 did not easily lend themselves to real-time tracking. Energy Trust will continue to balance trackable metrics with large-scale evaluations and research efforts like the Customer Insights Study that provide a comprehensive framework to measure progress and identify underserved groups.
- Energy Trust will continue to explore how participant demographic information might be collected for offers where customers are not directly receiving an incentive or information is not available (i.e., where incentives are paid to distributors or manufacturers).

Goal 9: Based on the Intercultural Effectiveness Scale survey, increase cultural responsiveness of all staff and board of directors by 20% by the end of 2020.

Baseline	Results	2020 Target	Status
Scored 3.79 out of 5 on Intercultural Effectiveness Scale survey in 2015	Scored 3.9 out of 5 on Intercultural Effectiveness Scale in 2019 and 2020	More culturally responsive and inclusive organization	Goal not achieved

- Energy Trust used the Intercultural Effectiveness Scale survey to assess the ability of staff and members of its board of directors to work with people from different cultures. In 2019, 90% of staff including contractors and interns took the survey. Board members completed the survey in May 2020. The two groups received an

average score of 3.9 out of 5. Results showed a small but positive change overall with notable gains in interpersonal engagement.
- Employees were invited to attend a presentation on organization-wide results and offered one-on-one meetings to discuss their scores and ways to incorporate results into their workplans.
- Human resources staff used the 2019 results to select a suite of trainings that address areas of significant growth potential.

Going forward:

- The Intercultural Effectiveness Scale survey is likely not the most appropriate survey for Energy Trust since it is geared to international engagement. Staff will select a new survey to track progress on this goal going forward.

Goal 10: Increase transparency and community engagement by publishing the Diversity, Equity and Inclusion Operations Plan and progress toward its goals.

2020 Target	Status
Internal and external stakeholders are aware of and informed of Energy Trust's diversity, equity and inclusion activities, goals and progress to goals	Goal achieved

- Staff provided regular updates on diversity, equity and inclusion goals and activities in quarterly and annual reports to the Oregon Public Utility Commission and Energy Trust's board of directors. These reports are posted on Energy Trust's website at www.energytrust.org/reports.
- Energy Trust launched a web page describing its diversity, equity and inclusion efforts at www.energytrust.org/diversity. The page materials on goals, baseline data collection, progress reports and Diversity, Equity and Inclusion Operations Plans.
- Energy Trust staff were given frequent updates about diversity, equity and inclusion goals and activities through presentations, internal newsletters and emails.

Going forward:

- Energy Trust will continue publishing reports and other communications on diversity, equity and inclusion activities, progress and lessons learned to promote transparency and trust among its stakeholders and customers, including underserved groups.
- Where possible, reports will track qualitative as well as quantitative measures of progress.

APPENDIX 3: Customer satisfaction results

Energy Trust calculated customer satisfaction from short web and telephone surveys with randomly selected 2020 program participants within about two months of project completion. The survey asked residential and non-residential participants in Oregon about satisfaction with their overall experience with Energy Trust. Participants in the Existing Buildings (including Existing Multifamily), Production Efficiency and commercial solar programs were also asked about satisfaction with their interactions with program representatives. Surveys were conducted with 1,031 residential customers and 1,106 non-residential customers in Oregon who received an incentive or discount from Energy Trust in 2020.

In 2020, the average proportion of program participants satisfied with their overall experience with Energy Trust was 96% and satisfaction with Energy Trust program representatives was 98%.

New Buildings projects often involve numerous market actors (architects, engineers, developers and owners) at different project stages, so it is difficult to reach a project representative who is able to respond to questions about satisfaction. Satisfaction with the New Buildings program is obtained from interviews with program participants as part of a separate evaluation survey. The most recent survey took place in Q1 2018. Ninety New Buildings project owners or representatives that participated in 2017 and 2018 were surveyed about their overall program satisfaction and satisfaction with interactions with program representatives. Of participants surveyed, 98% were satisfied with their overall program experience. Satisfaction with program representatives was 96%.

Table 1: 2020 overall satisfaction

Program	Satisfaction with overall experience
Existing Buildings, including Multifamily	98%
New Buildings*	98%
Production Efficiency	98%
Residential	94%
Solar (residential and commercial)	94%
Unweighted average	**96%**

* New Buildings satisfaction based on survey results of 2017 and 2018 program participants.

Table 2: 2020 satisfaction with program representatives

Program	Satisfaction with program representative
Existing Buildings, including Multifamily	99%
New Buildings*	96%
Production Efficiency	98%
Commercial Solar	6 of 8 customers
Unweighted average	**98%**

* New Buildings satisfaction based on survey results of 2017 and 2018 program participants.

Note: Energy Trust's customer feedback survey does not ask residential participants about satisfaction with program representatives. Residential participants interact with Energy Trust representatives to a varying degree and many do not interact with a program representative. In general, commercial and industrial participants have more interaction with Energy Trust representatives.

APPENDIX 4: Progress to 2020-2024 Strategic Plan

Energy Trust's 2020-2024 Strategic Plan defines the organization's areas of focus and key strategies for the five-year period. These focus areas align to Energy Trust's purpose, which is to help customers and communities reduce costs and realize additional benefits by saving energy and using renewable resources. The board-approved plan was developed through a public process that involved gathering input from the OPUC, utility partners, stakeholders, advisory councils and members of the public.

This appendix provides updates on activities for each focus area and related progress indicators. The board Strategic Planning Committee receives progress reports on a quarterly basis and provides committee updates at public board of directors meetings. The strategic plan and plan management information is available at www.energytrust.org/strategicplan.

Key

On track	On track, managing	Off track	Not started

Focus Area 1: Services to customers

We engage customers with relevant programs, information and services, including information and services specifically for underserved customers. We know we are making progress to this focus area when we achieve the following progress indicators:

Progress Indicator	Status as of Year 1
We achieve our annual savings and generation goals.	On track

- Energy Trust achieved its annual organizational electric savings goal, exceeded its annual organizational gas savings goal and far exceeded its annual organizational renewable energy generation goal.
    - Staff responded to the impacts of COVID-19 on customers and the economy in ways that improved energy savings forecasts and reached underserved customers, especially rural communities and customers with low incomes.
    - Staff held a virtual workshop with Umatilla County residents to understand interests and barriers to participating in our programs, fulfilling an OPUC performance measure requirement while gaining insights that will inform future offers and engagement.
    - Following the Labor Day wildfires that occurred across the state, an internal response team developed an initial strategy to support rebuilding and promote energy efficiency.

Progress Indicator	Status as of Year 1
We continue to use multi-year planning processes to identify ambitious longer-term energy targets that incorporate emerging sources of savings.	On track

- This progress indicator guides the organization to plan for and pursue innovative projects and approaches. Energy Trust uses a business planning process to reserve time for innovation efforts that explore new and emerging sources of savings and generation, among other things. This was the first year Energy Trust set targets and tracked staff time planned for innovative projects. Even though less time than planned for was dedicated to the most innovative types of projects (transformational innovation), time was dedicated as planned to the other two areas of innovation (core and adjacent innovation).

Progress Indicator	Status as of Year 1
We meet or exceed the goals we establish to increase the diversity of program participants.[33]	On track, managing

- This progress indicator aligns with the organization's diversity, equity and inclusion goals. Energy Trust achieved about half the goals by the end of 2020 set in the Diversity, Equity and Inclusion Operations Plan, including goals to increase residential customer participation in communities of color.
    - Looking forward, strategies and data tracking efforts that were part of the 2020 plan helped to inform the 2021 operations plan and goals. The Existing Buildings and business lighting request for proposal process and the subsequent contracts awarded prioritized diversity, equity and inclusion in subcontracts and customer service.

Focus Area 2: Supporting utilities

We strengthen the value we deliver to customers by linking energy efficiency and renewable energy to the approaches utilities are using to meet changing customer energy needs. We know we are making progress to this focus area when we achieve the following progress indicators:

Progress Indicator	Status as of Year 1
We develop a framework to value, deliver, report and evaluate energy efficiency and renewable energy resource opportunities in targeted locations in collaboration with utilities.	On track

- Staff began documenting approaches and lessons learned from targeted partnerships with utilities in order to streamline and standardize this emerging area of work.

Progress Indicator	Status as of Year 1
We implement and evaluate initiatives designed to drive customer adoption of energy efficiency and renewable energy projects in targeted areas.	On track

- Targeted partnerships with three of the five partner utilities were in progress or in the planning stage by year-end, for example:
    - Becoming a subcontractor to deliver PGE's residential Smart Battery Pilot and supporting PGE with the launch of a ductless heat pump controls pilot. Staff also participated in three working sessions hosted by PGE's Smart Grid Test Bed team to provide feedback on potential design concepts in the next phase that could launch in 2022 if approved by the OPUC.
    - A targeted load management project with Pacific Power in the Phoenix area wound down at the end of 2020, as scheduled; offers remained available through the end of 2020. Energy Trust has supported the planning and marketing of the project.
    - Energy Trust is also working with NW Natural on a targeted load management project in the Cottage Grove and Creswell area. Marketing efforts there continue with a focus on peak demand reduction. The next phase, if approved, would apply a localized avoided cost value to cost-effectiveness screening.
    - Targeted load management involves deploying energy efficiency and solar to serve customers and strengthen utility systems, potentially deferring utility infrastructure investments.

[33] See Appendix 2 for descriptions of program participation goals.

Focus Area 3: Informing policymakers

We provide objective information and analyses to policymakers and implementers to support development and implementation of energy policies. We know we are making progress to this focus area when we achieve the following progress indicator:

Progress Indicator	Status as of Year 1
We establish a system for monitoring regulatory and policy initiatives. We contribute data analyses and technical expertise during policy development and participate in policy implementation when there is potential customer benefit related to energy efficiency and renewable energy.	On track

- Staff developed an initial internal policy tracking system. The purpose of the system is to evaluate and adjust allocation of resources dedicated to this focus area, and when combined with periodic stakeholder surveys, assess staff effectiveness in this area.
- Staff provided public comment on the OPUC's work plans to implement greenhouse gas emissions reductions under Governor Brown's Executive Order 20-04.
- Staff monitored and participated in multiple OPUC processes and dockets, including Distribution System Planning requirements (UM 2005) and the investigation into the impacts of COVID-19 on customers (UM 2114). Staff provided information on cost-effectiveness, low-income initiatives and co-funding approaches.
- Staff was invited by the Governor's Office to provide information and perspective as a public purpose charge administrator to ongoing stakeholder discussions related to SB 1149 and the subsequent proposed 2021 legislation to revise the public purpose charge (HB 3141).

Focus Area 4: Delivering multiple benefits

We maximize the effectiveness and reach of public purpose charge funding by leveraging additional funding to advance clean energy investments that deliver multiple benefits. We know we are making progress to this focus area when we achieve the following progress indicators:

Progress Indicator	Status as of Year 1
We acquire more energy savings and renewable generation than would otherwise be achieved with only public purpose charge funding.	Not started
We coordinate with more organizations and communities where their additional resources help accomplish mutually supportive objectives.	Not started

- Staff began working with the board Strategic Planning Committee to develop methodologies for tracking savings and generation that result from leveraging non-public purpose change funding, as well as tracking partnerships with organizations and communities that help accomplish mutually supportive objectives. Energy Trust will begin reporting progress in these areas in 2021.

Progress Indicator	Status as of Year 1
We establish a concept agreement with the Oregon Public Utility Commission and at least one natural gas utility to assess a joint carbon reduction effort.	Not started

- Work on a concept agreement with a natural gas utility was prioritized for 2021.

Focus Area 5: Adapting to change

We enhance our ability to quickly and effectively respond to changes, needs and new opportunities. We know we are making progress to this focus area when we achieve the following progress indicators:

Progress Indicator	Status as of Year 1
We achieve diversity, equity and inclusion goals for employee hiring and recruitment, and for the board of directors.	On track

- Staff continued work on a diversity, equity and inclusion recruitment strategy and started working on a retention strategy. Energy Trust's board of directors formed an ad-hoc committee to lead the development of diversity, equity and inclusion metrics for the board.
    - In 2020, Energy Trust increased the percentage of employees and job applicants who self-reported as people of color even as the rate of hiring in 2020 slowed significantly due to COVID-19. Changes made to recruitment and hiring included:
        - Hiring panels must have qualified applicants of color in consideration throughout the hiring process.
        - Members of the Diversity Advisory Council are asked to participate on hiring panels.
        - Hiring managers and hiring panel participants are required to attend an implicit bias training prior to holding interviews.

Progress Indicator	Status as of Year 1
Annual surveys indicate that staff is significantly aware of how annual goal setting, business planning and prioritization enables flexible resourcing of existing and new initiatives.	On track, managing

- A survey on staff perception of organizational flexibility, adaptability and nimbleness indicated six of 12 statements where staff perceive the organization to be demonstrating these values. Those places that were not on track indicate a need for improvements to business planning and prioritization to better align work with available staff capacity. Overall, more staff feel the organization is improving in the ability to quickly and effectively respond to change, needs and new opportunities.
    - Organization flexibility was exemplified by staff pivoting and prioritizing COVID-19 and wildfire response efforts to serve vulnerable and impacted customers. In addition, staff were invited to a series of informational sessions to promote adoption of tools and resources to support innovation.
    - Efforts to improve organizational flexibility included prioritizing strategic initiatives during quarterly business planning updates and initiating longer-term efforts that seek to enhance organizational structure and clarify decision-making.

APPENDIX 5: Renewable resource development targets

A. Purpose of project development assistance

Energy Trust provides project development assistance and installation incentives for projects that will generate renewable electricity from hydropower, biopower, municipally-owned community-scale wind and geothermal resources.

The primary goal of project development assistance is to increase the number of distributed renewable energy generation projects in Oregon by lowering early-stage development barriers and financial risk. Through project development assistance, Energy Trust builds a pipeline of potential projects that have achieved critical pre-construction activities, including technical and financial assessments. Development assistance also prepares proposed project owners to apply for Energy Trust installation incentives and other sources of financial support. The early-stage analyses delivered through development assistance, such as feasibility studies, build and reinforce Energy Trust's awareness of market factors and other considerations important for supporting distributed renewable energy resources while helping individual projects leverage other incentives, construction services and long-term financing.

Applications for project development assistance must be received and approved by Energy Trust prior to the start of the proposed development activity. Project development assistance incentive funds are provided as a reimbursement following completion of the activity and proof of full payment to all contractors. Incentive funding typically equates to 50% of the project activity cost, up to a maximum of $200,000. Project proponents have a significant financial stake in development activities, helping ensure that activities are necessary and fiscally prudent. Common examples of project development activities include feasibility and design studies, feedstock studies, irrigation district modernization technical investigations and assessments, and transmission and interconnection studies.

While project proponents using any eligible technology can apply for project development assistance incentives, staff focuses efforts in two key areas:

- Electricity generation from the combustion of biogas, which is created by the anaerobic digestion of organic material at water resource recovery facilities (also known as wastewater treatment plants) and businesses that manage organic materials (such as breweries).
- Hydroelectric projects made possible from the modernization (i.e., piping) of irrigation water delivery infrastructure (canals, ditches and laterals) by irrigation districts.

B. Barriers to project development

Energy Trust's project development assistance is designed to address the main barriers to renewable energy project development. Barriers in 2020 remained similar to those in previous years and in some instances increased (e.g., higher capital costs for materials and labor). Helping projects overcome these barriers builds a pipeline of projects that can apply for incentives, complete construction and generate renewable energy.

- **Early-stage development capital is scarce.** Investing financial resources in renewable energy project development with above-market costs is often regarded as high risk. Investors are reluctant to commit funds into projects with unclear technical or financial viability, especially when a project may have a lengthy return on investment. Without early-stage funding, a project cannot advance to the point where the risk is reduced. By providing early-stage funding, Energy Trust builds a pipeline and helps move projects forward, enabling them to attract additional financing and make a decision to proceed with construction. On the other hand, early-stage assessments may also help inform the market if a project is determined to not be technically or financially viable. Energy Trust helps project owners reach that point with less financial exposure.

- **Project proponents whose primary business is not energy often encounter difficulties navigating the stages of project development.** Energy Trust works with many project proponents (e.g., municipalities, private businesses, irrigation districts) that are not professional energy developers. Advancing a project through resource characterization, feasibility assessment, financing, permitting and interconnection can be lengthy and difficult. Project development assistance—both financial and technical—helps project proponents navigate these steps in less time and at a lower cost.
- **Market conditions for distributed renewable energy generation in Oregon continue to be challenging.** At all stages of the development process, project owners face poor market fundamentals, including low avoided cost rates, high material and labor costs, and greatly diminished state and federal incentives. Utility interconnection is difficult and increasingly costly based on reports from project proponents. Project development assistance is an essential tool to continue to attract investment in projects in Oregon and to maintain development capacity in the state.

C. Project development assistance activity in 2020

This report details the specific uses of project development assistance in these areas in 2020. Since 2014, Energy Trust has focused on increasing the deployment of project development assistance incentives to build a pipeline of projects that can apply for installation incentive funds.

Summary of project development assistance activity in 2020

Focus areas	Projects supported	Total funds committed*	Total funds spent**
Focus area 1: Biogas	3	$143,226	$134,225
Focus area 2: Irrigation hydropower	15	$1,344,610	$1,087,357
Outside focus areas	12	$154,299	$257,952
Total	**30**	**$1,642,135**	**$1,479,534**

* Total funds committed only includes dollars committed in 2020.
** Total funds spent includes funds committed in 2020 and in previous years.

The 2020 OPUC performance measures for Energy Trust include metrics related to renewable energy and the focus areas in the above table. The first performance measure states:

> *Deploy at least $1.99 million in non-solar project development assistance incentives. Maintain a nonsolar project development assistance pipeline in excess of 25 projects. Report number of projects served total dollars spent, and summarize project progress through development stages.*

In 2020, the Other Renewables program deployed $1.64 million in non-solar project development assistance incentives to 30 different projects. The program committed most of these funds to irrigation hydropower projects. The program exceeded the benchmark for number of projects in the pipeline but was short of the benchmark for dollars deployed. This is attributed to a slowdown in irrigation modernization efforts as a result of the pandemic and accompanying travel and contractor staff limitations in 2020. In addition, for several irrigation districts, the amount of dollars deployed for development assistance was reduced because of limited hydropower potential in those districts. However, the program experienced an increase in the level of biogas project development assistance over 2019, reflecting two municipal water resource recovery facilities investigating biopower and renewable natural gas feasibility. Market forces such as flat marginal retail energy costs, inexpensive natural gas, increasing cogeneration operations and maintenance costs, and renewable natural gas incentives continue to make biopower economically challenging. Finally, development assistance outside of the focus areas increased by about 20%, where funds were expended to advance 12 renewable electricity projects, specifically agricultural hydropower, energy planning, municipal water-supply hydropower, unpowered dam hydropower, and municipal woody biomass combined heat and power.

Not reflected in the above table are a significant number of irrigation hydropower projects supported previously. These hydropower projects are in various stages of development, as irrigation districts advancing through modernization processes, including system improvement planning, permitting, fundraising and design and installation of pressurized irrigation pipe.

D. Focus area: Electricity generation from the combustion of biogas

Biogas projects supported: 3
Milestones met:

- Brewery waste-to-energy feasibility assessment
- Municipal biopower and renewable natural gas feasibility assessments

Oregon's businesses and municipalities are obligated to manage and safely dispose of significant volumes of organic material. As Oregon's population grows, the volume of organic material requiring processing and disposal increases as well. Organic waste material, managed daily by food processors, breweries and municipal water resource recovery facilities, are costly to manage and transport and may pose human health risks. Traditional methods of safely managing these materials include land application and landfilling, and in the case of food waste, conveyance to livestock operations.

With recent technological advancements, these materials can serve as a valuable biogas feedstock. Under controlled conditions (e.g., absence of oxygen, controlled temperature), organic materials can produce biomethane, or biogas, through a process known as anaerobic digestion. Biogas, about 60% methane by volume, is a well-recognized renewable energy resource. Biogas may be combusted to serve on-site thermal energy needs, used as a fuel for combined heat and power systems (cogeneration), or conditioned further and compressed for vehicle fuel or injected into existing natural gas pipelines as renewable natural gas (RNG).

Oregon's water resource recovery facilities treat wastewater to standards that are protective of human health and the environment. Treating wastewater is an energy intensive process, often the most significant use of energy for a municipality. The sophistication and scale of the treatment facilities range from simple aerobic treatment ponds to technologically advanced anaerobic treatment systems with nutrient recovery.

These publicly managed and funded water resource recovery facilities are ideal locations for investments in energy efficiency and renewable energy generation (primarily biopower, solar and solar + storage). Key advantages are their public ownership and permanency, along with their highly skilled staff and typically stable or growing base of ratepayers. In addition, they provide an essential public service, have access to low-cost capital, and have significant on-site heat and electricity demands. Project development assistance for municipal biopower projects is typically used for feasibility studies, regional organic material feedstock studies, pre-design and design studies. Additionally, Energy Trust uses operations, maintenance and technical information gleaned from operating municipal biopower projects to inform future projects.

In 2020, an 1,176-kW cogeneration project reached commercial operation at the City of Salem's Willow Lake Water Pollution Control Facility. In addition, a new 600-kilowatt cogeneration project was under construction at the Tri-City Wastewater Treatment Plant, which is operated by Water Environment Services. Each of these projects leveraged critical early-stage project development assistance from Energy Trust. These cogeneration projects, with operating lives of 30 to 40 years, are also designed to use the renewable thermal energy produced by the cogeneration engine as process heat, yielding significant energy efficiency benefits.

Energy Trust deploys project development assistance to help municipalities learn about the opportunities for adding or expanding generation and to advance efficiently through pre-construction development processes.

E. Focus area: Irrigation hydropower

Irrigation modernization projects supported: 15
Milestones met:

- Feasibility studies
- Compilation and evaluation of information on existing water use and infrastructure
- Evaluation of stakeholder needs
- Evaluation of water and energy conservation potential
- Evaluation of environmental benefits and water quality impacts
- Evaluation of hydroelectric potential
- Evaluation of economic impacts
- Development of system optimization plans

Energy Trust supports several types of irrigation hydropower projects, which are categorized by customer type and process used. Staff see technically and financially viable hydropower opportunities among irrigation districts, other agricultural water suppliers such as ditch companies, and farms where irrigation water is delivered to an individual user. Energy Trust's irrigation modernization work provides a comprehensive structure for irrigation districts and other agricultural water suppliers to assess hydropower potential and identify additional water delivery system improvements and benefits.

Much of Oregon's agricultural water is delivered to farms by irrigation districts or other water providers using aging, open canal systems. The conveyances were typically constructed more than 100 years ago, which lose significant quantities of water to seepage and evaporation. These municipal systems are ripe for modernization, which would derive lasting energy and water conservation benefits, and create additional opportunities for agricultural security, rural prosperity, drought resiliency and environmental improvements.

Hydropower projects using irrigation water have been a focus for Energy Trust since 2010. Despite challenging renewable energy market conditions, these types of projects remain viable due to the wide range of non-energy benefits that modernized irrigation systems can provide, substantial grants from state and federal agencies to offset the cost of piping and the concerted efforts by irrigation district managers and agricultural producers.

Modernizing an irrigation district is complex. A significant modernization milestone is the replacement of open canals with pipes, which saves water by eliminating seepage and evaporation. Irrigation canals use gravity to keep water flowing. Once the open system of canals and laterals are piped, the water in the pipe is pressurized by gravity, allowing irrigators to remove the pumps they formerly needed to lift and convey water to crops, thereby reducing energy use and maintenance costs. Pressurized water may also enable additional upgrades to more water-efficient on-farm irrigation systems (e.g., high-efficiency center pivot irrigators). Surplus water pressure can be used to generate hydropower, with revenues from the sale of renewable electricity helping to finance project implementation.

The Irrigation Modernization program provides irrigation districts and the farmers they serve a one-stop shop to navigate complex agricultural priorities, regulatory requirements, funding needs and environmental concerns. Within each district, the irrigation modernization initiative identifies short- and long-term irrigation goals, assesses opportunities and risks, identifies potential stakeholder partnerships, evaluates and communicates the associated energy, economic, ecological and social benefits of modernization, secures project financing and facilitates project implementation.

This nationally recognized effort reduces the cost and time required for project planning and implementation, addresses key regulatory and institutional barriers, leverages federal, state and private funding, and reduces costs for agency, environmental and agricultural program deployment. This initiative builds awareness that modern agricultural water management can help mitigate the impacts of long-term drought on agricultural production and regional watersheds and ecosystems. Irrigation modernization is replicable and scalable, designed to achieve significant energy, agricultural and ecosystem benefits in Oregon and other western states.

In 2020, irrigation modernization assessments were underway at 25 Oregon irrigation districts. These assessments identify the renewable energy, energy efficiency, agricultural, water conservation, environmental and economic benefits associated with modernization. They also characterize various potential project implementation approaches. Each irrigation district will choose the implementation approach that is right for their patrons and unique situation. After a district's board selects a preferred approach, then design, permitting and financing will begin, followed by contracting and construction.

Since 2015, the Irrigation Modernization program has been delivered by Farmers Conservation Alliance, a nonprofit that develops natural resource conservation solutions for rural communities. Farmers Conservation Alliance has worked with individual farmers, irrigation districts, agencies, tribes, nonprofits and foundations to form collaborative relationships that support modern irrigation systems. To date, more than 32 megawatts of hydropower potential has been identified across the 15 irrigation districts where energy generation studies have been completed. The potential is spread across many sites, with site-specific capacities ranging from less than 10 kilowatts to more than 10 megawatts. The potential is not evenly distributed geographically, nor do all districts have the internal capacity or risk tolerance to move projects forward on their own. In addition, not all projects can be initiated immediately; some projects require dozens of miles of large diameter pipe to be installed to create the pressure necessary for hydropower and work may be completed in phases over several years. In addition, early results indicate that modernization has the potential to yield significant energy and non-energy benefits.

F. Project development assistance outside of focus areas

Projects supported: 12
Milestones met:

- Feasibility studies
- Interconnection studies
- County energy planning support

Energy Trust supported 12 projects outside the two focus areas in 2020. These projects represent a wide variety of distributed renewable energy generation opportunities, including municipal water supply hydropower, agriculture water supply hydropower, existing dam hydropower, and municipal woody biomass combined heat and power. While all are viable, they fall outside the irrigation modernization hydropower and biogas focus areas. Permitting for these projects is often challenging and upfront development costs can be high. Energy Trust remains open to these opportunities and provides staff support but does not engage in targeted outreach to these types of projects.

APPENDIX 6: NW Natural industrial demand-side management activities

Since 2009, Energy Trust has provided service to NW Natural's Schedule 31 and 32 non-transport customers, funded through a special rate adjustment mechanism rather than through the public purpose charge. Program costs and therm savings for these customers in 2020 are included in the body of this annual report as a portion of NW Natural savings and reported separately below.

		Annual savings therms	Annual actual expenditures	Levelized cost per therm
Commericial	Existing Buildings	534,606	$1,966,498	37.9 ¢
	Existing Multifamily	1,942	$4,375	19.3 ¢
	New Buildings	26,898	$81,185	28.3 ¢
	Commercial total	**563,446**	**$2,052,058**	**37.3 ¢**
Industrial	Production Efficiency	2,166,772	$2,000,278	8.5 ¢
	Industrial total	**2,166,772**	**$2,000,278**	**8.5 ¢**
	Total	**2,730,218**	**$4,052,336**	**13.9¢**

APPENDIX 7: Purpose, goals and background

Purpose statement

We help customers and communities reduce costs and realize additional benefits by saving energy and using renewable resources.

Vision statement

Clean, affordable energy for everyone.

Background

Energy Trust is an independent 501c(3) nonprofit organization funded by and serving Oregon customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista, and Washington customers of NW Natural. We offer energy efficiency and renewable energy programs and services to every type of customer, including those who own or rent a home or building, product manufacturers, small and large businesses and industries, nonprofit and public organizations, farmers and ranchers.

Our purpose is to help customers and communities reduce costs and realize additional benefits by saving energy and using renewable resources. Since March 2002, we have been entrusted to invest public purpose funds from utility customers and deliver benefits from energy-efficiency improvements and renewable energy generation. We serve customers in coordination with utilities, community and industry organizations, government agencies and two other electric public purpose fund administrators—Oregon Housing and Community Services and the Oregon Department of Energy. Our work helps ensure a more affordable and sustainable energy future for utility customers and contributes to our local and state economy in positive ways.

We provide information, technical expertise and financial assistance to help people modify their energy usage habits, choose high-efficiency products, invest in energy-efficient construction and install renewable energy projects. Our programs and approaches, range of offers tailored to customers, and collaboration with public agencies and community organizations enable us to provide relevant clean energy solutions as technologies and customer needs evolve. With our assistance, participating customers derive a range of benefits—lower energy bills, greater comfort, better indoor air quality, improved productivity and lower carbon emissions.

We believe it is our responsibility to ensure all customers can directly benefit from our services, including people with low and moderate incomes, communities of color and rural communities. In 2019, we developed our first Diversity, Equity and Inclusion Operations Plan to better understand where gaps exist so that we can improve and enhance offerings for underserved customers. That plan ended in 2020 and the organization has started developing annual operations plans to guide this work.

As a steward of utility customer dollars, we consistently maintain low administrative and program support costs to ensure the majority of public purpose funds flow back to customers in the form of incentives, services and education. We competitively bid our program management and delivery contracts, ensuring the best prices for the services provided. For most programs, Energy Trust leverages specialized local trade and program ally businesses—many of which employ 20 or fewer staff—that already serve customers in the marketplace. We support and leverage a statewide network of trade ally contractors, allied professionals and participating retailers that are familiar with Energy Trust incentives. By connecting customers directly to this network, Energy Trust helps keep costs low, supports our region’s energy services sector and sustains opportunities in the areas we serve.

We are led by an independent board of directors whose members volunteer their time and expertise. Our work is also shaped by advice from three advisory councils comprised of stakeholders and volunteers. We strive to be

inclusive and transparent by holding open meetings and publishing online meeting agendas, notes, independent third-party program evaluations, draft and final budgets and action plans, reports and annual audited financial statements.

We comply with legal requirements and minimum performance measures set forth in our contract with the Oregon Public Utility Commission. Annual goals for electric and natural gas energy savings are developed in consultation with PGE, Pacific Power, NW Natural, Cascade Natural Gas and Avista and built from each utility's Integrated Resource Plan. This collaboration enables Energy Trust to focus on and be accountable for delivering the lowest-cost energy available to meet the needs of every utility customer. In addition, annual renewable energy generation goals are developed using market knowledge obtained through renewable resource assessments.

APPENDIX 8: Board of directors; board development guidelines; advisory councils, members and meetings

A. Board of directors

PRESIDENT—Melissa Cribbins, Coos Bay, is a Coos County Commissioner and attorney. Prior to her election in 2012, she worked for the Coquille Indian Tribe as in-house counsel for six years. Before Melissa became an attorney, she worked for the City of Spokane and Eugene Water and Electric Board in the field of water quality. She is a member of the Oregon State Bar, the Washington State Bar and is active in many organizations in Coos County and statewide. She is a graduate of Portland State University and Gonzaga University. *Melissa has served as president since February 2020.*

VICE PRESIDENT—Henry Lorenzen, Pendleton, has a resume that spans working as a partner at Corey, Byler, Rew, Lorenzen and Hojem law firm to running his family's 4,000-acre wheat farm. From 2002 to 2018, he served on the Northwest Power and Conservation Council, which develops a regional power plan and fish and wildlife program. He also served on the Oregon State Board of Higher Education, Oregon Fish and Wildlife Commission, Oregon Environmental Quality Commission, and on the boards of Oregon Public Broadcasting and the Oregon Historical Society. Henry's education includes a law degree from Lewis & Clark Law School, a master's in business administration from Harvard University and a bachelor's in electrical engineering from Oregon State University. He is certified professional electrical engineer. *Henry has served as vice president since February 2020.*

SECRETARY—Mark Kendall, Salem, has more than 35 years of experience in energy management and renewable resource development in Oregon. Prior to founding his own consultancy, Kendall Energy, in 2009, he spent 19 years with the Oregon Department of Energy working in commercial and industrial energy management policy, including serving as the governor's appointee to the Northwest Energy Efficiency Alliance board from 2001 to 2006. Before working for the state, he spent 11 years with the Eugene Water and Electric Board. He also served on the Oregon Low Carbon Fuel Standard Advisory Committee and facilitated the 2009 Industrial Greenhouse Gas Reduction subcommittee of the Oregon Global Warming Commission. He received his bachelor's degree from Linfield College with an emphasis in communications and energy management and his master's degree in organizational development from the Leadership Institute of Seattle City University. *Mark has served as secretary since February 2018.*

TREASURER—Susan Brodahl, Portland, is a vice president in the Portland office of Heffernan Insurance Brokers as well as an owner of Heffernan Group. Heffernan Group has more than 400 employees and is ranked in the top tier of all privately held brokerages in the country. Susan believes in a creative approach to insurance using a risk funding model. Susan is a frequent featured speaker at regional and national conventions and has been published in various trade and mainstream journals. She has been awarded the Lifetime Achievement Award from the Painting and Decorating Contractors of America and has an economics degree from Willamette University. *Susan has served as treasurer since February 2018.*

Alan Meyer, Salem, is a retired director of energy management for Weyerhaeuser Company, a diversified forest products manufacturing company. In that role, he was responsible for coordinating energy management activities at numerous manufacturing facilities throughout North America. Prior to joining Weyerhaeuser, he was director of energy for Willamette Industries, holding similar responsibilities. He also worked for PacifiCorp as the Oregon large industrial accounts manager. He previously served on the board of directors of Industrial Customers of Northwest Utilities, a nonprofit advocacy organization focused on energy policies. He has also served for more than 20 years on the City of Salem Morningside Neighborhood Association board. *Alan joined the board in September 2005.*

Alexia Kelly, Hood River, works at the intersection of policy and finance to accelerate the transition to a zero-carbon economy with governments, nonprofits and corporations. She is founder and CEO of Electric Capital Management, a clean energy and climate policy advisory firm. Alexia previously served as a senior climate

change adviser and foreign service officer with the U.S. Department of State, where she led an initiative on low emissions development across more than 25 countries, 10 federal agencies and more than $800 million in climate change mitigation funding. She also served as the lead U.S. negotiator on emissions trading to the United Nations Framework Convention on Climate Change and represented the U.S. to multiple World Bank funds. She is an appointee to the Hood River County Energy Council. *Alexia joined the board in February 2020.*

Anne Haworth Root, Medford, is co-owner and general manager of EdenVale Winery and Eden Valley Orchards, a destination winery, historic pear orchard and events center in southeast Medford. A second tasting room, Enoteca, is located in Ashland. An award-winning entrepreneur, Anne developed the concept and helped found the 57 Oregon Wine and Farm Tour, an agritourism coalition of Southern Oregon wineries, historic farms and specialty food and cheese companies. She is a graduate of Southern Oregon University, where she was student body president and chair of the Oregon Student Lobby. She pursued postgraduate studies in the Master of Commerce program at Wollongong University in Australia. *Anne joined the board in December 2011.*

Elee Jenn, Newberg, is principal marketing and business development manager at Energy Performance Engineering LLC in Newberg. She helps building owners construct and maintain high-performance energy efficient facilities through system commissioning and building control services. Many of Energy Performance Engineering's clients are schools, colleges and governments, including Portland Community College in Newberg. An accredited Leadership in Energy and Environmental Design professional, Elee holds a master's in analytical chemistry and a bachelor's in chemistry. *Elee joined the board in October 2018.*

Eric Hayes, Beaverton, is the state organizing coordinator for the International Brotherhood of Electrical Workers. He engages and organizes electrical workers to achieve better wages, pension, insurance and training. With 23 years at IBEW, Eric's multiple roles included recording secretary, vice president and president of Local 48. During this time, Eric served as a trustee of the Edison Pension Trust, Harrison Health Trust and the Apprenticeship Trust. He was also president of the Electrical Minority Workers Caucus Portland Chapter, which promotes minorities and women in IBEW. *Eric joined the board in October 2018.*

Erik Andersson, Salem, brings to the board an understanding of how renewable energy and energy efficiency efforts can be leveraged into a community's economic development strategy, particularly in rural areas. He is president of SEDCOR, or Strategic Economic Development Corporation, an economic development nonprofit with more than 450 members in Oregon's Mid-Willamette Valley. He previously served as economic development manager for Tacoma Public Utilities in Tacoma, Washington, where he developed the utility's first economic development strategic plan, and as economic development manager for Pacific Power. Erik served under former Gov. Ted Kulongoski as regional coordinator for economic revitalization in the Willamette Valley and central part of the Oregon Coast. He has a bachelor's degree in agricultural economics from Cornell University and a master's in business administration from McGill University. *Erik joined the board in February 2020.*

Ernesto Fonseca, Portland, is the chief executive officer of Hacienda, an Oregon community development corporation and social enterprise that advances the livability, health and economic progress of underserved communities in the Pacific Northwest. He has dedicated his career to the development of high quality, affordable housing and social services in Mexico and the United States. Ernesto brings experience in community development, housing and energy access from his time working with the Housing Authority of Maricopa County and the City of Avondale, and Arizona State University. He holds a master's degree in energy performance and climate responsive architecture and a doctorate in environmental design and planning from Arizona State University. *Ernesto joined the board in May 2018.*

Lindsey Hardy, Bend, is the program director of the Bend Energy Challenge, a program of The Environmental Center. Before that, she was the outreach director at Sunlight Solar Energy. She sat on the steering committee of the High Desert branch of the Cascadia Green Building Council for three years and planned Central Oregon's Green and Solar Tour. As an AmeriCorps volunteer with the University of Oregon's Resource Assistance for Rural Environments, she oversaw the Solarize Pendleton campaign, helping neighborhoods benefit from efficiency of scale in residential solar installations. She has a bachelor's in environmental studies from Ithaca College. *Lindsey joined the board in May 2015.*

Roland Risser, Washington County, has extensive knowledge of residential, commercial and industrial energy efficiency program design, development and implementation, including low-income energy efficiency programs.

He retired from the U.S. Department of Energy, where he was director of the Building Technologies Office and then deputy assistant secretary of Renewable Power. His decades of energy experience include multiple leadership positions at Pacific Gas and Electric and serving on national boards for the American Council for an Energy-Efficient Economy and the Consortium for Energy Efficiency. Roland earned a master's in biology from California Polytechnic State University, a bachelor's in biology from the University of California at Irvine and graduated from the Haas School of Business at University of California at Berkeley. *Roland joined the board in October 2018.*

Debbie Kitchin, Portland, is the co-owner of InterWorks LLC, a construction company engaged in commercial tenant improvement and renovation and residential remodeling services. InterWorks is an award-winning contractor specializing in sustainable building practices. Prior to joining the family business in 1996, she served as senior economist for the Northwest Power and Conservation Council for 15 years and was a regional economist for the Bonneville Power Administration for three years. Debbie is vice chair for government relations of the Portland Business Alliance and is a board member for Greater Portland Inc. She is past president of the Central Eastside Industrial Council, a past board member of the Portland Building Owners and Managers Association and a past president of the Portland Commercial Real Estate Women. *Debbie left the board in February 2020.*

Roger Hamilton, Eugene, is a former consultant with Western Grid Group, an organization that promotes transmission access for renewable energy projects across the West. He also consults with The Resource Innovation Group on climate change adaptation and mitigation. He has spent many years in public service as a Klamath County commissioner, an adviser on energy and watersheds to former Gov. John Kitzhaber and an Oregon Public Utility Commissioner. He has also served on the Oregon State Parks Commission, the National Association of Public Utility Commissioners and the board of directors of the Regulatory Assistance Project. *Roger left the board in February 2020.*

Ex-officio: Oregon Public Utility Commission

Letha Tawney, Portland, is one of three Oregon Public Utility Commissioners and was appointed by Gov. Kate Brown in June 2018. Prior to this, Letha worked for the World Resources Institute as an expert on clean energy development and large customer buying strategies. As the Polsky Chair for Renewable Energy, she led the Institute's work on propelling innovation in business and regulatory models in the power sector. Now Letha represents Oregon on the Electricity and the Critical Infrastructure committees for the National Association of Regulatory Utility Commissioners. She also serves on the Energy Imbalance Market Board of State Regulators, engaging closely on Western electricity market development. Letha has a master's degree in public administration from the Harvard Kennedy School and a bachelor's in business and computer science from George Fox University. *Letha joined the board as ex-officio in October 2019.*

Special board adviser: Oregon Department of Energy

Janine Benner, Salem, is the director of the Oregon Department of Energy. She joined ODOE in 2017 as assistant director for planning and innovation and was later made director in February 2018. She provides leadership and policy direction to help the state shape an equitable clean energy transition, protect the environment and public health, and responsibly balance energy needs and impacts for current and future generations. Janine came to ODOE from the U.S. Department of Energy where she served as associate assistant secretary in the Office of Energy Efficiency and Renewable Energy, the largest government funder of clean energy research and development. Before that, she served as deputy assistant secretary in the department's Office of Congressional and Intergovernmental Affairs. Janine also spent 12 years working for Rep. Earl Blumenauer, first as an energy and environmental policy adviser and then as deputy chief of staff. She grew up in Portland and has a degree in history from Princeton University. *Janine joined the board as special board adviser in April 2017.*

B. Board development guidelines

Energy Trust's board of directors is a non-stakeholder, volunteer board. It oversees Energy Trust management, provides strategic and policy direction and approves the organization's budget and major expenditures. The board

carries out its oversight role collectively and through several committees. The board's bylaws ensure Energy Trust board meetings and other processes are clear, open and accessible to the public.

The Oregon Public Utility Commission grant agreement with Energy Trust calls for the Energy Trust board to include the skills, broad representation and diversity necessary to achieve the nonprofit's purpose and vision. As board openings arise, the board consults community-based organizations, advisory councils, individuals and collaborating organizations to identify candidates with appropriate experience and knowledge of underserved customers.

The 2020 board included 13 voting members with background in business, private consulting, government, utilities, trades, nonprofits and higher education. Members are from Bend, Coos Bay, Eugene, Hood River, Medford, Newberg, Pendleton, Salem and the Portland metropolitan area. The board's OPUC ex-officio member is Commissioner Letha Tawney. Janine Benner, director of the Oregon Department of Energy, has been a special board adviser since April 2017. The ex-officio and special board adviser are not voting members.

All voting board members complete and sign disclosure of economic interest forms each year. The OPUC ex-officio board member and the special adviser from the Oregon Department of Energy do not receive confidential information. Once a year, board and staff members participate in a planning session to review progress and discuss Energy Trust's strategic direction. Board members are supported to undertake ongoing development activities. In addition, board governance and fiduciary responsibility training is provided to new board members in orientation and to all board members in conjunction with the board's annual meetings.

C. Advisory councils, members and meetings

The following lists of advisory council members reflect every member who served during all or part of 2020. In addition to the council meetings detailed below, Energy Trust held a 2021 Draft Budget Workshop in October for the three councils, the board and the public.

Conservation Advisory Council

Alyn Spector, Cascade Natural Gas
Anna Kim, Oregon Public Utility Commission
Charlie Grist, Northwest Power and Conservation Council
Dave Moody, Bonneville Power Administration
Holly Braun, NW Natural
Jason Klotz, Portland General Electric
Jeff Bissonnette, NW Energy Coalition
Julia Harper, NEEA
Kari Greer, Pacific Power
Keith Kueny, Community Action Partnership of Oregon
Kerry Meade, Northwest Energy Efficiency Council
Lisa McGarity, Avista
Rick Hodges, NW Natural
Tim Hendricks, Building Owners and Managers Association
Tina Jayaweera, NW Power and Conversation Council
Tyler Pepple, Alliance of Western Energy Consumers
Warren Cook, Oregon Department of Energy
Wendy Gerlitz, NW Energy Coalition

2020 meeting dates	Major discussion topics
February 19	Diversity Advisory Council members; preliminary 2019 results; Existing Buildings and business lighting request for proposals; ductless heat pump incentives; 2020 legislative session; council operations and 2020 planning
April 22	COVID-19 impacts on members' organizations; Energy Trust's COVID-19 response

June 17	Black Lives Matter and racial justice; draft 2021 goals; progress toward 2020 diversity, equity and inclusion participation goals; rural workshop planning; COVID-19 response; Trade Ally Network survey results; commercial sector updates; Residential program changes
July 29	Update on cost-effectiveness exception for ductless heat pumps; efficiency measure changes; next steps for showerheads; New Buildings cost-effectiveness workshops; community engagement guidelines; 2021 budget schedule; support for Portland Clean Energy Community Benefits Fund applicants
September 16	Manufactured Home Replacement Pilot update; updated forecast and measure changes; draft 2021 action plans; Existing Buildings and business lighting contracts; large electric customer funding activity
November 18	Residential incentives for low-income utility customers; 2021 budget update; wildfire response efforts; Industrial sector request for proposals and request for qualifications; residential non-energy benefits research

Diversity Advisory Council

Charity Fain, Community Energy Project
Cheryl L. Roberts, African American Alliance for Homeownership
Dolores Martinez, EUVALCREE
Indika Sugathadasa, PDX HIVE
Kaeti Namba, Native American Youth and Family Center
Kheoshi Owens, Empress Rules
Oswaldo Bernal, OBL Media LLC
Shane Davis, City of Portland
Sherry Tran, small business owner
Susan Badger-Jones, special projects consultant
Veronica Silva, Rogue Climate

2020 meeting dates	Major discussion topics
January 28	Existing Buildings and business lighting request for proposals; OPUC performance measures; board nominations; new Diversity Advisory Council members; future agenda items
February 18	OPUC's relationship to Energy Trust; Diversity, Equity and Inclusion Operations Plan; data enhancement project update; Existing Buildings and business lighting request for proposals
April 14	Survey on future agenda items; review of community-based organizations that Energy Trust works with; board governance review by Synergy Consultants, Inc.; internal diversity, equity and inclusion committee charter
July 28	Data enhancement project update; 2021 Diversity, Equity and Inclusion Operations Plan; revisions to Diversity, Equity and Inclusion Lens
September 15	Tribute to Kaeti Namba; update on future agenda items; board DEI metrics development
November 17	2021 Diversity, Equity and Inclusion Operations Plan; data enhancement project update; Energy Trust's involvement in response to wildfire recovery; Industrial sector request for proposals and request for qualifications

Renewable Energy Advisory Council

Alexia Kelly, Electric Capital Management (prior to becoming a board member)
Andria Jacob, City of Portland

Anna Kim, Oregon Public Utility Commission
April Snell, Oregon Water Resources Congress
Dick Wanderscheid, Bonneville Environmental Foundation
Erik Anderson, Pacific Power
Frank Vignola, Solar Monitoring, University of Oregon
Jaimes Valdez, City of Portland's Portland Clean Energy Community Benefits Fund
Jason Busch, Pacific Ocean Energy Trust
Josh Halley, Portland General Electric
Kendra Hubbard, Solar Energy Industries Association
Les Perkins, Farmers Irrigation District
Max Greene, Renewable Northwest
Michael O'Brien, Renewable Northwest
Oriana Magnera, Verde
Rebecca Smith, Oregon Department of Energy
Suzanne Leta, SunPower

2020 meeting dates	Major discussion topics
February 19	PGE Renewable Development Fund and Pacific Power Blue Sky community grant; update on Oregon Community Solar Program; report on previous years and coming trends; changes to non-residential solar incentives; 2020 legislative session
April 22	COVID-19 response efforts
June 17	Energy Trust 2021 goals; hydropower project in Hillsboro
July 29	Community engagement guidelines; PGE Smart Battery Pilot; solar for service providers proposal
September 16	Impact of wildfires; 2021 budget themes; thank you to departing member Frank Vignola
October 14	Community solar incentives
November 18	Update on equitable solar efforts; budget update; solar solutions for energy resilience; upcoming community solar incentive; residential non-energy benefits research

APPENDIX 9: Impacts on utility peak demand

This appendix provides an annual update on Energy Trust's impacts on utility demand. It describes ongoing and future approaches to work with utilities and other stakeholders to employ distributed energy resources to mitigate peak demand on a systemwide basis for utilities, alleviate local distribution system constraints and lower utility costs for the benefit of ratepayers. This appendix also discusses the impacts energy efficiency and renewable resources have on peak demand and the progress being made on the further development of methods to quantify and value the impact peak demand reductions have on utility transmission, supply and distribution systems.

Specifically, this appendix addresses the following purposes:

- Report Energy Trust annual program impacts on peak demand for electric and natural gas utilities. This includes:
    - Expected winter and summer coincident peak capacity contribution estimates from 2020 energy efficiency and solar generation measures.
- Assess data and tools needed to link utility system management objectives to specific Energy Trust actions. These might include:
    - Actionable information about opportunities to avoid specific system investments.
    - Description of methods, including areas of collaboration with utility partners, for linking the areas where investments are needed in demographic and load data for program targeting.
    - Possible enhancements or updates regarding peak impact valuation and measurement used in cost-effectiveness analyses.
- Identify and report on complementary pilots and initiatives that reduce peak demand and meet corresponding grid optimization objectives, developed in coordination with utilities. This includes:
    - Work with utilities to plan where and how Energy Trust programs and measures reduce demand on critical elements of the power delivery system while optimizing co-benefits through coordinated planning.

A. Report the value of current program impacts on peak demand

Energy Trust helps customers install energy efficiency and renewable generation measures that not only save energy and offset electric and gas loads, but also provide additional benefits to the utility system and to ratepayers. Energy Trust will continue to improve its understanding of how energy efficiency savings and renewable generation provide these additional benefits to utilities in context with utility integrated resource planning and the evolving policy landscape. Energy Trust is incorporating this evolving knowledge into avoided cost benefit calculations to estimate the value of impacts of energy efficiency activities on utilities' peak demand.

Peak demand reduction estimates from energy efficiency

For 2020, Energy Trust estimated peak demand reductions from electric and gas energy-efficiency projects by calculating the percent of annual energy savings that occur during the system's peak time periods identified by utilities, and documented and approved by the Oregon Public Utility Commission (OPUC) for use in the calculation of Energy Trust avoided costs via OPUC docket UM 1893.[34] To estimate the portion of electric energy savings in those periods, Energy Trust relied on load profiles taken from the Northwest Power and Conservation Council's Seventh Power Plan.[35] For natural gas, Energy Trust calculated both peak-day demand reductions and peak-hour demand reductions by relying on peak factors from two sources: peak-day factors were based on electric analogs taken from the Northwest Power and Conservation Council's Seventh Power Plan for several end-uses, and peak day factors for space heat end-use savings were developed by NW Natural. Energy Trust

[34] The most recent information on capacity values and calculations used in UM 1893 is available online: https://edocs.puc.state.or.us/efdocs/HAU/um1893hau151422.pdf

[35] https://nwcouncil.app.box.com/s/ph0by9u53vygowx42rms5oytojhdmg5x

relied on peak-hour factors developed by NW Natural for all end-uses.[36] These factors are used to calculate gas peak reductions by end-use at the measure level.

Energy Trust's and NEEA's efficiency programs resulted in the following peak demand reduction estimates for 2020.

Table 1. 2020 electric system efficiency peak demand reduction estimates (MW) at generator

Utility	Summer MW	Winter MW	Total aMW Saved
PGE	33.8	37.8	25.6
Pacific Power	21.9	27.8	17.5
Total	**55.7**	**65.6**	**43.1**

For gas measures, Energy Trust calculated peak-day and peak-hour natural gas savings, presented in the table below.

Table 2. 2020 Net natural gas system efficiency peak demand reduction estimates (therms)

Utility	Peak-day therms	Peak-hour therms	Total therms Saved
Northwest Natural	64,681	4,276	6,357,068
Cascade Natural Gas	5,238	369	426,714
Avista	5,409	380	414,395
Total	**75,328**	**5,025**	**7,198,177**

Peak demand reduction estimates from solar electric generation

Energy Trust estimated 2020 average peak demand contributions from residential and non-residential solar electric projects. Energy Trust estimated average generation from installed solar projects for multiple locations throughout Energy Trust territory during peak hours by using monthly generation profiles for representative project types based on variation caused by shading, tilt, orientation and geographic location. Actual historic or real time peak contributions for each project varies based on time of day and weather. Table 3 shows the average solar generation over the peak period identified by each utility for each season. The figures below show the average daily solar generation profile shape by season and utility.

Table 3. 2020 solar electric generation peak demand reduction estimates (MW)

Utility	Summer MW	Winter MW	Total Generation (MWh)
PGE	3.49	1.19	14,318
Pacific Power	2.17	0.71	13,406
Total	**5.66**	**1.90**	**27,724**

[36] Northwest Natural peak factors can be found in Chapter 4 of Northwest Natural's 2018 IRP on pages 4.7 and 4.8. Available online https://www.nwnatural.com/uploadedFiles/NW%20Natural%202018%20IRP.pdf

Figure 1: Average Hourly summer solar generation profile from all 2020 solar installations in Portland General Electric territory

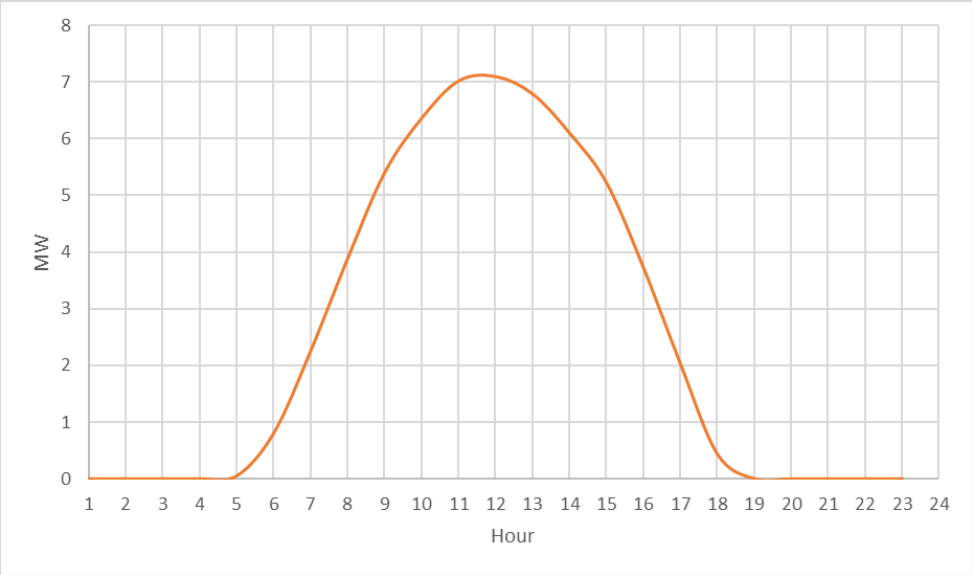


Figure 2: Average Hourly winter solar generation profile from all 2020 solar installations in Portland General Electric territory

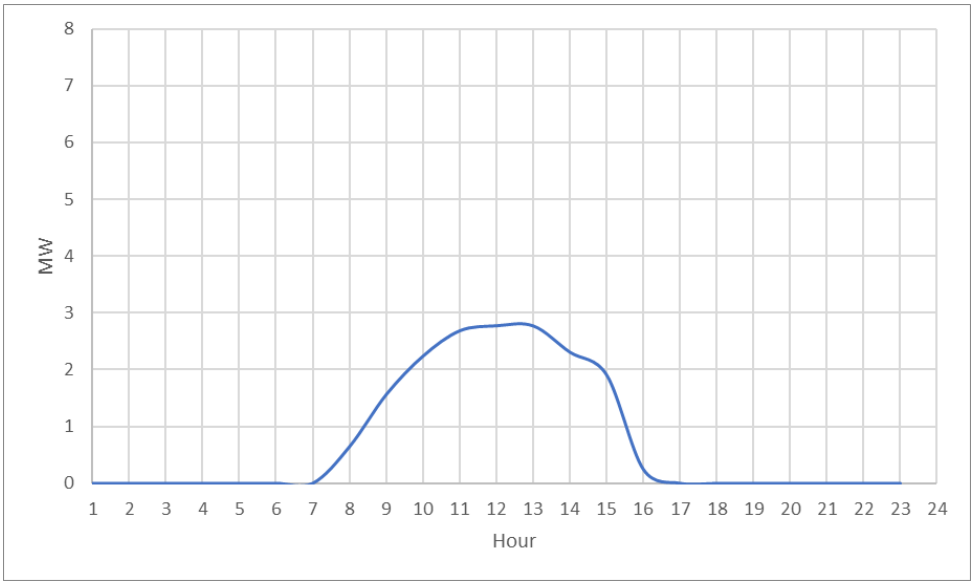


Figure 3: Average Hourly summer solar generation profile from all 2020 solar installations in Pacific Power territory

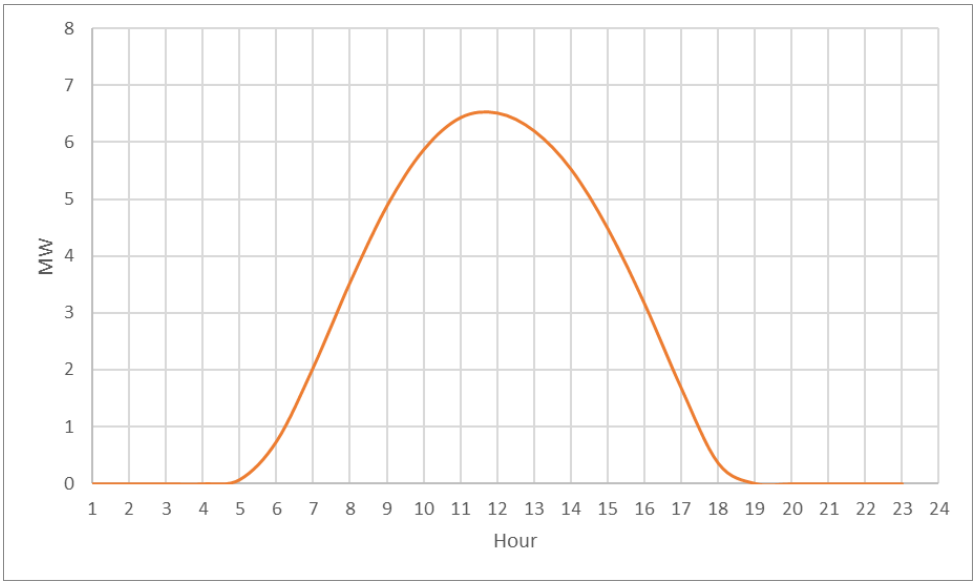
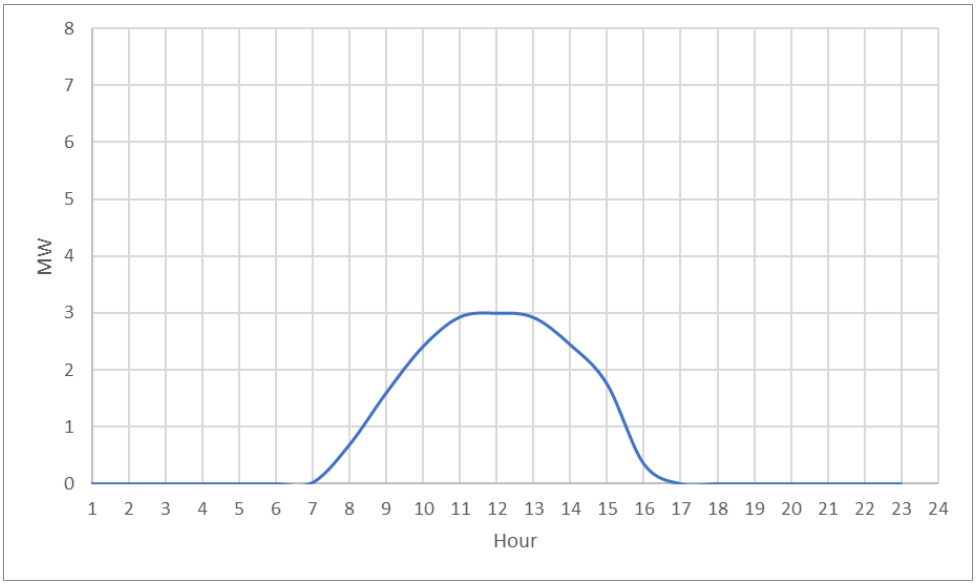


Figure 4: Average Hourly winter solar generation profile from all 2020 solar installations in Pacific Power territory



The above 2020 tables and figures exclude demand reduction estimates from renewable energy generation projects other than solar electric projects. Energy Trust has not incorporated these impacts into reporting because there are a relatively small number of projects with high degrees of production variability. More work is required to estimate the demand contributions of these projects and Energy Trust will consider doing so in future reporting.

B. Assess data and tools needed to link utility grid objectives to specific Energy Trust actions

Energy Trust began to work with Kevala Analytics as part of a U.S. Department of Energy grant to share past renewable energy and energy efficiency project information to facilitate planning for the interconnection and integration of distributed energy resources such as energy efficiency, solar and solar plus storage. In 2020,

Energy Trust continued that work under a contract in order to explore the ability of the tool to provide transparency into localized grid constraints, areas of increased interconnection cost and the impacts on the distribution grid of delivering distributed energy resources. In early 2021, Energy Trust will coordinate with stakeholders and share results with the OPUC, PGE and Pacific Power.

Beginning in September of 2018, Energy Trust and Portland General Electric (PGE) partnered to deliver direct installation (DI) of smart thermostats in PGE's territory. Customers receiving DI smart thermostats are required to be automatically enrolled in PGE's Smart Thermostat Demand Response (DR) program. In 2020, the direct install offering led approximately 3,000 smart thermostats being installed in homes in PGE's territory.

The Northwest Energy Efficiency Alliance (NEEA) and regional stakeholders continued the End-Use Load Research (EULR) project in 2020 to help gather meter data for load profile development. While COVID-19 slowed the pace of metering installs during 2020, the project is still ongoing and initial data has been made available for review and analysis. The Northwest has not conducted large-scale studies on how different types of residential and commercial customers use electricity on a daily basis for almost 30 years – the Home Energy Metering Study (HEMS) and the Commercial Energy Metering Study (CEMS), aim to address deficiencies for a number of end-use profiles. The EULR Study is a key component of Energy Trust's strategy to update end use and whole home load shape estimations. This study design was informed by a collaborative planning effort conducted by NEEA's Partners, including Energy Trust. The main objective of this study is to develop a robust characterization of energy consumption of key heating and cooling measures to support planning and implementation to pursue clean energy goals and support utility information needs. Key benefits include:

- An updated framework to assess the contributions energy efficiency technologies make to reducing utility peak demand.
- A better understanding of how to integrate renewable energy into the grid, increasing reliability as the deployment of distributed generation and new end use technologies increases over time; and
- Prioritized data by end use for application in a range of utility functions including demand response, load forecasting and resource planning.

C. Report on and Energy Trust activities that help meet grid objectives in coordination with utilities

Energy-efficiency programs have the potential to help electric and natural gas utilities address demand-related challenges. Energy Trust can provide further benefit to utility systems by increasing the saturation of energy-efficient, demand response-capable equipment (such as internet connected thermostats and heat pump water heaters with built in Wi-Fi), providing additional options for utilities when considering potential demand response programs. Utility demand response programs can use this equipment as a resource in reacting to peak demand events.

Through targeted load management pilot designs, Energy Trust is collaborating with utility partners to offer additional incentives for measures and services that contribute to coincident peak demand reduction. Additionally, Energy Trust's well-established program marketing and outreach efforts, sales channels, contractor connections and customer relationships may prove valuable to utilities in marketing combined efficiency and demand management equipment and service packages. In 2020, the OPUC issued guidelines to investor-owned electric utilities to develop distribution system plans for their grid systems. Going forward, Energy Trust expects to work collaboratively with utilities to provide data in support of plans. Pending utility identified grid needs, Energy Trust also expects to provide additional efficiency and renewable investments for localized areas to support utility distribution system needs.

Energy Trust is working on the following grid optimization related efforts.

Coordination with Portland General Electric

Energy Trust acts as a representative on PGE's advisory committee for its Smart Grid Test Bed - Demand Response pilot. In this role, Energy Trust provides advice on the design of the test bed and feedback on the phase II pilot proposal PGE will submit to the OPUC. In addition to our coordination on the Smart Grid Test Bed, Energy Trust is working with PGE to support the test bed through the development of coordinated marketing arrangements and joint measures.

Residential Smart Battery Pilot

In 2020, PGE launched a Smart Battery Pilot designed to provide incentives for 525 residential battery energy storage systems located "behind the meter" in customers' homes. The individual customer owned-systems will be combined to create a virtual power plant that can be used to provide valuable grid services. The five-year pilot will allow PGE to study how to optimize the use of these batteries to benefit the grid, while ensuring that customers also receive the benefits they want from owning the battery. Energy Trust has contracted with PGE to provide implementation support for the PGE pilot and help connect customers and Solar trade ally contractors interested in participating in this program. As part of this pilot, Energy Trust is providing subject matter expertise, support for customer outreach, trade ally education, quality management, application review and upfront incentive processing.

Grid Harmonization New Home Construction

In 2020, Energy Trust finalized research and prospective plans to integrate distributed energy resources into residential new construction programs to deliver benefits to the grid. This work revealed that in the future, distributed energy resources (DERs) will deliver significant value for residential customers and utilities beyond just energy efficiency and solar generation. The research suggested that program and installation costs of DERs could be reduced if DERs were considered and adopted during the construction of a home as opposed to being retrofitted into the home at a future date. Measures identified during this research as being valuable included grid interactive water heaters, smart thermostats, solar + smart inverters or solar + battery storage, electric vehicle chargers, and others. In 2020 Energy Trust rolled out the Energy Smart Home package providing an additional incentive for new homes that incorporated specific 'energy smart' measures. In 2021, Energy Trust plans to work with stakeholders to continue integrating existing and new emerging DER technologies into the ESP initiative design.

Targeted load management pilots with utilities

In 2019, Energy Trust collaborated with Pacific Power to launch a second targeted load management pilot in the Phoenix area. This pilot builds off the learnings of the previous collaborations with Pacific Power in North Santiam Canyon by increasing the flexibility of Energy Trust's energy efficiency and solar program offerings and delivery strategies and testing the efficacy of additional tactics to achieve demand reduction objectives. One example is integrating and promoting pilot measures that have the potential to achieve greater peak savings and provide increased incentives up to the maximum incentive allowed under current avoided costs to achieve pilot goals. The implementation phase of the pilot began June 1, 2019 and concluded in December 2020. The targeted area completed 694 projects, compared with 358 projects within the baseline period, representing a 193% increase in participation for the targeted area. In addition, all the projects implemented saved 1,510,547 kWh representing 297 kW of summer peak demand reduction.

In 2020, Energy Trust and NW Natural continued development of a three-phased pilot project to determine a value per peak therm that NW Natural can use to vet energy efficiency against other supply side resources to address future location specific constraints. NW Natural filed the pilot proposal with the OPUC as an amendment to their 2018 Integrated Resource Plan (IRP) in the spring of 2019. The proposal includes pilot design, a research hypothesis, key research questions and the overall objectives of the pilot. Phase 1 of the pilot completed in August 2020 and focused primarily on increased marketing and outreach in the targeted area. The project is currently in Phase 2, promoting increased marketing and providing increased incentives up to our current cost-

effectiveness caps. The team plans to launch the third phase of the pilot in the Cottage Grove and Creswell area on Aug. 1, 2021. Phase 3 (August 2021 to July 2022) is pending OPUC approval and aims to examine the application of a localized avoided cost value for the project area.

APPENDIX 10: Higher-value solar applications

In 2020, in addition to standard program offerings, the Solar program focused on activities to improve equitable access to solar for lower-income customers and to support innovative applications of solar that provide greater value to communities or the grid. This appendix provides information and context on higher-value applications of solar, market barriers and trends.

A. Advanced solar systems

Solar systems paired with "smart" inverters or battery storage can provide greater benefits to customers and the grid compared with conventional solar. Energy Trust defines advanced solar systems as those that integrate photovoltaics with advanced inverters, advanced battery energy storage systems and/or complimentary flexible loads. Energy Trust's market research shows upfront costs are a barrier to installation of solar systems paired with battery storage, or solar + storage. The research also showed that energy resilience—the ability to power essential loads during an outage, the primary customer benefit of solar + storage—is not well understood by customers.

In 2020, Energy Trust sought to address market barriers and further support market drivers for increasing adoption of solar + storage by:

- Providing technical and sales training to solar trade ally contractors about solar + storage system capabilities, design and installation so they can more effectively communicate the value to customers.
- Providing educational workshops for customers on the current technology and any tax credits, state rebates or other incentives available to lower their upfront costs.
- Raising customer awareness broadly of solar + storage technology and connect customers with solar trade ally contractors who can provide custom quotes.

Advanced "smart" inverter adoption

The Solar program collects inverter manufacturer and model data for each system installed and has identified "smart" models capable of advanced functions that can be remotely enabled and programmed via an internet connection to utilize those capabilities. Table 1 summarizes adoption of these inverter models compared with full program volume. Other models may also have latent advanced functions, so this is likely a conservative estimate.

Table 1. Energy Trust solar installations with advanced "smart" inverters

Year installed	Installation with advanced inverters[37]	Total solar installations	% of total
2008	0	253	0%
2009	14	475	3%
2010	81	1,198	7%
2011	181	1,329	14%
2012	348	1,242	28%
2013	173	881	20%
2014	247	1,291	19%
2015	448	1,801	25%
2016	508	1,749	29%

[37] Table 1 counts only installations that have advanced inverters that are capable of being remotely updated and programmed to provide grid services. Other installations may have inverters that can be updated manually.

Year installed	Installation with advanced inverters[37]	Total solar installations	% of total
2017	758	1,795	42%
2018	1,129	1,785	63%
2019	1,130	1,357	83%
2020	1,507	1,825	83%
Total	**6,524**	**16,981**	**38%**

Solar with advanced battery storage adoption

The Solar program has seen growing customer interest for pairing battery storage with a solar system.[38] Table 2 summarizes solar + storage installations in the program through 2020. Since 2016, an increasing number of solar + storage applications have specified equipment that could be categorized as advanced battery energy storage systems capable of providing additional benefits to the customer and the utility grid beyond backup power during an outage. Between 2016 and the end of 2020, there have been 172 solar + storage projects installed that are capable of providing grid services, totaling 2.99 MWh and 1.25 MW based on the documentation provided to Energy Trust. In 2020, some solar + storage adoption was bolstered by two additional incentives that were made available: the Oregon Department of Energy's Solar + Storage Rebate and a PGE Smart Battery Pilot. Energy Trust plays an implementation partner role in the PGE Smart Battery Pilot, which launched in 2020 and is expected to ramp up in 2021.

Table 2. Energy Trust solar + storage installations

Year installed	Installation with battery storage	Total solar installations	% of total
2008	4	253	1.6%
2009	2	475	0.4%
2010	6	1,198	0.5%
2011	4	1,329	0.3%
2012	8	1,242	0.6%
2013	2	881	0.2%
2014	6	1,291	0.5%
2015	2	1,801	0.1%
2016	10	1,749	0.6%
2017	42	1,795	2.3%
2018	65	1,785	3.6%
2019	37	1,357	2.7%
2020	70	1,825	3.8%
Total	**258**	**16,981**	**1.5%**

[38] Energy Trust does not have a storage incentive offering. Customers who choose to install an integrated solar + storage system are eligible for a standard solar incentive and the federal Investment Tax Credit. Some customers in 2020 were able to reserve an Oregon Solar + Storage rebate before funding ran out. Additionally, PGE customers with qualifying equipment may qualify for on-bill rewards or an instant rebate through PGE's Smart Battery Pilot.

B. Equitable Solar Initiative

Despite continuing cost declines and increased availability, solar remains out of reach for many households. The Equitable Solar Initiative acknowledges historic participation in Energy Trust's solar offers has not accurately represented Oregon's demographics. The objective is to foster a more equitable solar market by designing incentive offers, program strategies and solutions to support people of color, people with low- and moderate-income, rural communities and other underserved customers to expand the benefits of solar to all utility customers.

From 2017 through early 2019, Energy Trust convened a low- and moderate-income solar work group that included public entities, community-based organizations and industry representatives. The group developed strategies to address market barriers and work toward a more equitable distribution of solar projects. Many of the organizations involved in the solar work group are still engaged with Energy Trust through the Diversity Advisory Council or other more direct program engagement. The Solar program continues to implement feedback from the work groups to develop new offers to support projects that benefit low- and moderate-income customers.

Here are some examples:

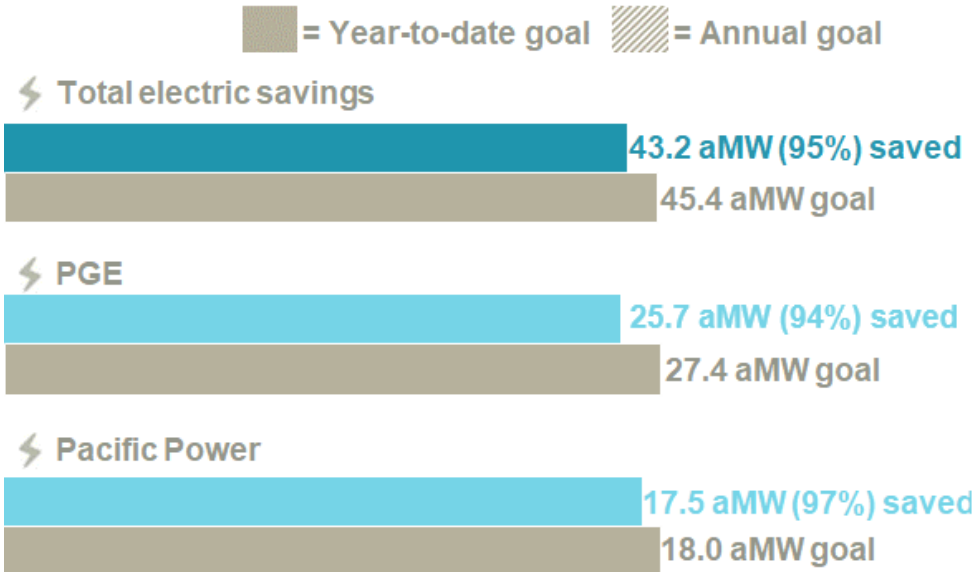
- In 2019, the Solar program awarded $81,600 in solar innovation grants to community-based organizations to develop community-centric program models that help low- and moderate-income customers benefit from solar technology. Highlights included a solar project on a low-income multifamily building in Enterprise and a community organization in Corvallis working to install solar on up to 20 Habitat for Humanity homes. All deliverables were finalized in 2020, with learnings informing future program activities.
- This was the first full year that the income-qualified incentive for moderate-income homeowners called Solar Within Reach was available. The offer provides a higher incentive level for moderate-income homeowners who may have less ability to use tax incentives or have higher financing needs. In 2020, the program received 180 Solar Within Reach applications and completed 86 projects, paying $715,233 in Solar Within Reach incentives.
- The Solar program offers development assistance incentives for small or public and nonprofit projects applying to the Oregon Community Solar Program. To qualify for the development assistance, applicants must show how the project will bring additional benefits to low-income or other underserved customers. The program has received 12 enrollments for development funds in 2020 and paid $36,864 incentives so far in support of qualifying community solar project development.
- In October 2020, the Solar program made increased incentives available for non-residential projects for tribal, affordable multifamily properties, and eligible nonprofit customers with a stated mission and track record of serving underserved communities. These incentives offset a greater portion of the upfront cost of a project and support Energy Trust's goals to expand the benefits of solar to more underserved Oregonians, and those serving them. The initial launch of the offer was very well received with 16 applications and $1.46 million in incentives reserved in quarter four 2020 to support eligible customers and projects.

APPENDIX 11: Quarter four results tables

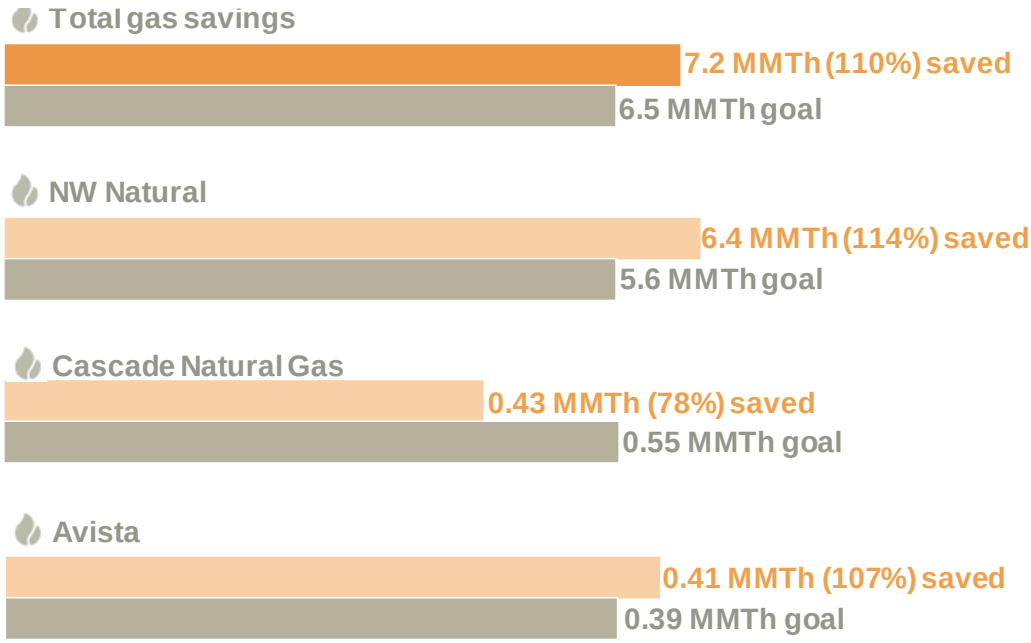
This appendix includes only activity funded by Oregon electric utility customers of PGE and Pacific Power under state law and by Oregon natural gas customers of NW Natural, Cascade Natural Gas and Avista through regulatory agreements between the OPUC and each natural gas utility. The total organization results appendix reports energy savings, generation, expenditures and revenue for all Energy Trust activity, including activity in NW Natural territory in Southwest Washington, Energy Trust's subcontract to deliver the Oregon Community Solar Program and other activity.

I Q4 2020 activity at a glance[39]

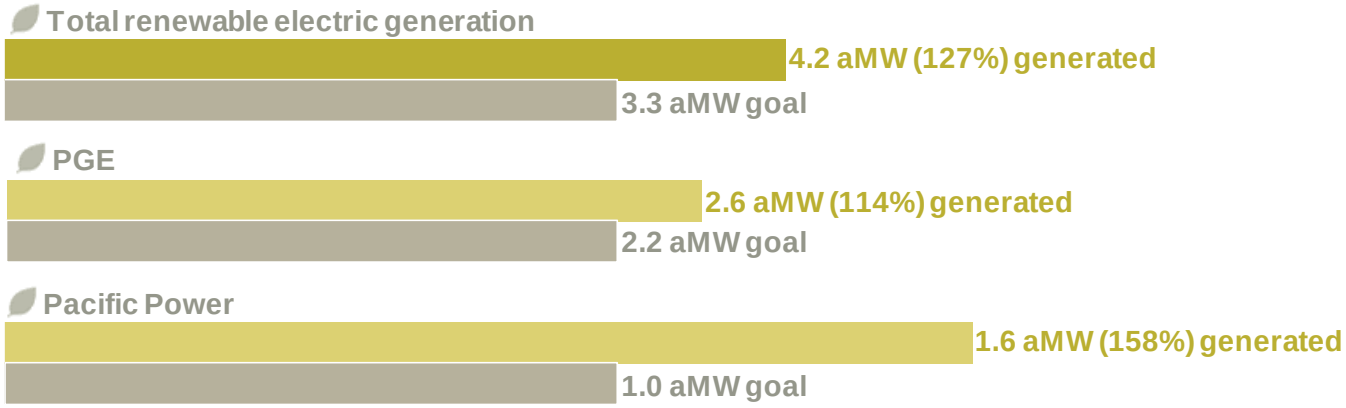
Savings



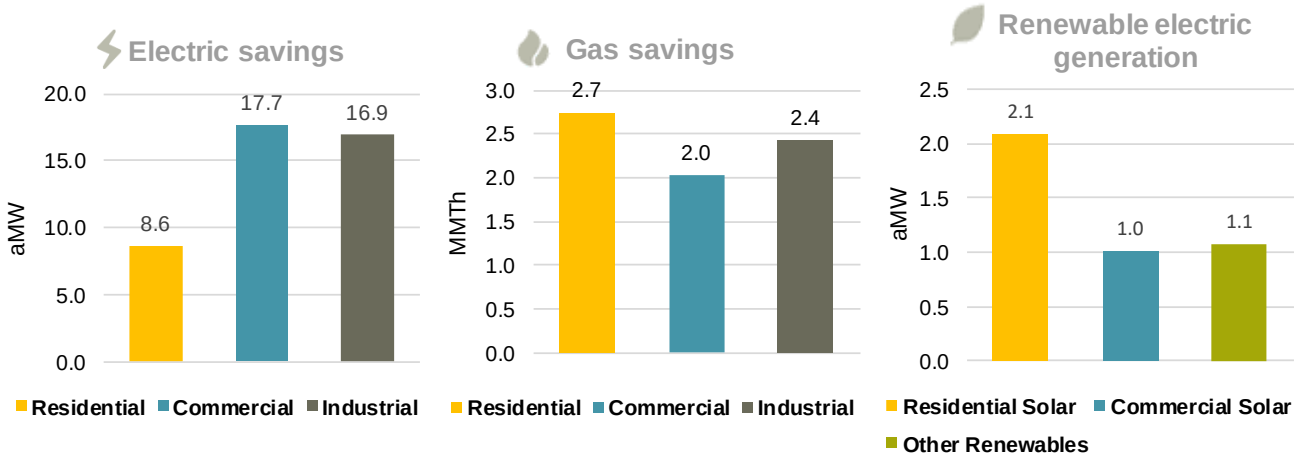
[39] This document reports gross savings. Note that aMW indicates average megawatts, MMTh indicates million annual therms and MM is million.


Total gas savings
7.2 MMTh (110%) saved
6.5 MMTh goal
NW Natural
6.4 MMTh (114%) saved
5.6 MMTh goal
Cascade Natural Gas
0.43 MMTh (78%) saved
0.55 MMTh goal
Avista
0.41 MMTh (107%) saved
0.39 MMTh goal

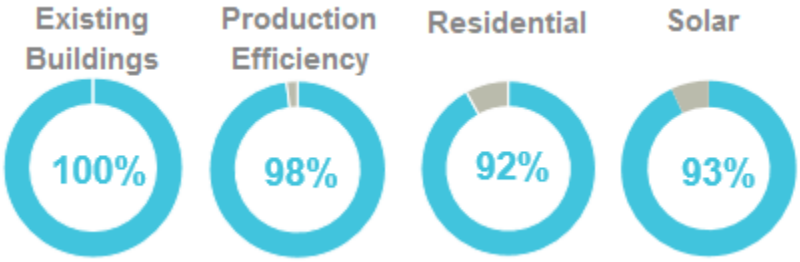
Generation


Total renewable electric generation
4.2 aMW (127%) generated
3.3 aMW goal
PGE
2.6 aMW (114%) generated
2.2 aMW goal
Pacific Power
1.6 aMW (158%) generated
1.0 aMW goal

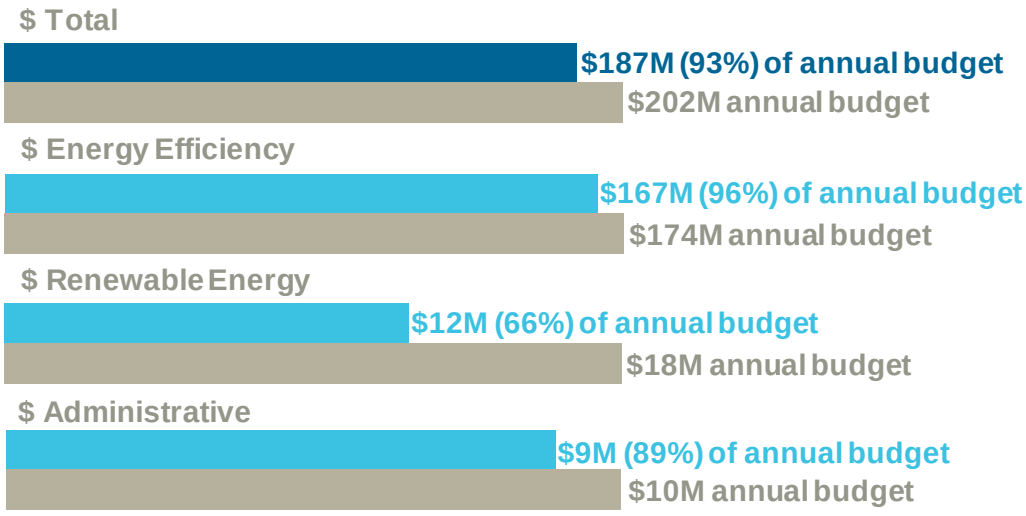
Savings and generation by sector year-to-date



Customer satisfaction[40]

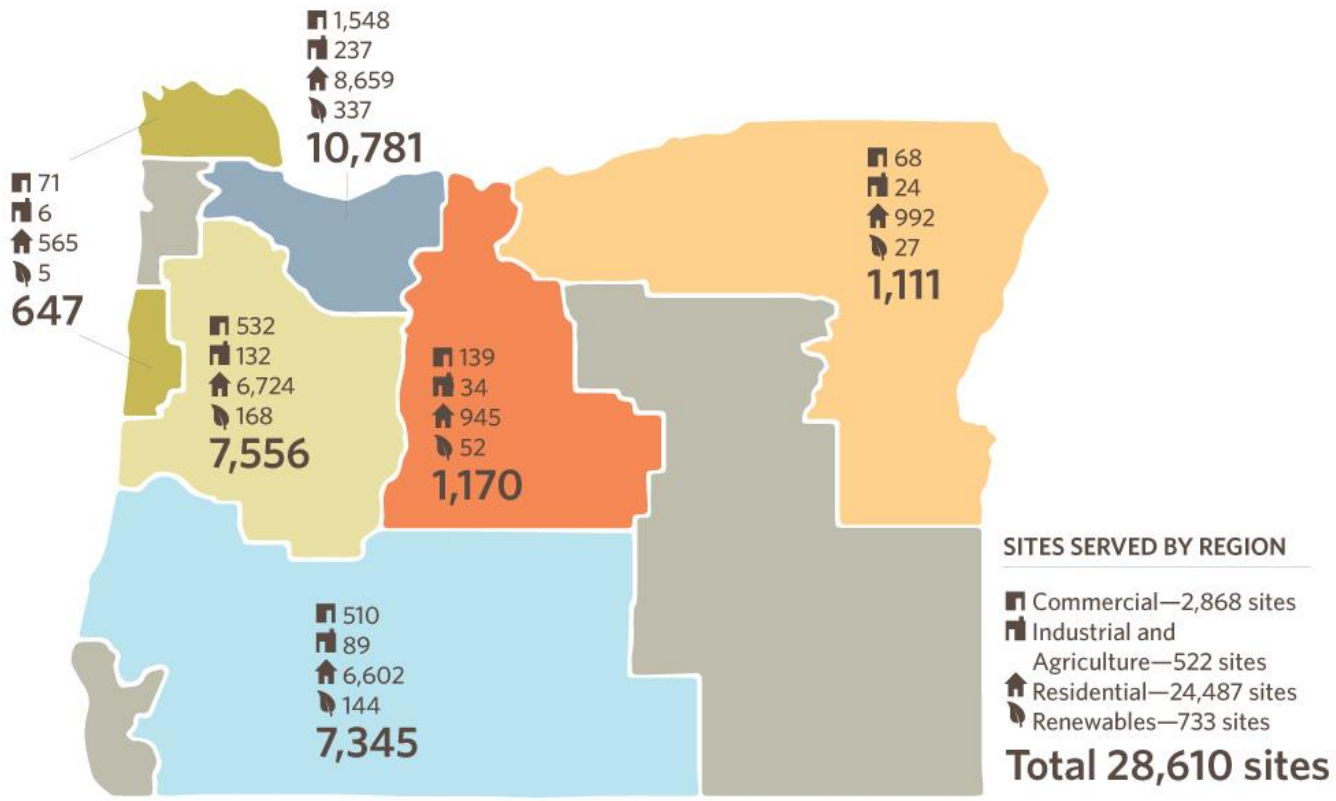


Oregon public purpose charge expenditures



[40] From November 2020 to January 2021, Energy Trust delivered a short web and telephone survey to 526 randomly selected participants in five Oregon programs who completed projects between October and December 2020 and received an incentive or discount from Energy Trust. Existing Buildings results includes Multifamily participants.

Sites served by region in Q439[41]



[41] This document reports on Energy Trust services to Oregon customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista. Areas in gray are not served by these utilities.

II Revenues and expenditures tables[42]

A. Oregon public purpose charge revenues41[43]

Source	Q4 actual revenues	Q4 budgeted revenues
Portland General Electric	$9,050,329	$9,074,942
PGE Incremental	$11,360,496	$11,356,337
Pacific Power	$6,639,482	$7,107,324
Pacific Power Incremental	$7,627,384	$7,055,550
NW Natural	$3,331,065	$3,511,845
NW Natural Industrial DSM	$1,393,862	$1,395,195
Cascade Natural Gas	$785,739	$802,161
Avista	$518,323	$518,323
Total	**$40,706,681**	**$40,821,678**

B. Oregon public purpose charge expenditures

Source	Q4 actual expenditures	Q4 budgeted expenditures
Portland General Electric	$33,292,880	$37,630,137
Pacific Power	$24,591,990	$25,588,385
NW Natural	$6,177,278	$7,715,228
NW Natural Industrial DSM	$1,131,481	$2,144,166
Cascade Natural Gas	$678,716	$1,449,562
Avista	$989,398	$749,219
Total	**$66,861,743**	**$75,276,698**

[42] Columns may not total due to rounding.
[43] Revenues include public purpose revenue, including incremental electric revenue from SB 838. Incremental revenues are those authorized under SB 838 to support capturing additional cost-effective electric efficiency savings above the amount supported by funding through SB 1149.

C. Oregon public purpose charge expenditures by sector and program42[44]

		Q4 actual expenditures	Q4 budgeted expenditures
Commercial	Existing Buildings	$17,022,375	$21,528,347
	Existing Multifamily	$3,141,649	$2,912,136
	New Buildings	$6,748,411	$6,483,458
	NEEA Commercial	$572,697	$843,331
	Commercial total	**$27,485,132**	**$31,767,271**
Industrial	Production Efficiency	$16,951,698	$16,889,276
	NEEA Industrial	$-22,668	$107,195
	Industrial total	**$16,929,029**	**$16,996,471**
Residential	Residential	$16,678,163	$16,785,182
	NEEA Residential	$1,059,309	$990,437
	Residential total	**$17,737,473**	**$17,775,619**
	Energy efficiency total	**$62,151,634**	**$66,539,361**
Renewables	Solar	$2,705,783	$3,723,279
	Other Renewables	$8,287	$2,565,571
	Renewable generation total	**$2,714,070**	**$6,288,850**
	Administration	**$1,996,038**	**$2,448,487**
	Total	**$66,861,743**	**$75,276,698**

D. Incentives paid

Qtr	PGE efficiency	Pacific Power efficiency	NW Natural efficiency	Cascade Natural Gas efficiency	Avista efficiency	PGE generation	Pacific Power generation	Total
Q1	$5,580,213	$4,103,630	$2,880,466	$193,953	$71,170	$523,516	$669,645	$14,022,593
Q2	$8,499,559	$6,425,756	$2,248,167	$291,711	$225,009	$1,457,679	$996,914	$20,144,794
Q3	$10,570,367	$7,431,809	$3,255,486	$267,255	$209,970	$1,149,134	$994,797	$23,878,818
Q4	$22,792,713	$14,953,462	$5,040,782	$384,662	$525,929	$224,098	$1,388,025	$45,309,670
Total	**$47,442,851**	**$32,914,657**	**$13,424,901**	**$1,137,581**	**$1,032,078**	**$3,354,427**	**$4,049,381**	**$103,355,876**

[44] Negative NEEA industrial expenditure is due to billing based on a forecast that was later adjusted when actual costs were available.

III Savings and generation tables43[45,46,47]

A. Savings and generation by fuel

	Q4 savings/generation	Total annual savings/generation	Annual goal	Percent achieved YTD
Electric savings	23.8 aMW	43.2 aMW	45.4 aMW	95%
Natural gas savings	3,911,569 therms	7,209,444 therms	6,526,799 therms	110%
Electric generation	0.99 aMW	4.17 aMW	3.27 aMW	127%

B. Progress toward annual efficiency goals by utility

	Q4 savings	Total annual savings	Annual goal	Percent achieved YTD	Annual IRP target	Percent achieved YTD
Portland General Electric	14.8 aMW	25.7 aMW	27.4 aMW	94%	30.5 aMW	84%
Pacific Power	9.1 aMW	17.5 aMW	18.0 aMW	97%	19.2 aMW	91%
NW Natural	3,545,194 therms	6,368,334 therms	5,591,966 therms	114%	6,018,697 therms	106%
Cascade Natural Gas	166,891 therms	426,714 therms	547,244 therms	78%	621,804 therms	69%
Avista	199,483 therms	414,395 therms	387,588 therms	107%	313,420 therms	132%

C. Electric savings by sector and program

		Q4 savings aMW	Total annual savings aMW	Annual goal aMW	Percent achieved YTD
Commercial	Existing Buildings	5.3	10.9	13.1	83%
	Existing Multifamily	0.6	1.4	1.5	93%
	New Buildings	2.3	4.5	4.8	95%
	NEEA Commercial	0.5	0.9	0.7	129%
	Commercial total	**8.7**	**17.7**	**20.0**	**88%**
Industrial	Production Efficiency	11.0	16.2	17.1	95%
	NEEA Industrial	0.4	0.7	0.8	87%
	Industrial total	**11.4**	**16.9**	**17.9**	**94%**
Residential	Residential	2.7	6.9	5.5	125%
	NEEA Residential	1.0	1.8	1.9	91%
	Residential total	**3.8**	**8.6**	**7.4**	**116%**
	Total electric savings	**23.8**	**43.2**	**45.4**	**95%**

[45] Columns may not total due to rounding.
[46] Electric savings include transmission and distribution savings.
[47] The gas savings do not include results for NW Natural in Washington.

D. Natural gas savings by sector and program

		Q4 savings therms	Total annual savings therms	Annual goal therms	Percent achieved YTD
Commercial	Existing Buildings	438,673	1,323,749	1,757,530	75%
	Existing Multifamily	67,185	178,180	204,919	87%
	New Buildings	264,524	527,596	548,061	96%
	NEEA Commercial	427	610	456	134%
	Commercial total	**770,809**	**2,030,135**	**2,510,966**	**81%**
Industrial	Production Efficiency	1,844,976	2,433,764	1,514,698	161%
	NEEA Industrial	-	-	-	-
	Industrial total	**1,844,976**	**2,433,764**	**1,514,698**	**161%**
Residential	Residential	1,294,236	2,735,103	2,478,903	110%
	NEEA Residential	1,549	10,442	22,232	47%
	Residential total	**1,295,785**	**2,745,545**	**2,501,135**	**110%**
	Total natural gas savings	**3,911,569**	**7,209,444**	**6,526,799**	**110%**

E. Renewable energy generation by utility

	Q4 generation aMW	Total annual generation aMW	Annual goal aMW	Percent achieved YTD
Portland General Electric	0.44	2.55	2.25	114%
Pacific Power	0.55	1.61	1.02	158%
Total	**0.99**	**4.17**	**3.27**	**127%**

F. Renewable energy generation by program

	Q4 generation aMW	Total annual generation aMW	Annual goal aMW	Percent achieved YTD
Solar	0.86	3.09	2.24	138%
Other Renewables	0.13	1.07	1.03	105%
Total generation	**0.99**	**4.17**	**3.27**	**127%**

G. Incremental utility SB 838 expenditures46[48,49]

Utility	Q4 SB 838 Expenditures	Total Annual SB 838 Expenditures
Portland General Electric	$284,856	$1,084,024
Pacific Power	$625,482	$1,149,920
Total	**$910,338**	**$2,233,944**

[48] Reflects expenditures by Pacific Power and PGE in support of utility activities described in SB 838. Reports detailing these activities are submitted annually to the OPUC.
[49] Pacific Power's reported SB 838 expenditures for quarter three were adjusted slightly following publication of Energy Trust's quarter three report.

APPENDIX 12: 2020 energy efficiency results for SB 1149 and SB 838 funds

A. Energy efficiency results for SB 1149 funds

2020 SB 1149 electric efficiency results	PGE savings aMW	Pacific Power savings aMW	Total savings aMW	Expenses	Mil $/aMW
Commercial	3.7	2.4	6.1	$ 22,860,921	$ 3.77
Industrial	6.7	4.1	10.8	$ 15,923,345	$ 1.47
Residential	1.6	1.4	3.0	$ 13,170,564	$ 4.43
Total	**12.0**	**7.9**	**19.9**	$ **51,954,831**	$ **2.62**

B. Energy efficiency results for SB 838 funds

2020 SB 838 electric efficiency results	PGE savings aMW	Pacific Power savings aMW	Total savings aMW	Expenses	Mil $/aMW
Commercial	7.1	4.5	11.6	$ 46,425,367	$ 4.01
Industrial	3.4	2.7	6.1	$ 20,860,632	$ 3.43
Residential	3.2	2.5	5.6	$ 27,315,791	$ 4.84
Total	**13.7**	**9.6**	**23.3**	**$ 94,601,791**	**$ 4.06**

C. Incremental utility SB 838 expenditures[50]

2020 SB 838 utility expenditures	Q1	Q2	Q3	Q4	Total
Portland General Electric	$ 260,920	$ 323,786	$ 214,462	$ 284,856	$ 1,084,024
Pacific Power	$ 96,544	$ 196,109	$ 231,785	$ 625,482	$ 1,149,920
Total	**$ 357,464**	**$ 519,894**	**$ 446,247**	**$ 910,338**	**$ 2,233,944**

[50] Quarter one expenditures for PGE are different than previously reported due to updated information from PGE.