

Eugene Water & Electric Board

May 25th, 2023

This Presentation Covers:

A way to describe a home's energy efficiency: Home Energy Score

A summary of the homes that are participating in the Bethel Clean Energy project

EWEB's rebate and loan offerings for energy efficiency, water efficiency, and resiliency

Why Does EWEB Care About Energy Efficiency?

Conservation is cheaper than new power plants

For more than 40 years, the Eugene Water & Electric Board has been a leader in promoting strong and innovative conservation programs.

Improving residential energy efficiency helps to:

- Improve comfort & save families money on energy bills

- Reduce wasted energy & carbon emissions

- Foster growth of energy efficiency jobs in local economy

- Mitigate health impacts of homes, including mold, allergens, and pests

A Way to Provide Energy Information: Home Energy Score

US Department of Energy developed the Home Energy Score in ~2016 (EWEB is a partner)

A “miles-per-gallon” rating for homes

An affordable, reliable, & easy way to

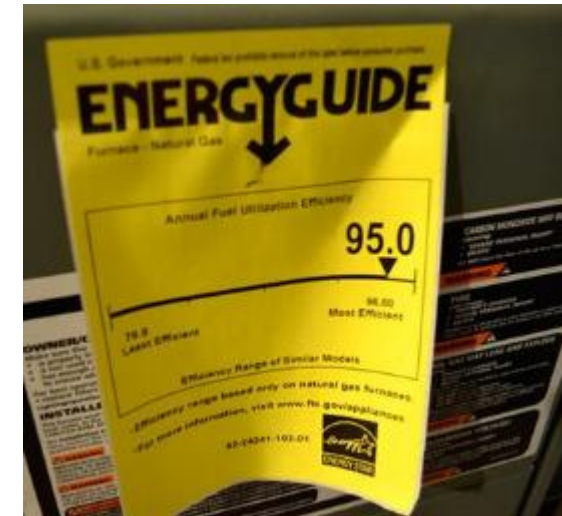
understand a home’s energy performance

EWEB made modifications for flexibility

Encourages clean electricity

Allows for remote assessments

Allows for manufactured homes,
apartments



Home Energy Score: What It Means

The Score is more useful than looking at prior utility bills

Assumes average weather for that location

Controls for impacts due to occupant behavior by assuming "average" behavior for all homes

Score of 1: High energy costs, expected to use more energy each year than 85% of U.S. homes

Score of 5: Average energy costs, ~50% of homes in the U.S. use less energy

Score of 10: Low energy costs, expected to use less energy than 90% of U.S. homes

Score with Improvements: Reflects how the home will score if cost-effective efficiency improvements are made

EWEB HOME ENERGY SCORE
Know the score. Outsmart energy waste.

U.S. DEPARTMENT OF ENERGY
THIS HOME'S SCORE: **2** OUT OF 10

THIS HOME'S ESTIMATED ENERGY COSTS: **\$1,765** PER YEAR

Better Buildings Home Energy Score
Year home's current score: **2**

HOME PROFILE
LOCATION: 123 Main St, Eugene, OR, 97401
YEAR BUILT: 1994
HEATED FLOOR AREA: 789 sq. ft.
NUMBER OF BEDROOMS: 2

ASSESSMENT
ASSESSMENT DATE: 1/27/2019
EXPIRATION DATE: 1/27/2027
ASSESSOR: Marie Curie, EWEB

HOW MUCH ENERGY IS THIS HOME LIKELY TO USE?
Electric: 16,698 kWh \$1,765
Natural Gas: 0 therms/yr \$0
Other: 0 gal/yr \$0
TOTAL ENERGY COSTS PER YEAR: **\$1,765**

THIS HOME'S CARBON FOOTPRINT:
as measured in metric tons of CO2 equivalent per year
This Home: **0.31**

ton/year WORST **8+** ton/year BEST **0**

What should my home's carbon footprint be? Oregonians should reduce carbon pollution per household to 7.1 tons per year by 2020, and to 1.9 tons per year by 2050 to reach our climate goals.
Note: All electric homes in Eugene will have a low carbon footprint, even if they have a poor energy score.

- Actual energy use and costs may vary based on occupant behavior and other factors.
- The carbon footprint is based only on estimated building energy use.
- Carbon emissions are calculated based on utility- and fuel-specific emissions factors provided by the Oregon Department of Energy.
- Estimated energy costs are calculated based on current utility prices (\$0.11/kWh for electricity).

• This report meets Oregon's Home Energy Performance Score Standard

Score today:	Score with improvements*:	Estimated energy savings with improvements:	Estimated carbon reduction with improvements:
2	9	\$777 per year	44%

FEATURE	TODAY'S CONDITION	RECOMMENDED IMPROVEMENTS
Attic insulation	Ceiling 1: Vaulted, R-0; Ceiling 2: R-11	Add attic insulation to R-49 as space allows
Floor insulation	R-21	-
Wall insulation	R-11	-
Envelope/Air Sealing	Not professionally air sealed	Have the home professionally air sealed
Windows	Double-pane wood or vinyl	-
Skylights	None	-
Heating system	Baseboard, Electric	Install an efficient heat pump
Cooling system	No Cooling	-
Duct insulation	No ductwork	-
Duct sealing	No ductwork	-
Water heater	Electric storage	Install a heat pump water heater
Solar PV	None	Visit bit.ly/EWEBsolar for more info

See EWEB website for example report: <https://www.eweb.org/documents/energy-efficiency-improvements-report-19012019.pdf>

What are the participating homes like?

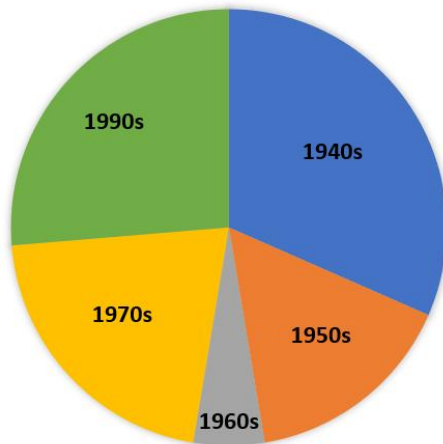
A variety of homes:

Mostly older (average year built=1967)

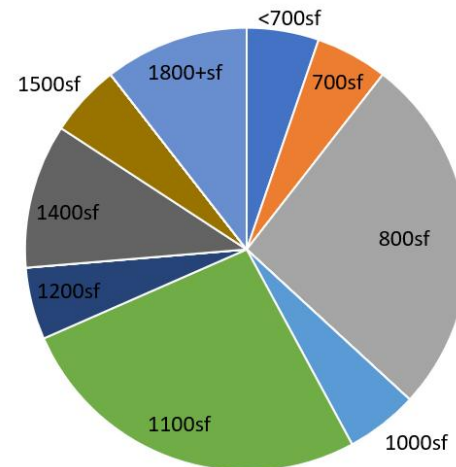
Modestly-sized (average size=1154sf)

Mostly electric heat, ~a third using electric resistance heat

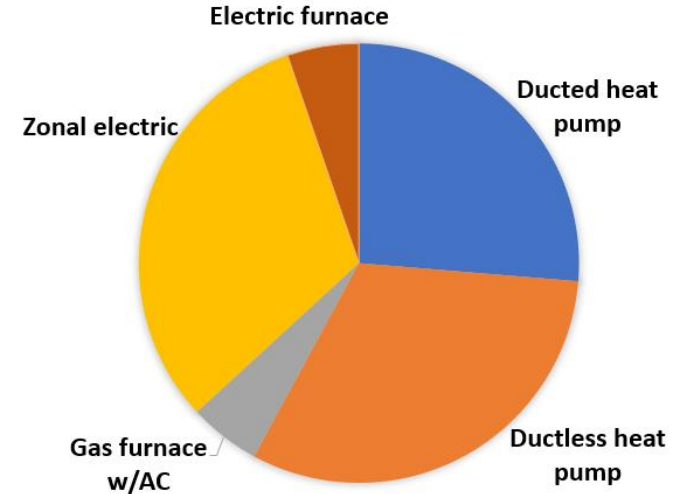
AGE OF HOMES



Home Sizes



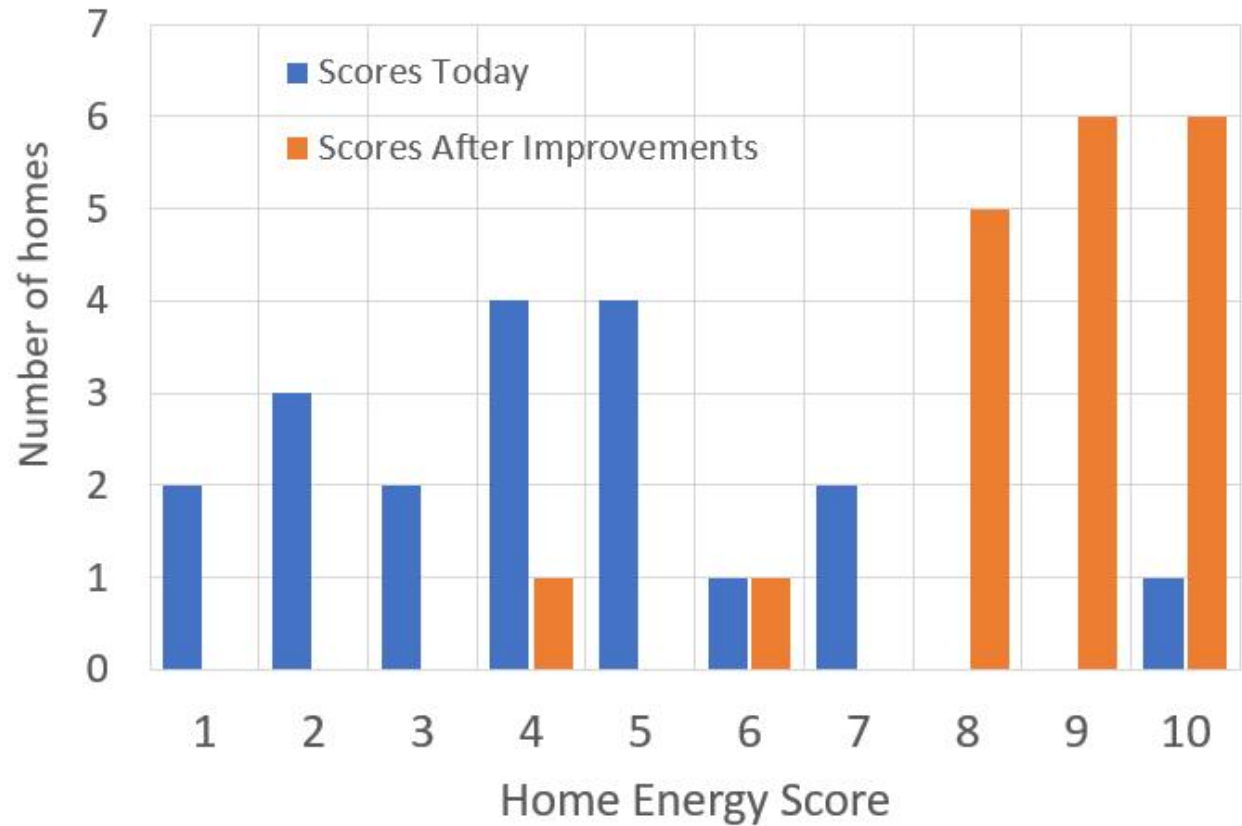
HEATING SYSTEM TYPES



How did participating homes score?

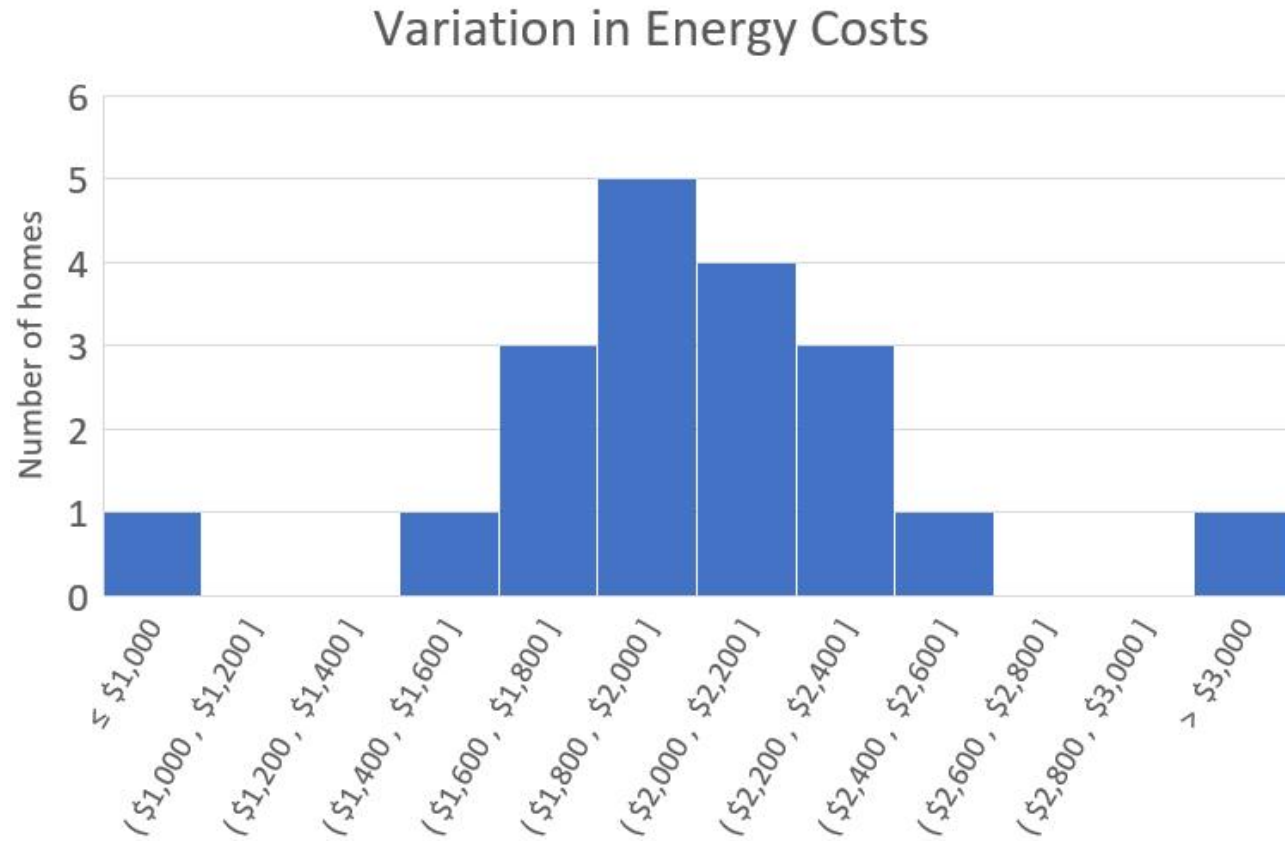
The average score was 4.2 in this group of homes. If improvements are made, the average score would be 8.6

Variation in Home Energy Scores



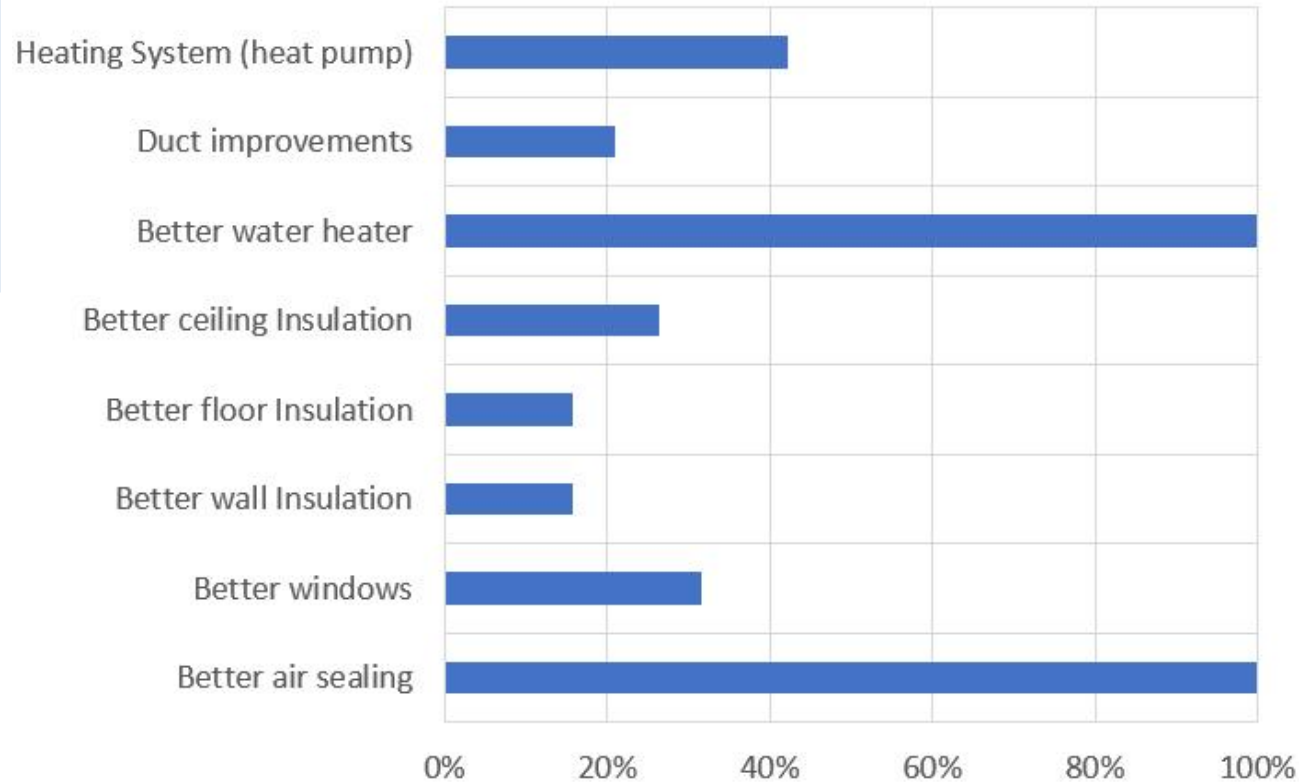
What are the annual energy costs for participating homes?

Annual energy costs range from \$298-\$3288/yr with an average of \$1953/yr



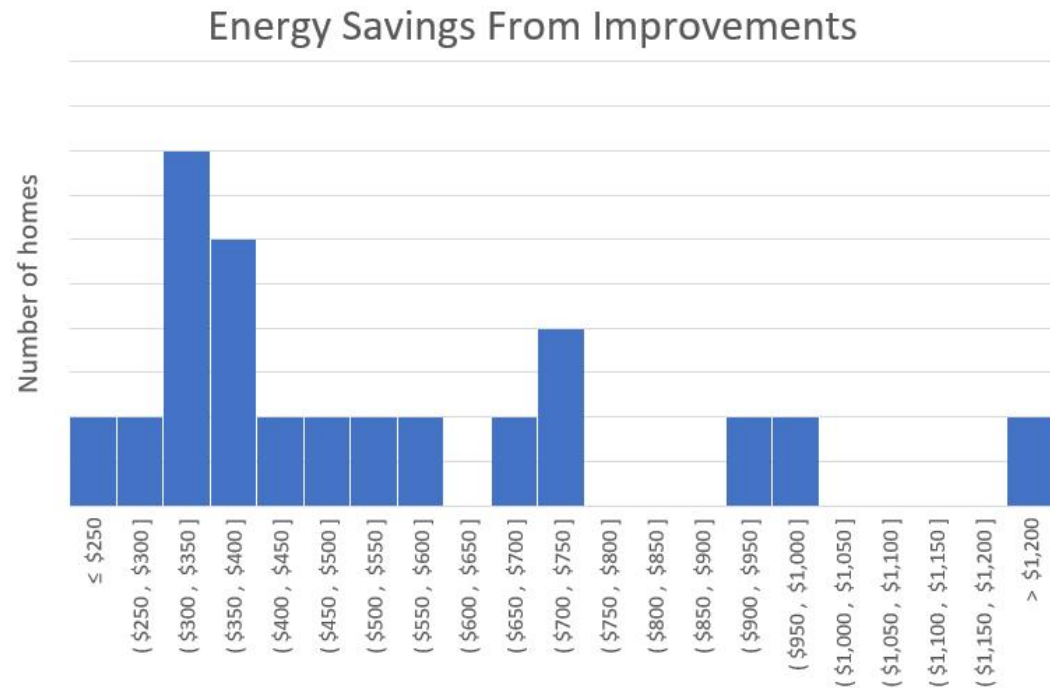
What energy improvements are recommended?

Recommended Energy Improvements



How much energy would be saved?

Annual savings range from \$237-\$1729/yr, with an average of \$564/yr



EWEB can help with the costs of improvements

- Rebates or 0% interest loans
- Additional funding for limited income households