

Strategic program - draft

Clean energy in single family homes

Investing \$140 million over five years in 3,500 single-family homes to decrease energy usage, GHG emissions and utility bills while increasing comfort, health and resiliency.

This program will fund energy efficiency and renewable energy improvements for low-income homeowners, as well as for renters and moderate-income homeowners in single-family residences. Homes owned and occupied by low-income households will be eligible for whole home energy retrofits and the highest level of program investment. Eligible measures for rentals and moderate-income owner-occupied units will be limited to high-impact efficiency measures and are funded at a lower level (see table 1).

All eligible improvements will prioritize the highest energy-use reduction potential and will include measures that also provide health, safety and accessibility benefits. Each home will receive estimated energy-saving projections along with a test-in assessment that follows building science principles, and a test-out quality assurance verification.

This strategic program is intended to increase the speed with which frontline communities receive climate investments that lower greenhouse gas emissions and utility bills, increase resiliency, and improve occupant health and comfort. The program will leverage other funding sources, such as utility programs, Federal Inflation Recovery Act funding and other relevant grants. Low-barrier and fair term loans will be made available to moderate-income homeowners to leverage smaller PCEF investments into greater GHG emissions-reducing and asset-preserving projects.

Table #1	Single family energy investments			
	Number of homes 5-year total	PCEF investment per home	Eligible households	Reduction in energy use per home
Deep energy retrofits	1,500	Up to \$50K	Homeowners <80% AMI	30%
Limited high-impact energy efficiency measures	500	Up to \$15K	Renters <80% AMI	15%
Limited high-impact energy efficiency measures	750	Up to \$30K	Homeowners 81%-120% AMI	20%
Limited high-impact energy efficiency measures	750	Up to \$15K (50% match required)	Homeowners 121%-150% AMI	20%

* Up to 30% of construction budget for each home can be used for enabling repairs, accessibility measures, and other necessary life, health, safety measures. The remaining 70% must be used for energy improvements.

Goals, opportunity and metrics

Goals:

- Reduce greenhouse gas emissions
- Provide energy upgrades to 3,500 single-family homes
- Reduce home energy use by 15% to 30% per household
- Ensure access to appropriate cooling and ventilation for low-income homes
- Prioritize the addition of upgrades that improve accessibility and climate resiliency in low and moderate-income households, including efficient cooling and wildfire smoke relief measures.

Opportunity: Energy upgrades can reduce utility bills, make homes healthier and more comfortable, and cut emissions from greenhouse gases and other pollutants. Yet only about 0.2% of low-income households in the United States receive much-needed weatherization services each year. In Portland, about half (49,000) of all low-income households live in single-family homes, many of which are older and inefficient. A third of these are BIPOC households, both owners and renters, with incomes at or below 80% AMI.

This program will invest heavily in homes occupied by low-income homeowners as a means to directly target benefits to PCEF priority populations and to support housing stability. As housing costs rise, many current low-income homeowners risk displacement as their homes become less affordable and maintenance is deferred. PCEF investments to improve the energy usage of their homes can reduce their housing cost burden, as well as improve the value of their asset, supporting intergenerational wealth building.

However, it is important that we also serve renters who are disproportionately people of color and who also experience higher housing cost burden than homeowners (see figure 2). The biggest challenge in bringing climate programs to the rental market is lack of owner interest and willingness to participate. In single-family housing, property owners rarely pay utility bills and are therefore unmotivated to invest in energy efficiency measures. The result is that those most in need of utility expense relief are often left unserved by energy programs. To mitigate the potential risk of increasing rents while serving this market, the program includes a pathway that allows for a lower level of investment in high-impact efficiency investments (e.g., heat pumps, attic insulation). Rental properties can receive an increasing level of investment associated with length of rent stability agreement the property owner agree to.

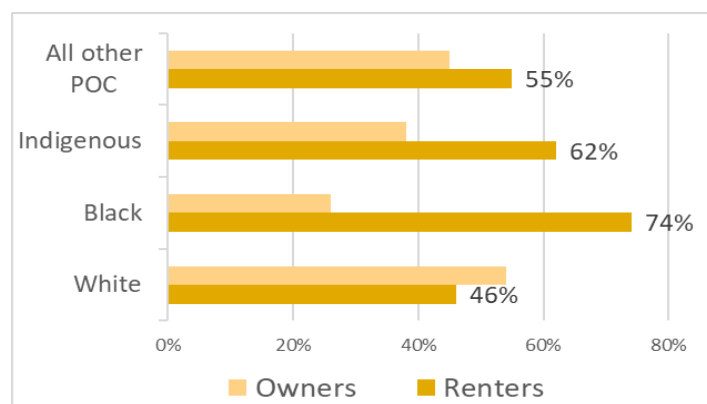


Fig. 1: Rates of rentership and homeownership in single-family homes.

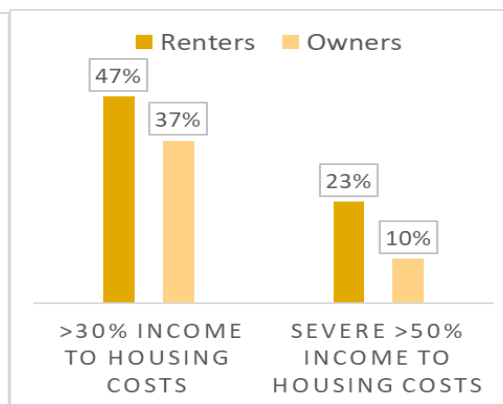


Fig. 2: Rates of Housing Cost Burden and Severe Housing Cost Burden.

This program model strives to fill in the gaps and eliminate typical barriers that have historically limited equitable access to energy efficiency and renewable energy programs by:

- Providing adequate funding levels for each upgrade.
- Funding critical home repairs required to enable energy upgrades.
- Eliminating regulatory barriers such as fuel-switching exclusions and narrow savings-to-investment requirements.
- Serving a wider range of income levels.
- Serving renters by installing high-energy saving measures such as ductless heat pumps and attic insulation.

Metrics to be tracked and reported include:

- Number of homes improved
- Occupant demographics
- Location of homes improved
- Modelled or deemed energy use/savings/generation by home
- Number of homes to which heat pump cooling technology is added
- Number of homes with improved ventilation/filtration
- If applicable, installed kW and modeled annual kWh for solar PV
- Workforce (including apprentices, workers, subcontractors and contractors) demographics, hours and wages

Direct benefits and social impact

Financial Benefits and Beneficiaries	<ul style="list-style-type: none"> • Low to moderate-income households and the program will prioritize Black people, Indigenous people, and other people of color communities. • Home energy upgrades will provide direct financial benefits to occupants through utility bill reduction and asset preservation for homeowners.
Equity Accountability Mechanisms	<ul style="list-style-type: none"> • All projects will receive third party quality assurance inspections, equipment commissioning and quality assurance verification. • Workforce and Contractor Equity Agreement compliance. • Rental properties that receive PCEF investment will be required to commit to rent stabilization for 3, 5 or 9 years, depending on the level of investment. • Priority for projects that are developed by organizations that reflect PCEF priority populations and utilize diverse contractors and workforce • Funding for accessibility measures for people who experience disabilities
Timing of benefits	<ul style="list-style-type: none"> • Program online by summer 2024 • Energy efficiency upgrades have an average 20-year life and solar installations have an average a 30-year life. Benefits of both evident immediately after installation. • Program will fund maintenance plans and support occupant education to ensure GHG reduction potential is realized, and life of the measures are maximized. • Landlord reluctance may delay benefits in rental homes.
Co-benefits	<ul style="list-style-type: none"> • Home energy efficiency and renewable energy upgrades, when completed following solid building science principles, improve the comfort and health of occupants by making homes healthier and safer. Home energy upgrades can reduce mold, moisture, and harmful particulate exposure. They can also lower the risk of gas leaks and carbon monoxide poisoning. The reduction in thermal stress

	caused by extreme heat or cold improves climate resiliency in vulnerable communities, and indoor air quality improvements can provide direct health benefits.
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Partner roles

Through RFP solicitation, PCEF will select organizations that can commit to providing a minimum of 50 whole home energy retrofits or 150 single-measure installations per year (note: applicants desiring to provide fewer retrofits will be encouraged to apply through community responsive grants). Applicants may be non-profit, for-profit or government organizations. Preference will be given to organizations with a history of serving and reflecting PCEF-priority populations. In addition to project design and implementation, selected partners will access other available funding such as utility programs, Federal Inflation Recovery Act grants, and low-cost loans for moderate-income homeowners to leverage PCEF grants into greater savings and benefits.

Workforce and contractor equity

5-year funding amount: \$3.5M

To align contractor and workforce capacity with the demands of this program as well as the larger market, PCEF will support and fund worker training, as well as capacity building for implementation partners and priority population contractors.

Workforce and Contractor Development investment goals:

- 350-450 green building and equipment installation trainings for workers
- 5,000 hours of building science technical mentorship for contractors
- Equipment provided for 15-25 contractors entering or expanding in building clean energy work
- Retention grants for up to 80 new workers and 50 contractors

Requirements

- Compliance with PCEF Workforce Contractor Equity Agreement (WCEA) including:
 - Utilization rates, informed by market study and to include preference for local businesses in addition to contractor/subcontractor/worker/apprentice utilization rates for race, ethnicity and gender. Note that the market study will be complete spring/summer 2023.
 - Safe and Respectful Jobsite training for workers, supervisors and owners.
 - Distribute information cards on PCEF requirements to workers.
 - Collect and report workforce demographic, trade and wage reporting for workers.
 - Pay 180% minimum wage for all PCEF funded work.

Timeline and implementation

- RFP solicitation winter, 2023
- Program online by summer 2024
- Lower number of upgrades the first year as partners and program gears up, will be made up in subsequent years.