

# Energy Trust of Oregon

Presentation

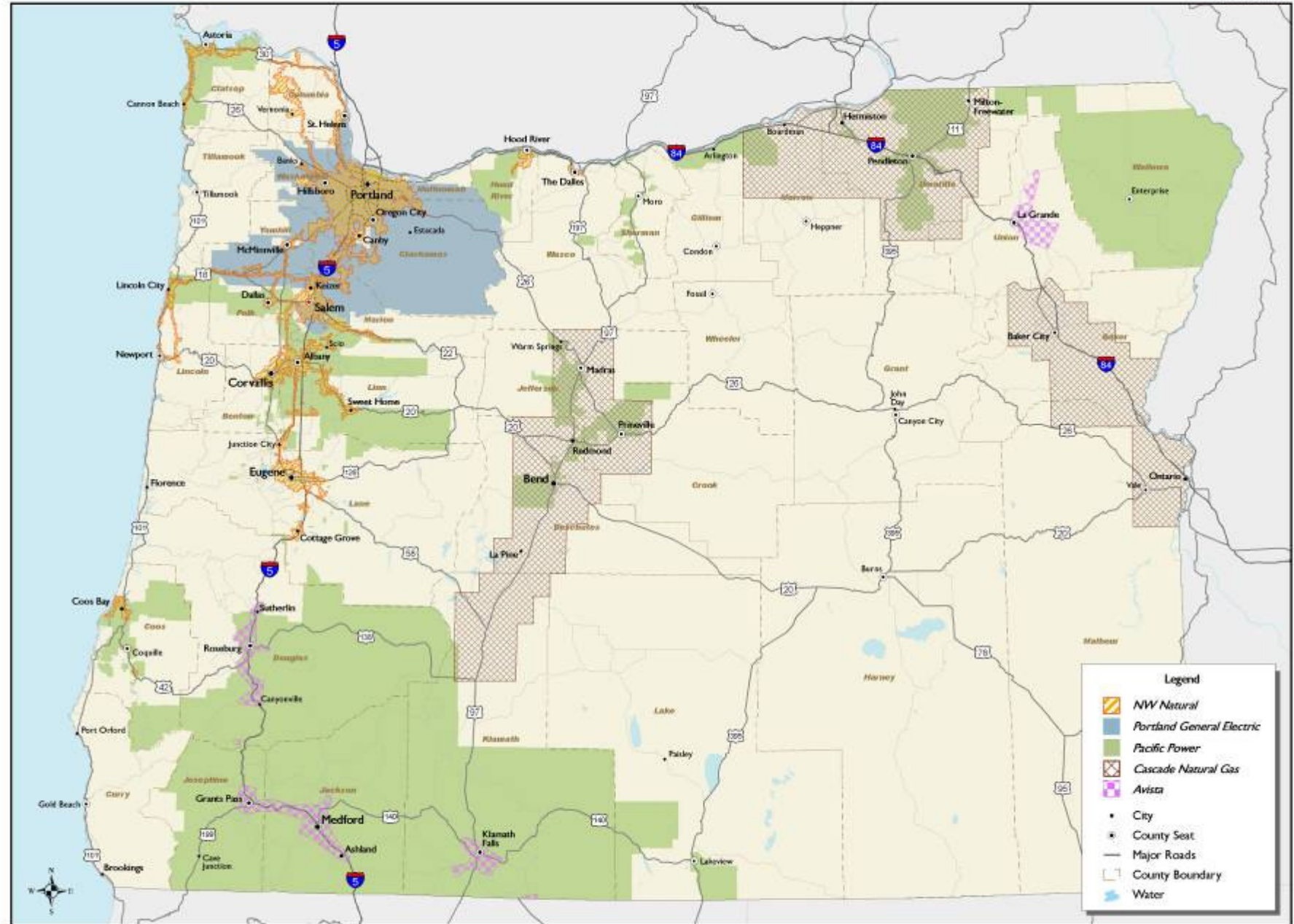
Reach Code Committee  
April 14, 2010

# Energy Trust Service Territories

1-866-ENTRUST  
energytrust.org



0 10 20 40 Miles



# Energy Trust of Oregon



Energy Trust Call Center  
1-888-368-7878

## Energy Trust Incentive Programs:

### For Homes

New Homes, Existing Homes,  
Appliances

### For Businesses

New Commercial, Existing  
Retrofits, Industrial Processing  
Equipment

### Renewables

Biopower, Solar Electric, Solar  
Hot Water, Wind, Open  
Solicitation



# Energy Trust New Homes Financial Incentives for Builders

- Energy Trust provides incentives from \$100 - 5,000+ to help builders move beyond code
- Incentives are scaled, based on efficiency above code
- Performance bumps at pre-defined levels
- Key levels:
  - ENERGY STAR = \$800
  - ENERGY STAR + ducts inside = \$1,600
  - Zonal Electric Home = \$1,600
  - High Performance Home shell = \$2,400
  - Advanced Performance Homes = \$4,000



## NW ENERGY STAR Builder Option Package (\$800)

- Ceiling: R-49
- Floor: R-38
- Window: U-0.32
- Heat: 90 AFUE/8.5 HSPF
- DHW: 0.62 gas/0.93 electric EF
- Ducts sealed & tested
- Air leakage tested <7.0 ACH50
- Efficient Lighting: 75% CFL
- Energy Star Dishwasher



## Oregon High Performance Home – Shell Only (\$2400)

- Energy Star plus ducts inside plus...

Wall: U-0.050

R-21 + R3 sheathing

Windows: <16% floor area

Air leakage < 5.0 ACH50

Whole home mechanical ventilation

## Advanced Performance Home (\$4000)

- Non-ducted heating system
  - 80 AFUE/8.5 HSPF/Electric Resistance
- Walls: U-0.025/R-40
- Ceiling: U-0.016/R-60
- Windows: U-0.22
  - < 15% CFA
- Air tightness: 2.5 ACH50
- Whole home mechanical ventilation



# Energy Trust solar incentives

- Solar electric
  - Pacific Power \$1.50/wattDC
  - Portland General Electric \$1.75/wattDC
  - \$20,000 max per home
- Solar domestic hot water
  - Electric water heating
    - \$0.40/annual kWh saved (first year)
  - Natural gas water heating
    - \$0.30 per annual kWh saved (first year)
  - \$1,500 max per home

# New Buildings

Discover commercial building efficiency solutions



# Early Design Assistance

\$2,500 Max per  
project

## EARLY DESIGN ASSISTANCE

- Available to Standard, Custom and LEED® projects.
- Purpose is to help offset the costs of an integrated design charrette and encourage a thorough look at energy savings potential from the project
- Project owner must be committed to achieving at least 10% energy savings beyond Oregon Energy Code
- Incentive is paid upon completion of the charrette and program approval of the meeting minutes or report



# Standard incentives

Up to  
**\$500,000**  
per project

Prescriptive incentives for purchasing and installing pre-approved energy-efficient equipment.

## **NATURAL GAS MEASURES:**

- Domestic hot water
- Heating equipment
- Food service equipment

## **ELECTRICAL MEASURES:**

- Lighting & controls
- Motors & drives
- HVAC equipment
- Heat pumps
- Chillers
- Air to air heat exchangers
- Demand control ventilation
- Ice machines
- Food service equipment

\*If combined with Custom Track, total project maximum is \$500,000.



# Standard Track Measures\*

<b>Energy Efficiency Measures</b>	<b>Performance Criteria</b>
<b>NATURAL GAS MEASURES</b>	
Domestic Water Heating, condensing tank	91% AFUE
Furnace, non-condensing and condensing	86% and 91% AFUE
Boiler	90% AFUE
<b>ELECTRICAL MEASURES</b>	
Lighting and Controls, T8, T5	'High Performance' or LER, Watts Controlled
Motors and Drives	Percent Efficient, 3 - 7.5 hp VFD
A/C 6 - 25 tons	EER 11 - 10
Air to Air Heat Pumps, 6 – 25 tons	10.6 EER, 3.5 COP
Chillers	IPLV
Air to Air Heat Exchangers	Outside Air
Demand Controlled Ventilation	Outside Air

\*Partial List



## Custom incentives

Up to  
\$500,000  
per project

Incentives based on estimated savings demonstrated through an energy analysis. Baseline is Oregon Energy Code. If combined with Standard Track, total project maximum is \$500,000.

### **NEW CONSTRUCTION:**

- Incentives are calculated at \$0.10/kWh and \$0.80/therm saved.

### **MAJOR RENOVATION:**

- Lighting incentives - \$0.17/kWh, up to 35% of eligible project costs, not to exceed 100% of incremental cost
- Mechanical incentives - \$0.25/kWh and \$1/Therm, up to 50% of eligible project costs, not to exceed 100% of incremental cost
  - Natural gas incentives - \$1/therm, up to 35% of eligible project costs, not to exceed 100% of incremental cost



# Additional incentives for custom projects

\$25,000 Max per project

## TECHNICAL ASSISTANCE

Up to \$25,000 or \$0.05/kWh and \$0.40/therm (based on annual estimated savings) to discuss energy efficiency options with an energy advisor and to cover the costs of an energy analysis and application to the New Buildings program. This incentive is in addition to the \$500,000 incentive cap and can not exceed the total cost of the study.

- \$500 available to ST projects

\$40,000 Max per project

## COMMISSIONING

Provides incentives to commission energy measures approved under the Custom Track. Incentive is \$0.03/kWh and \$0.20/therm. Commissioning incentive is part of the \$500,000 Custom Track incentive cap.



## New Buildings: LEED®

Up to  
\$500,000  
per project

Incentives for projects that achieve LEED NC or CS certification from the US Green Building Council – Versions 2.0, 2.1, and 2.2 – and LEED V.3.

**CANNOT BE COMBINED WITH OTHER TRACKS**

### **ENERGY SAVINGS INCENTIVES:**

Incentives calculated at \$0.10/kWh and \$0.80/therm for New Construction; \$0.20/kWh and \$1.00/therm for Major Renovations



# Additional incentives for LEED® projects

\$40,000  
Combined max  
per project

## Enhanced Commissioning and Measurement and Verification

Provides incentives to LEED® NC & CS Track projects that receive Energy and Atmosphere Credit points 3 & 5 for Enhanced Commissioning and Measurement and Verification.

Incentive is \$0.03/kWh and \$0.20/therm for the combined credits up to a maximum of \$40,000 in addition to the LEED® NC & CS Track incentives.



# Energy Trust Solar Incentives



Projects with solar electric or solar hot water are eligible for additional incentives through Energy Trust's Solar Program.

*Requires installation by an Energy Trust Solar Trade Ally.*

Commercial Projects (For Profit – 30 kW-200kW)	Systems under 30,000 watts	Systems over 30,000 watts	Max. Incentive (200,000 watts)
<b>Pacific Power</b>	\$1.00/watt	Varies from \$1.00 to \$0.50/watt	\$100,000
<b>PGE</b>	\$1.25/watt	Varies from \$1.25 to \$0.75/watt	\$150,000

*Solar Program Contact:*  
*Dave McClelland, incentive applications*  
*dave.mcclelland@energytrust.org 503-459-4073*





# Energy Trust PV Incentives (cont.)

Commercial Projects ( <i>Non-profit or government</i> )	Systems under 30,000 watts	Systems over 30,000 watts	Max. Incentive (200,000 watts)
<b>Pacific Power</b>	\$1.25/watt	Varies from \$1.25 to \$0.75/watt	\$150,000
<b>PGE</b>	\$1.50/watt	Varies from \$1.50 to \$1.00/watt	\$200,000

PGE Only – Large or Multiple Systems (>200 kW total per owner per year)	Per watt incentive rate	Max. Incentive (800,000 watts)
<b>For-profit and Third Party Owned</b>	\$0.75/watt	\$600,000 per customer \$500,000 per site
<b>Non-profit or government</b>	Not Available	-----



# Energy Trust Solar Water Heating Incentives



Commercial Projects	PGE/Pacific Power with Electric Water Heating	Northwest or Cascade Natural Gas with gas water heating	Maximum Incentive
Commercial Hot Water	\$0.40 per first year kilowatthour savings	\$6.00 per first year Therm savings	35% of project cost
Commercial Pool Heating	\$0.10 per first year kilowatthour savings	\$1.50 per first year Therm savings	35% of project cost



# Small Commercial Efficiency pilot



## What is it?

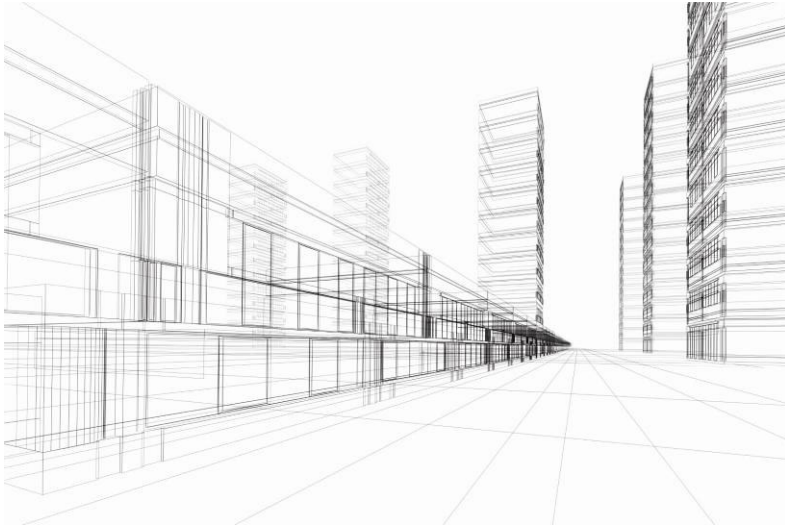
- A prescriptive, whole-building approach to reduce energy use by 10 – 30% by following the *Core Performance Guide – Oregon Edition*
- Targets 10,000 – 70,000 sq. ft. office, retail, public assembly, or school buildings
- A program that integrates energy efficiency with green building and offers added incentives for achieving Earth Advantage® Commercial certification.



Contact Nicole Hillis, outreach manager,  
[nhillis@earthadvantage.org](mailto:nhillis@earthadvantage.org) or 503.334.7994



# Path to Net-Zero Pilot



## Overview

Launched May 1, 2009

Provides enhanced incentives for owners who construct buildings with exceptional energy performance and strive for net-zero on-site energy use.

Pilot is currently full, with 15 projects enrolled, including:

- 6 schools or college facilities
- 3 multi-unit residential buildings
- 3 community centers/event spaces
- 2 government/municipal buildings
- 1 office building



# Contact the New Buildings Program

**Energy Trust of Oregon** 866-368-7878

[www.energytrust.org](http://www.energytrust.org)

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