

2016 | ANNUAL REPORT



PAM'S SUNNYSIDE GREENHOUSE, COTTAGE GROVE


EnergyTrust
of Oregon

2016 IN REVIEW

In 2016, our incentives, expert guidance and network of 2,400 contractors and allied professionals helped 80,600 homeowners, renters, businesses, factories and farms benefit from clean energy investments.



We delivered more electric and gas savings than in any other year—at a fraction of the cost utilities would otherwise pay to buy energy from other sources.



We helped residential customers install a record 1,200 customer-owned solar systems. We also helped 14 irrigation districts identify opportunities to modernize their systems, generate hydropower, save water and electricity and boost local economies.



We engaged builders to complete more than 400 energy-efficient new commercial and major renovation projects and 3,300 high-efficiency new homes with EPS™, a home energy performance score indicating low energy costs and carbon footprint. More than half of these projects were outside the Portland metro area.



Our efforts to advance new technologies flourished, with installation of more than 4.6 million LEDs and 4,000 residential smart thermostats.



We expanded outreach to smaller cities, rural communities, those with moderate incomes and Oregon's increasingly culturally diverse population.

FROM THE EXECUTIVE DIRECTOR

I am pleased to share my first report highlighting Energy Trust of Oregon's outstanding 2016 accomplishments and benefits to utility customers. Last year, Energy Trust exceeded all annual electric and natural gas efficiency goals and installed more standard solar capacity and generation than ever before—while maintaining very low costs.

As a newcomer to Oregon in 2016, my priority was to visit many of the communities we serve and learn firsthand about the needs of people around the state. Having lived in communities large and small—in Nebraska, Alaska and New York—I've learned that successful change starts at the local level. Energy Trust can support local goals, from economic development and managing population growth to mitigating drought and boosting resiliency.



In Coos Bay, I talked with trade allies, customers and Coos County commissioners about their desire to boost local economic activity in order to retain younger residents.



In Bend, I saw the booming new construction of homes, businesses and multifamily buildings in a rapidly growing and sustainably minded community where Energy Trust supported ambitious clean energy objectives—from new construction that exceeds code to the city's successful energy challenge.



In Pendleton, I met with the Confederated Tribes of the Umatilla Indian Reservation to see how Energy Trust's expertise helped the Yellowhawk Tribal Health Center get on the path to net zero, meaning it will operate at least 40 percent more efficiently than required by current energy code.

Clean energy is critical to Oregon's economy and lower carbon future. While we have been successful in our first 15 years at saving energy equal to the output of a power plant, there is still plenty more to accomplish. And opportunities to generate clean energy from Oregon's sun, water, waste and wind are abundant. With a history of developing nationally recognized programs, Energy Trust is leading the rest of the country in finding new technologies and strategies to help capture that efficiency and generate renewable resources—one community at a time.

The road ahead is full of opportunity.

A handwritten signature in black ink that reads "Michael T. Colgrove".

Michael T. Colgrove
Executive Director

MULTIPLE BENEFITS



"It's all about the quality of life for residents. People who have stable housing have a much better life. A building like this goes a long way to fulfilling that goal."

- Rob Roy, co-founder, Pacific Crest Affordable Housing



Energy Trust helped customers in Central Oregon save **\$22 MILLION** on utility bills in 2016.

Central Oregon served by:

- ✓ Pacific Power
- ✓ Cascade Natural Gas

IRONHORSE LODGE IN PRINEVILLE

Residents of IronHorse Lodge don't worry about changing energy costs. That's because the lodge, which includes 26 units of affordable housing for low-income seniors, uses 77 percent less energy than a typical multifamily building built to Oregon energy code.

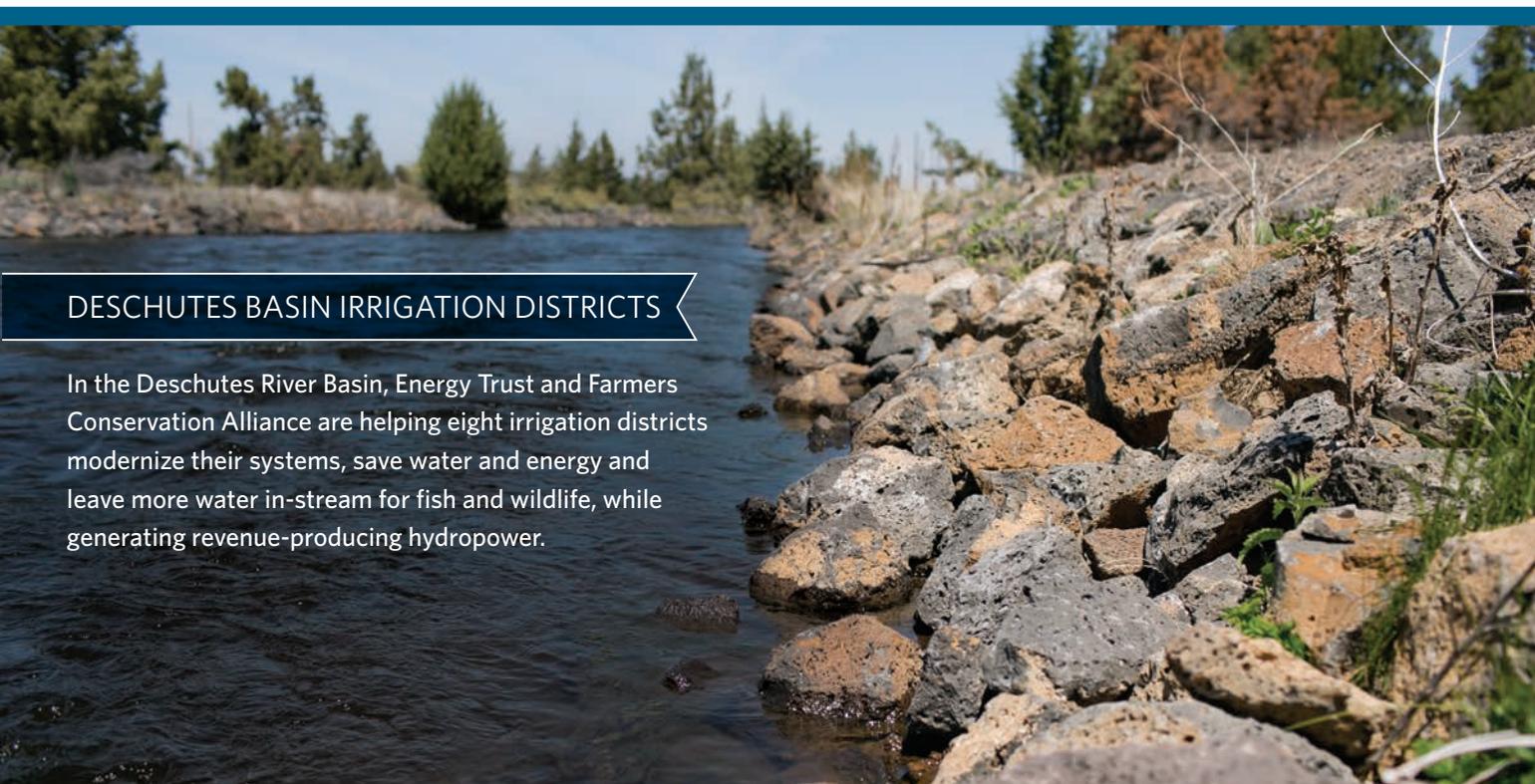
Wanting to keep operating costs low and predictable for fixed-income residents, Pacific Crest Affordable Housing enrolled the lodge in **Energy Trust's Path to Net Zero initiative**, which helped the building get as close as possible to consuming only as much energy as it produces in a year. From early design through construction, Pacific Crest received technical assistance to make sure energy-saving features were included. **Energy Trust cash incentives totaling \$118,000 helped offset the cost.**

Solar panels on the building's roof produce energy for water heating and electricity. A tightly sealed building envelope, extra insulation and a variable-refrigerant-flow heating and cooling system keep residents comfortable year-round. Solar tubes bring natural light into hallways, while efficient LEDs light common areas and individual units. Low-flow water fixtures cut down on energy and water use.

IronHorse expects to save and generate enough energy to **decrease annual expenses by more than \$25,000**, keeping rent and utility bills lower for residents. And Pacific Crest has plans to build a similar 50-unit project in Bend.

DESCHUTES BASIN IRRIGATION DISTRICTS

In the Deschutes River Basin, Energy Trust and Farmers Conservation Alliance are helping eight irrigation districts modernize their systems, save water and energy and leave more water in-stream for fish and wildlife, while generating revenue-producing hydropower.



FAMILY FARMS, LOCAL JOBS



"The more we save, the more we can produce, which translates into more jobs and higher wages."

- Andy Couch, director of engineering, Umpqua Dairy



UMPQUA DAIRY PRODUCTS, CO. IN ROSEBURG

Energy Trust helped customers
in Southern Oregon save
\$34 MILLION
on utility bills in 2016.

Southern Oregon served by:

- ✓ Pacific Power
- ✓ NW Natural
- ✓ Avista

A third-generation family business, Umpqua Dairy has been producing and distributing premium dairy products for more than 85 years. Using milk from family farms in Oregon, Umpqua takes pride in setting high product standards and staying ahead of industry changes. The Roseburg manufacturer of milk, ice cream, butter and other products has embraced that same approach to improving energy efficiency in its operations—working with Energy Trust on more than 15 projects since 2003.

One of Umpqua's first energy upgrades involved overhauling its ammonia refrigeration system, which could not keep up with increasing demand. Energy Trust helped replace two small compressors with a large energy-efficient model and install a new control system to ensure optimal production temperatures.

When it was time to replace production ice cream freezers, Umpqua turned to Energy Trust for help installing three new high-efficiency freezers that scooped 350,000 kilowatt hours from its annual energy use. Umpqua recently built a new ice cream mixing room that tripled capacity and uses the latest in energy-efficient equipment and LED lighting.

Altogether, Umpqua has achieved annual energy cost savings of \$105,000 and received almost \$184,000 in Energy Trust cash incentives.

"Thanks to Energy Trust, our energy use per unit has dropped steadily and significantly," said Andy Couch, director of engineering. "We reinvest those savings in new, modern equipment that helps expand our business."





BUILDING FOR BETTER LEARNING



"Energy Trust helped us develop a plan to touch every school and improve efficiency. Now we can redirect our energy cost savings into strategies that help us maintain, and even improve, services to students."

- Michelle Jones, director of business services,
Pendleton School District



Energy Trust helped customers in Eastern Oregon save **\$6.4 MILLION** on utility bills in 2016.

Eastern Oregon served by:

- ✓ Pacific Power
- ✓ Cascade Natural Gas
- ✓ Avista

PENDLETON SCHOOL DISTRICT IN PENDLETON

Leveraging a local bond measure and cash incentives and assistance from Energy Trust, Pendleton School District launched a comprehensive strategy to upgrade aging facilities, lower costs and improve the learning environment for students.

The district built two identical 64,000-square-foot elementary schools and completely renovated the 50,000-square-foot Pendleton Early Learning Center for preschool and kindergarten students. All feature energy-efficient lighting and mechanical systems, along with high-efficiency water heating systems, low-flow plumbing systems, ENERGY STAR® appliances and solar electric systems.

Pendleton High School and Sunridge Middle School both benefitted from energy reboots, with new high-efficiency natural gas condensing boilers and variable frequency drives.

Pendleton School District **received \$330,415 in Energy Trust cash incentives** toward its energy-saving and renewable energy improvements, which are **saving an estimated \$97,000 in annual energy costs**. And the district is already scoping project opportunities at additional schools and district buildings.



COLUMBIA BASIN STUDENT HOMEBUILDER PROGRAM, HERMISTON

The Columbia Basin Student Homebuilder Program has students working shoulder-to-shoulder with architects, engineers, local contractors and Energy Trust to design and build energy-efficient homes—gaining valuable skills and developing our future workforce.

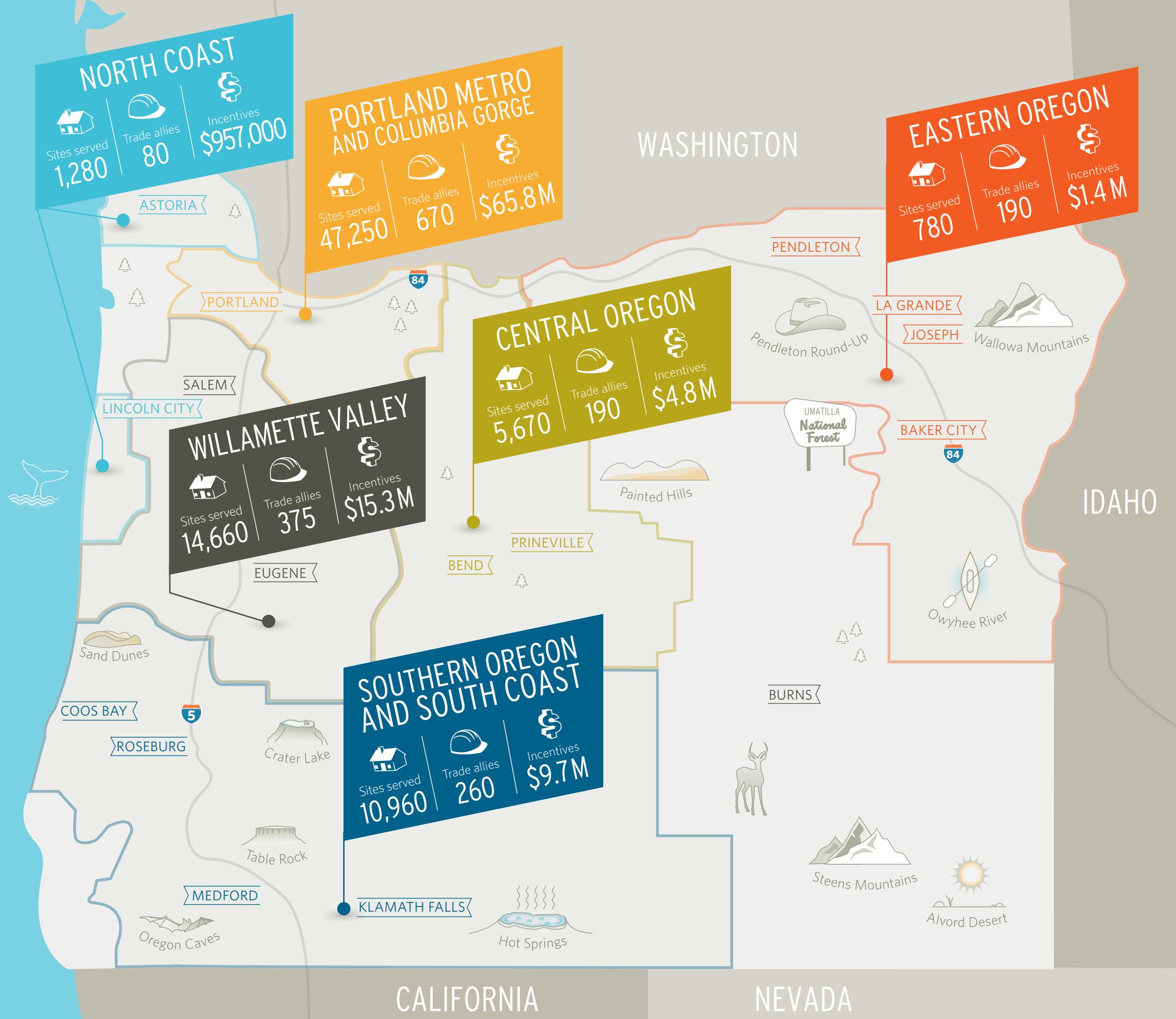
LOCAL BENEFITS

IN 2016

70,650 Residential sites served
7,000 Commercial sites served

1,120 Industrial and agricultural sites served
1,830 Sites installed renewable energy systems

80,600 TOTAL Sites served



WASHINGTON

IDAHO

CALIFORNIA

NEVADA



COMMUNITY ASSETS

"The center has been so popular that we're looking at ways to leverage the facility to bring more events to Newport."

- Tim Gross, public works director, City of Newport



NEWPORT AQUATIC CENTER

IN NEWPORT

Energy Trust helped North Coast customers save **\$6.1 MILLION** on utility bills in 2016.

North Coast served by:

- ✓ Pacific Power
- ✓ NW Natural

Although it's been open only a few months, the Newport Aquatic Center is already a destination in the community. With a 25-yard competition pool, a warm-water recreation pool and space for 300 spectators, the center's recreational swimming, lap swimming, water fitness programming and special events attract visitors from Yachats to Lincoln City.

"I've had multiple residents tell me the aquatic center is the best thing to happen to Newport in 30 years," said Tim Gross, public works director, City of Newport.

Unlike the 50-year-old pool the aquatic center replaced, the new facility is a model of efficiency and a dream to maintain. Two high-efficiency natural gas condensing boilers with variable frequency drives and multiple heat exchangers keep pool water at a consistent temperature.

Energy Trust provided the city with a \$21,000 cash incentive toward the cost of the energy-efficient boilers, which are saving Newport an estimated \$11,000 in annual energy costs. As Gross put it: "We wanted to make the facility as energy efficient as possible, and took advantage of all opportunities available."





COMPETITIVE ADVANTAGE



"With guidance from Energy Trust, we have modified many of our systems to run more efficiently, reducing our use of natural gas and making us more competitive."

- Georgia Baxter, CEO, J.H. Baxter & Co.

REGIONAL BILL SAVINGS



Energy Trust helped customers in the Willamette Valley save **\$163 MILLION** on utility bills in 2016.

Willamette Valley served by:

- ✓ *Portland General Electric*
- ✓ *Pacific Power*
- ✓ *NW Natural*

J.H. BAXTER & CO.

IN EUGENE

J.H. Baxter & Co., which produces and pressure treats wood products such as power poles and structural beams, has diligently cut energy costs to stay competitive. The certified woman-owned business has completed 10 natural gas efficiency projects at its Eugene plant, **saving more than \$183,000 annually.**

Some projects have been large, such as insulating four exterior hot-bath treatment tanks—an \$83,000 investment that trimmed annual energy costs by \$55,000. Others have been smaller, such as replacing the gaskets on the facility's pole kiln, which netted almost \$7,000 in annual energy savings.

Last year, J.H. Baxter sought help from Energy Trust for its lead boiler, the backbone of the company's operation. Over time, the natural gas boiler had built up a layer of soot, decreasing efficiency. A simple tune-up eliminated soot and boosted efficiency by 8.5 percent, saving an estimated \$21,000 annually.

"The boiler tune-up project was a real home run for us," said Jeanne Olson, plant manager. "The cash incentive from Energy Trust meant that our investment paid for itself quickly through energy savings."

EMERALD VALLEY WEATHERIZATION INC., SPRINGFIELD

"Energy Trust incentives entice property owners to move forward, particularly the instant incentives because we can reduce a customer's cost upfront."

- Kristin Mason, owner and
Energy Trust trade ally contractor





A BRIGHTER FUTURE

"The dollars we're saving on energy costs go directly back into programs and services—helping us deliver quality health care to those who often can't afford it."

– Gil Muñoz, CEO, Virginia Garcia Memorial Health Center



Energy Trust helped customers in Portland Metro and Columbia Gorge save

\$255 MILLION
on utility bills in 2016.

Portland Metro and Columbia Gorge customers served by:

- ✓ *Portland General Electric*
- ✓ *Pacific Power*
- ✓ *NW Natural*

VIRGINIA GARCIA WELLNESS CENTER IN CORNELIUS

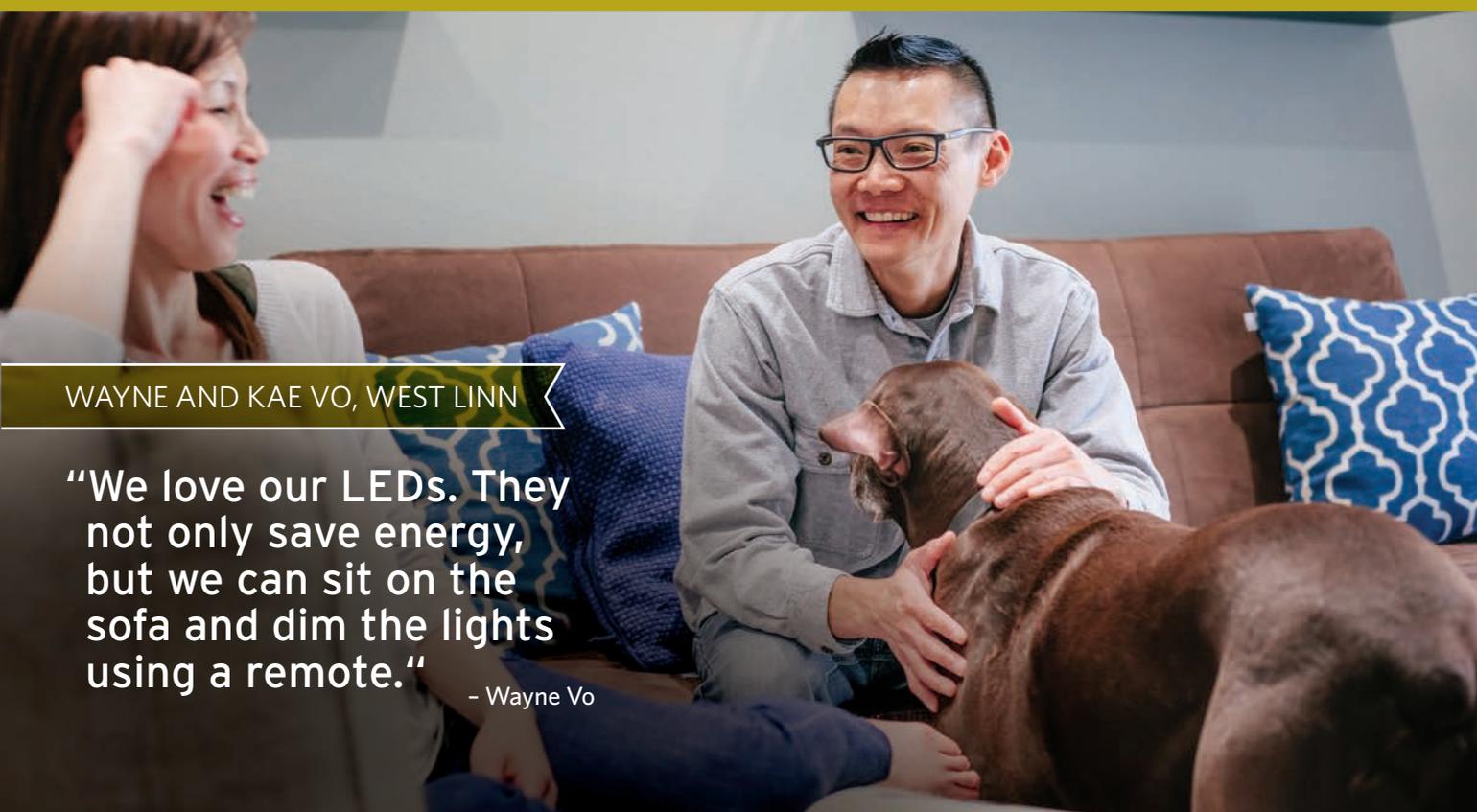
With 17 clinics across Washington and Yamhill counties, Virginia Garcia Memorial Health Center provides high-quality, comprehensive and culturally appropriate primary health care with a special emphasis on migrant and seasonal farmworkers and others with barriers to receiving health care.

The 35,000-square-foot, LEED® Silver certified Virginia Garcia Wellness Center facilitates a sense of well-being. It is bathed in light from a 20-foot-high skylight that illuminates two floors and double-height windows that overlook the front and back entries. The center boasts multipurpose spaces for classes

and community use, including a kitchen, exercise room and community garden.

Virginia Garcia worked with Energy Trust to integrate extra insulation, high-performance windows, efficient lighting and controls, and a variable-refrigerant-volume conditioning system to keep energy use low and comfort high.

The center uses 30 percent less energy than a typical building constructed to Oregon energy code, and is outfitted so the roof and electrical system are ready for solar panels when funds permit.



WAYNE AND KAE VO, WEST LINN

"We love our LEDs. They not only save energy, but we can sit on the sofa and dim the lights using a remote."

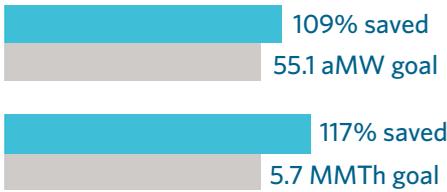
- Wayne Vo



RESULTS AT A GLANCE

EXCEEDED ENERGY SAVINGS GOALS

In the highest ever year for electric and gas savings, Energy Trust exceeded all efficiency goals.



ADVANCED RENEWABLE GENERATION PIPELINE

Energy Trust exceeded its standard solar generation goal and built a robust pipeline of renewable energy projects expected to generate energy in future years. The delay of two custom projects to 2017 impacted achievement of the overall renewable energy goal.



ACCOUNTABLE AND TRANSPARENT

Energy Trust is governed by a volunteer board of directors and is overseen by the Oregon Public Utility Commission. Two advisory councils guide our work.

- ✓ Every dollar received and invested is accounted for in monthly, quarterly and annual financial statements
- ✓ Financial statements are audited annually by an independent auditor
- ✓ A portion of projects are evaluated by a third party
- ✓ Each kilowatt hour and therm acquired is reported in quarterly and annual reports
- ✓ We operate to achieve annual OPUC minimum performance measures, report quarterly and annually on progress to annual and five-year goals and contract for an independent management audit every five years

Note: aMW is average megawatts and MMTh is million annual therms

THE LOWEST-COST ENERGY WE CAN BUY

Energy efficiency is the lowest-cost energy utilities can buy at a fraction of the cost they would otherwise pay for other energy sources. For every \$1 we invest in energy efficiency, customers will save nearly \$3.

ENERGY TRUST'S TOTAL COST TO SAVE OR GENERATE ENERGY

Electricity



2.6 cents/kWh

(compared to 7.6 cents/kWh utilities pay for energy from other sources)

Natural gas



27.9 cents/therm

(compared to 47 cents/therm utilities pay for energy from other sources)

■ Energy Trust cost
■ Cost paid by utilities for other energy sources

REVENUES AND EXPENDITURES ON TARGET

- ✓ Revenue totaled \$148.9 million, on target with budget
- ✓ Expenditures totaled \$183.8 million, on target with budget (as planned with utilities, Energy Trust used reserves to meet expenses in excess of revenue)
- ✓ Delivered \$109.2 million in incentives, with most of the remainder going to delivery of customer services
- ✓ Spent less than 6.2 percent of annual revenues on administrative support costs
- ✓ Achieved an unmodified financial opinion from an independent auditor, available online at www.energytrust.org/financials

MET PERFORMANCE MEASURES SET BY THE OREGON PUBLIC UTILITY COMMISSION

The full list of Energy Trust's performance measures and results is available in our 2016 Annual Report to the Oregon Public Utility Commission at www.energytrust.org/reports.

- ✓ Achieved 93 percent customer satisfaction
- ✓ The benefits of all programs far exceeded the costs
- ✓ Kept staffing expenditures at 6.6 percent of total expenditures on a three-year rolling average
- ✓ Paid \$1.8 million and committed nearly \$3 million in early-stage support to help 48 biopower, hydropower, geothermal and wind projects overcome development barriers

POWERED BY LOCAL BUSINESSES

Energy Trust works with 2,400 trade ally contractors and other allied professionals who are part of our on-the-ground network that connects customers to incentives and services. We provide resources, funding and training to help these businesses build skills and expertise in new areas of opportunity. By connecting customers to informed contractors in their communities, we are supporting the growth of local businesses.

UTILITY PARTNERS

Our programs are available to 1.6 million utility customers of Portland General Electric, Pacific Power, NW Natural, Cascade Natural Gas and Avista. Together, they represent 74 percent of electricity customers and nearly all natural gas customers in Oregon. We also serve customers of NW Natural in Washington.

CUMULATIVE IMPACT



20 MILLION TONS OF CARBON DIOXIDE AVOIDED

Energy Trust investments have kept 20 million tons of carbon dioxide out of the atmosphere, equal to removing 3.5 million cars from Oregon roads for a year.



\$5.7 BILLION ADDED TO OUR ECONOMY

Energy Trust investments have cumulatively spurred \$5.7 billion in local economic activity since 2002, including \$1.7 billion in wages, \$312 million in small business income and employment equivalent to 4,700 jobs lasting a decade.



\$6.9 BILLION SAVED ON UTILITY BILLS

Since 2002, Energy Trust has invested \$1.5 billion to help participants save \$2.7 billion on their energy bills. Over time, the savings from these investments will add up to nearly \$6.9 billion.

As an independent nonprofit organization, Energy Trust helps meet Oregon's energy needs with the cheapest and cleanest options available. Our on-the-ground outreach, technical services, cash-back incentives and connections to local contractors help homeowners, renters, businesses, manufacturers, farmers and ranchers across the state cut costs with affordable, clean energy solutions. We also help customers power their homes and businesses with renewable energy from solar, biopower, hydropower, wind and geothermal sources.

To see more of our 2016 achievements, customer stories and financial information, visit www.energytrust.org/annualreport.

Energy Trust of Oregon
421 SW Oak St., Suite 300
Portland, OR 97204
1.866.368.7878

Printed on recycled paper that contains post-consumer waste.

Front cover photo: Pam's Sunnyside Greenhouse grows garden plants, dahlias and indoor foliage in energy-efficient greenhouses.