



Manufactured Housing: Nexus Of Clean Energy & Affordable Housing Finance

Agenda

- Introduction To Energy Trust
- Manufactured Housing: Energy & Housing Perspectives
- Chattel Market Characteristics
- Oregon Manufactured Home Replacement Pilot

About us

Independent
nonprofit

Serving 1.6 million customers of
Portland General Electric,
Pacific Power, NW Natural,
Cascade Natural Gas and Avista

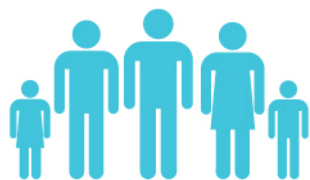
Providing access
to affordable
energy

Generating
homegrown,
renewable power

Building a
stronger Oregon
and SW
Washington

15 years of affordable energy

From Energy Trust's investment of \$1.5 billion in utility customer funds:



Nearly 660,000 sites transformed into energy efficient, healthy, comfortable and productive homes and businesses



13,000 clean energy systems generating renewable power from the sun, wind, water, geothermal heat and biopower

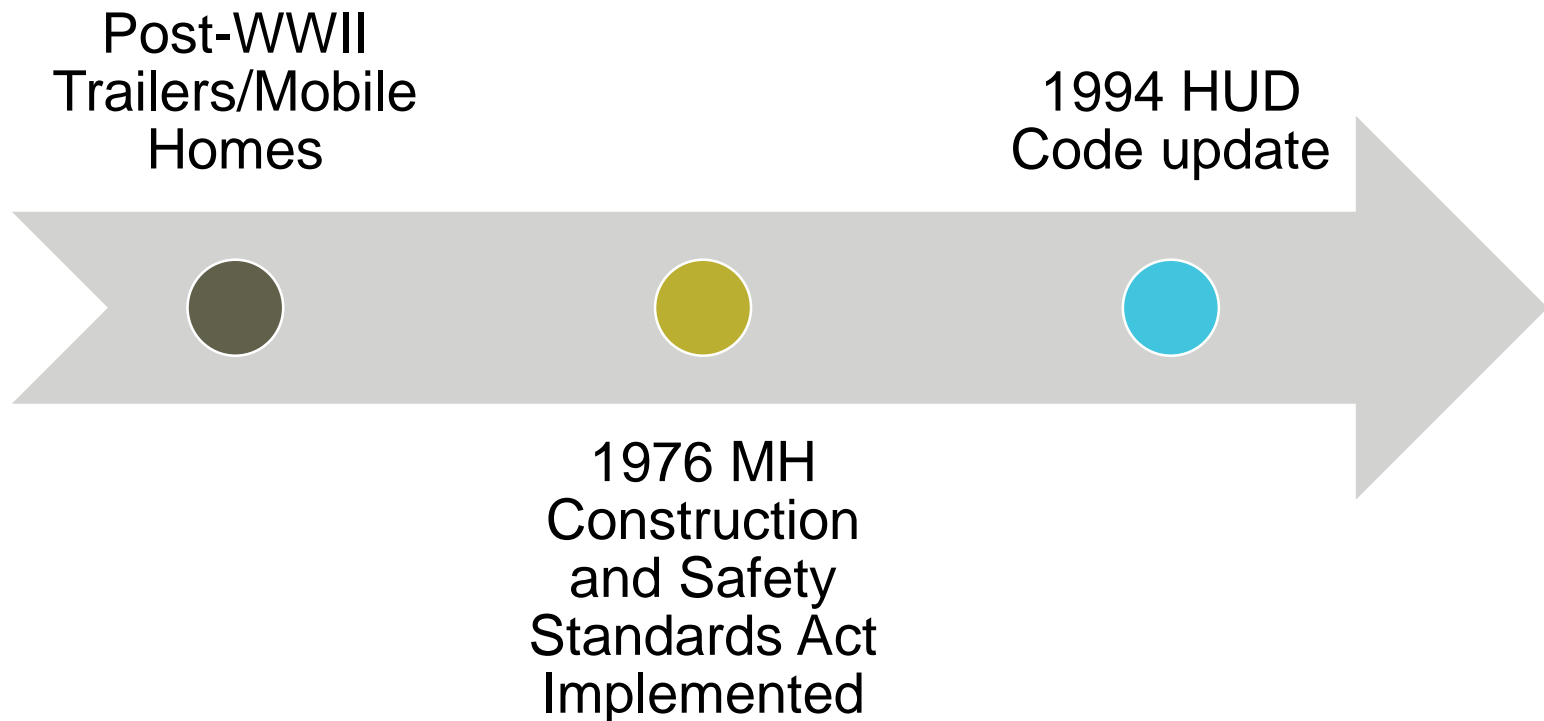


\$6.9 billion in savings over time on participant utility bills from their energy-efficiency and solar investments



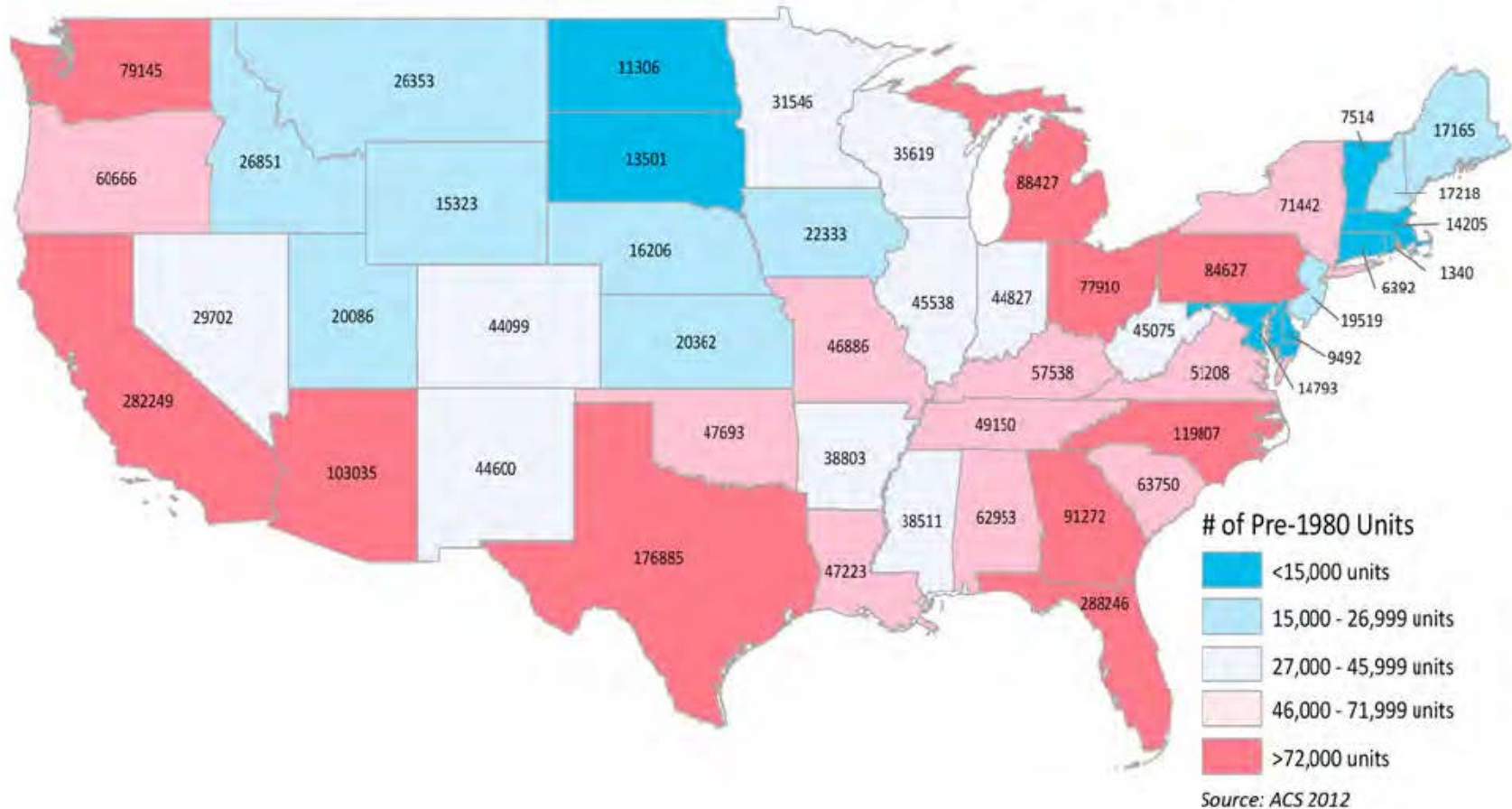
20 million tons of carbon dioxide emissions kept out of our air, equal to removing 3.5 million cars from our roads for a year

Trailer vs Manufactured Home? Timeline and Definitions



Distribution Of Older Vintage Homes

Figure 3: Number of Manufactured Homes Built Prior to 1980



Source: "Eradicating Older Manufactured Homes: Replacement Programs As A Strategy" retrieved from <http://www.jchs.harvard.edu/research/publications/eradicating-substandard-manufactured-homes-replacement-programs-strategy>



Ownership Models

- Parks = land-lease community
- Occupant may own the home, but the land underneath is leased from a park operator
- 43% of MHs are sited in leased land communities
- 60,000 leased land communities nationally
- Titling varies by state, typically default to personal property with provisions to be titled as real property

Older Manufactured Homes: The Energy Perspective

- High energy burden
- Structurally cannot accommodate increased insulation
- Frequently in distressed condition, diminishing energy benefit of individual repairs and improvements
- Repair costs can exceed value of the home
- In place well beyond useful life with a natural rate of retirement at 1.4% of existing stock per year (Oregon)



Manufactured Homes as Affordable Housing

THE SATURDAY EVENING POST

**Housing Shortage Relieved
With Trailer Coaches . . .**

A Home-Dream come True!

• LOOK INSIDE a modern trailer coach. You'll find the real life answer to your home dreams. . . You'll be amazed at the comfort, convenience and efficiency built into these *mobile homes*. . . real HOMES that are easing the need for small-family dwellings in towns and cities all over the United States. THE PRIVACY and handiness of a 3 room apartment are coupled with the mobility of an automobile—*plus* freedom from unnecessary obligation and expense. Study the pictures above. . . think how happy you'd be in A HOME OF YOUR OWN! And after this emergency is over, your sturdy, mobile home will be *valuable* for vacation use. RIGHT NOW YOU CAN GET a modern, roomy trailer coach.

(The manufacturers are straining every expanded facility to produce the thousands of trailer coaches so desperately needed, in our house-hungry nation—and they are succeeding!)

INDIVIDUALS and communities needing small dwellings will do well to see a dealer handling trailer coaches bearing the *Trailer Coach Manufacturers' Seal of Approval*. FHA and other agencies are approving hundreds of projects employing trailers—why not yours?

FREE BEAUTIFUL ILLUSTRATED BOOK

Send for this colorful 80 page book, "Live and Play—The Trailer Coach Way." It shows you the many advantages of the Trailer Coach, answering for both home and recreation, tells you what to look for in a Trailer Coach manufactured by a member of Trailer Coach Manufacturers Association. Mail the coupon today!

Relax in comfort in this completely and fully furnished living room. The handsome divan can be converted into a comfortable extra bed.

Women marvel at the completeness and efficiency of trailer coach kitchens; men also like their capacity, their compactness, and their practicality.

The bedrooms of coaches built by TCMA members have roof fans, cross-ventilation, built-in closets.

**ATTEND NATIONAL TRAILER COACH SHOW
CHICAGO COLISEUM, MARCH 16TH TO 24TH**

TRAILER COACH MANUFACTURERS ASSOCIATION

PRODUCING MEMBERS:
ALMA - AMERICAN - CENTURY - CONTINENTAL - DOD - ELGAR - GENERAL - HOWARD - INDIAN - LASALLE - LIBERTY - LIGHTHOUSE - LUXOR - MAIN-LINE - MODERN - NATIONAL - NEW MOON - PINK-AMERICAN - PLATT - PRINCE SCHROEDER - ROYAL - BOYCRRAFT - SCHULT - STREAMLITE - SUPERIOR - TRAVELITE - TRAVELD - TROTWOOD - UNIVERSAL - ZIMMER

TRAILER COACH MANUFACTURERS ASSOCIATION
DEPARTMENT 308, 311 WEST WASHINGTON STREET, CHICAGO 2, ILLINOIS

Please send me Free copy of 80 page book "Live and Play—The Trailer Coach Way."

Name _____
Address _____
City _____ Zone _____ State _____

If interested in profit opportunities presented by operating a TRAILER COACH PARK check here for special information 12

- \$28,400 median annual income in manufactured homes
- \$51,939 median annual income in single family, site-built homes
- Largest source of “naturally occurring” affordable housing
- Avg cost of single-wide home: \$42,000

Image retrieved from <https://www.collectorsweekly.com/articles/home-in-a-can> (From *Don't Call Them Trailer Trash*, Schiffer Publishing) March 9, 1946 edition of "Saturday Evening Post"

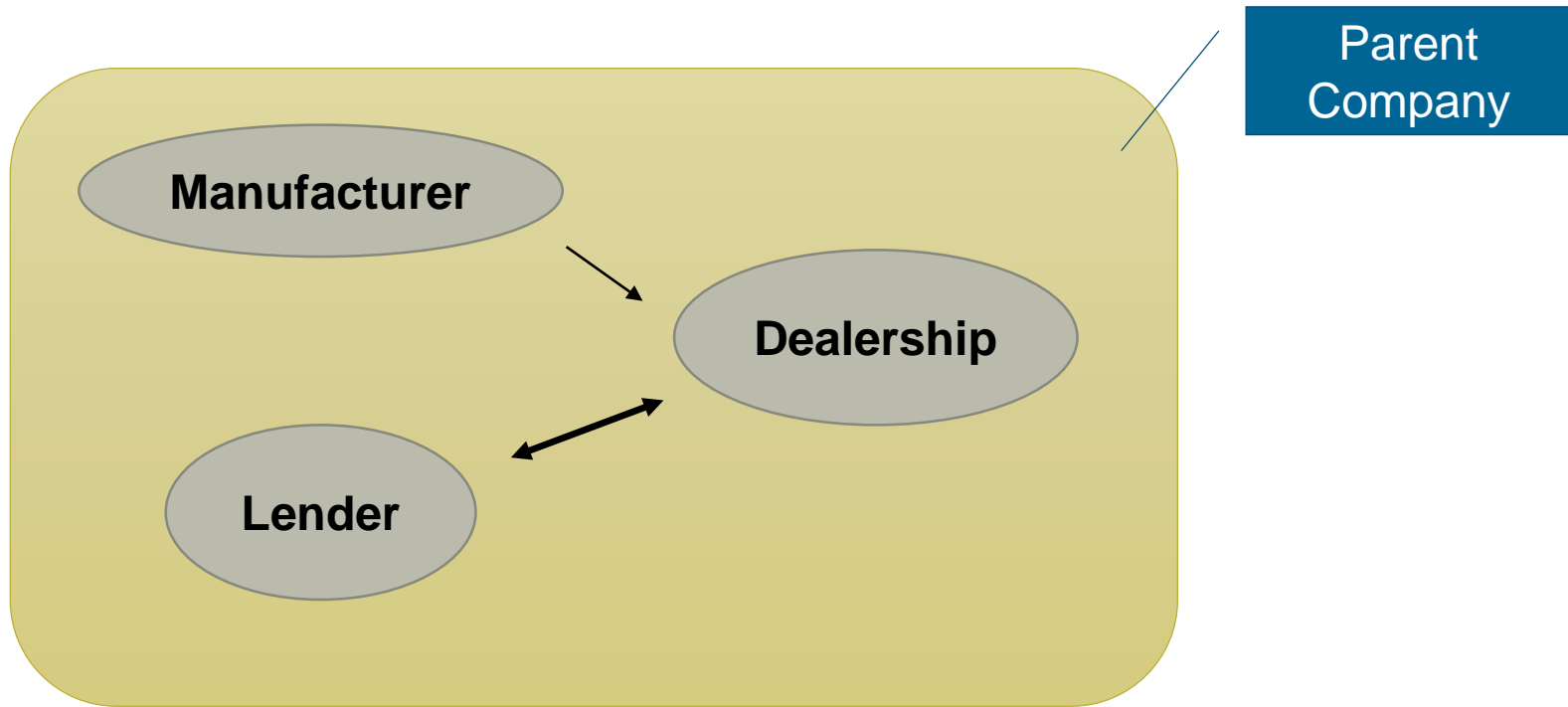
Manufactured Home Financing

Manufactured Homes as Personal Property

- Chattel loans have higher rates and shorter terms as compared with conventional mortgage products
- 68% of MH loans are classified as “Higher Priced Mortgage Loan” (as compared to 3% of site built)*
- MH finance experienced a wave of defaults during late 90’s early 2000’s
- Chattel lending has since consolidated to a handful of privately held firms, secondary market never recovered.

*Manufactured Housing Consumer Finance In The United States. (2014, September). Retrieved from http://files.consumerfinance.gov/f/201409_cfpb_report_manufactured-housing.pdf

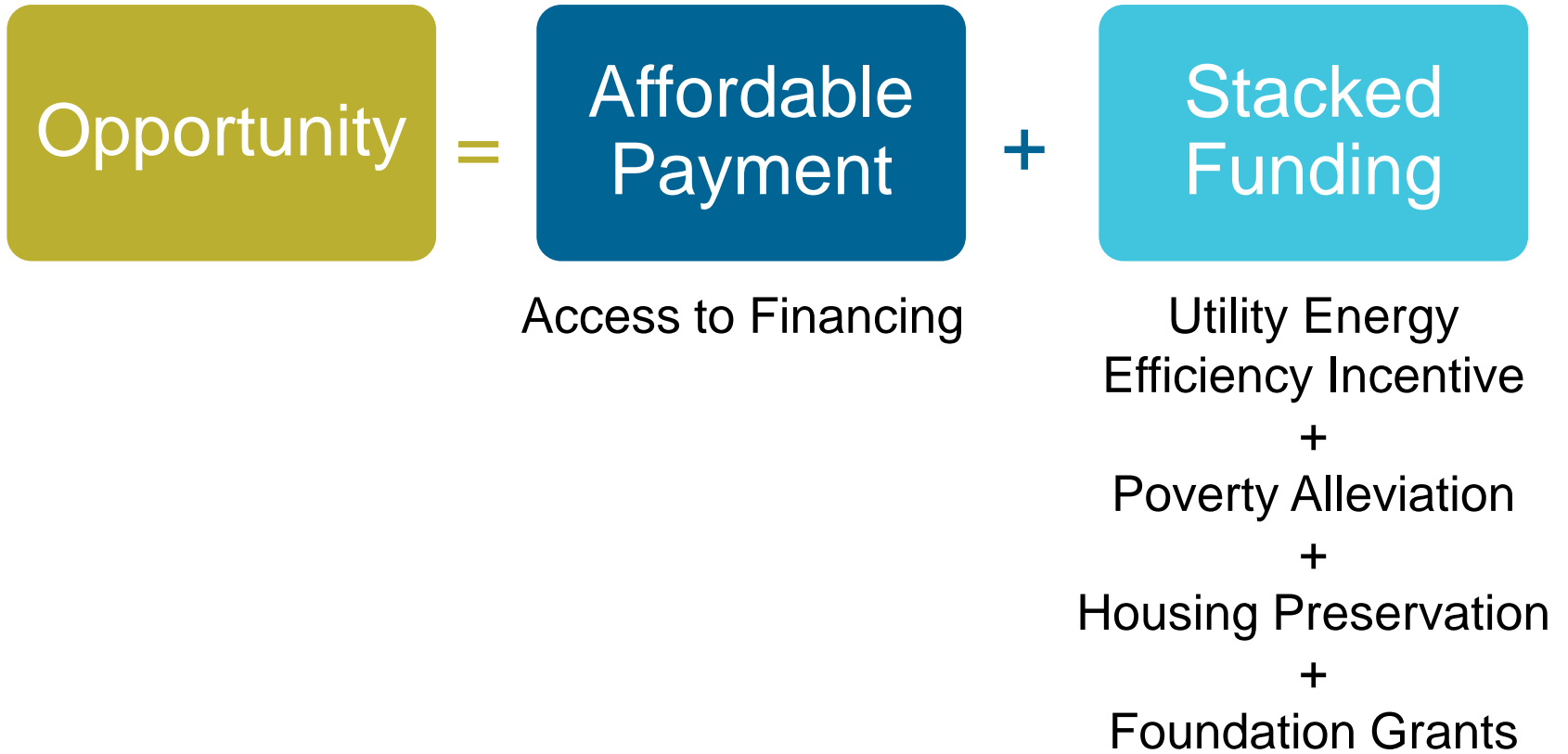
Chattel Market Structure: Sample Scenario



	Consumer 1: Loan at APOR	Consumer 2: Loan at HPML APR	Consumer 3: Loan at the HOEPA high- cost APR
Manufactured home price	\$80,000	\$80,000	\$80,000
20-year fixed-rate loan at 80% loan-to-value	\$64,000	\$64,000	\$64,000
Rate	3.36%	4.87%	9.87%
Percentage points above APOR	0%	1.50%	6.50%
Monthly payment	\$367	\$418	\$618

“Manufactured Housing Consumer Finance In The United States. (2014, September). Retrieved from http://files.consumerfinance.gov/f/201409_cfpb_report_manufactured-housing.pdf

Energy Trust of Oregon
Manufactured Home Replacement Pilot



Manufactured Home Replacement Pilot

- Partnership between housing, energy and community development organizations
- Goal is to better understand energy impact, quality of life improvements, project costs, barriers to participation and key elements of a successful program design
- Create a scalable financial model for leased land communities

Research Objectives

Utility Bills



Measure
energy savings

Structural
Assessments



Document
conditions,
connect to energy
and health
outcomes

Participant
Interviews



Customer-
focused design
to understand
lived experience

Documenting
Cost



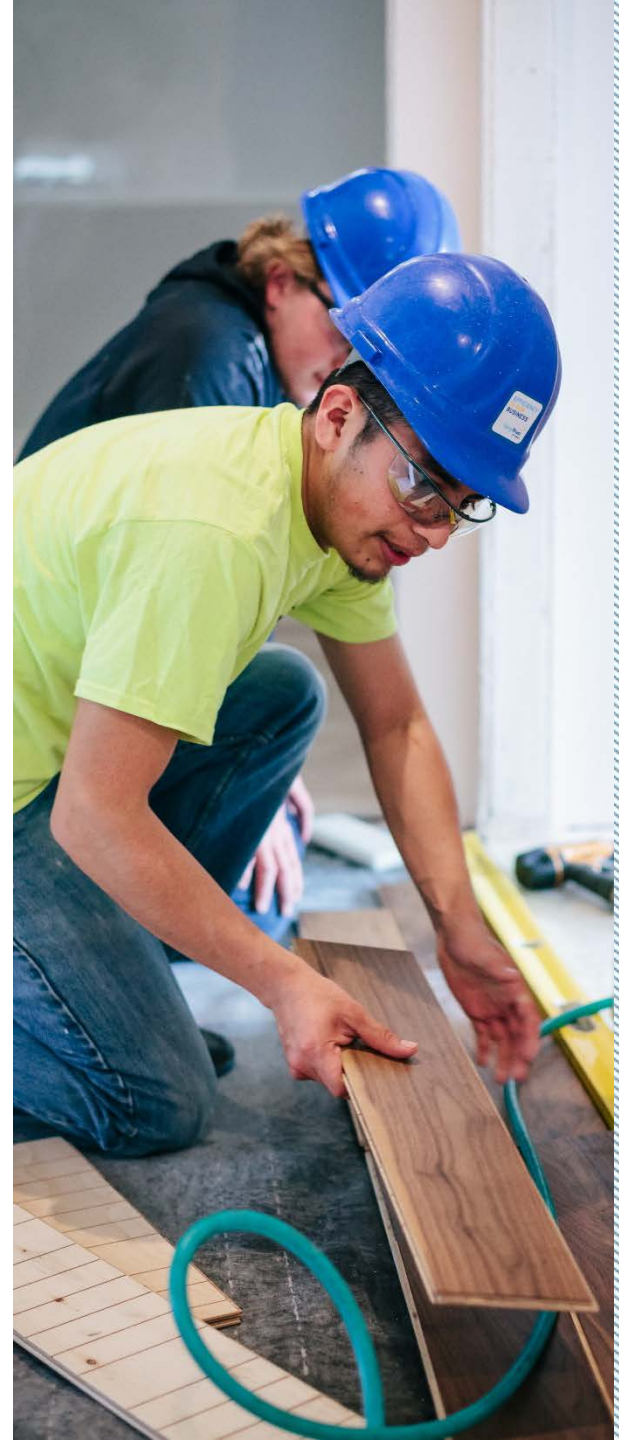
Economic
modeling

Energy Trust MH Replacement Savings and Incentives

Climate Zone: West of the Cascades			
Home configuration	Year built	Energy savings	Maximum Energy Trust Incentive
Single-Wide	Pre-1976	7,937 kWh	\$10,000
	1976-1994	4,723 kWh	\$7,500
Double-Wide	Pre-1976	15,148 kWh	\$15,000
	1976-1994	9,653 kWh	\$12,500
Climate Zone: East of the Cascades			
Home configuration	Year built	Energy savings	Maximum Energy Trust Incentive
Single-Wide	Pre-1976	14,935 kWh	\$15,000
	1976-1994	9,695 kWh	\$9,000
Double-Wide	Pre-1976	27,656 kWh	\$17,500
	1976-1994	18,696 kWh	\$15,000

Recommended Reading

- 1) “Manufactured Housing Consumer Finance In The United States” Consumer Finance Protection Bureau, Sept 2014
- 2) “Eradicating Substandard Manufactured Homes: Replacement Programs as a Strategy” Mathew Furman, Harvard Joint Center For Housing Studies, Nov 2014
- 3) “The Mobile Home Trap” Investigative series from Seattle Times and Center For Public Integrity, 2015-2016





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