Alaska Housing
FINANCE CORPORATION

Building Codes, Energy Efficiency and Homeowner Assistance:

A Workshop on Alaska Housing Finance Corporation's Upcoming Federal Grant Programs

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Introduction

Alaska Housing Finance Corporation (AHFC) is a self-supporting public corporation with offices in 16 communities statewide. AHFC provides statewide financing for multi-family complexes and single-family homes with loan options for low- to moderate-income borrowers, veterans, teachers, nurses, public safety officers and those living in rural areas. AHFC provides energy efficiency programs, low-income rental assistance, and programs for those who are homeless and those seeking to become financially self-sufficient.

Framework for Responsive Code Development

Budget: $1,500,000

Schedule: 3 Years

AHFC has been conditionally approved for a grant from the Department of Energy:

- Office of Energy Efficiency and Renewable Energy to create a framework for building code adoption for the State of Alaska.
- Negotiations of the grant are still underway and could be subject to change.

Framework for Responsive Code Development

AHFC will work with partners to develop an easy-to-follow framework for building code adoption in Alaska.

Our partnerships include:

- Alaska Municipal League (AML)
- Alaska Association of Housing Authorities (AAHA)
- Alaska State Home Builders Association (ASHBA)

Framework for Responsive Code Development

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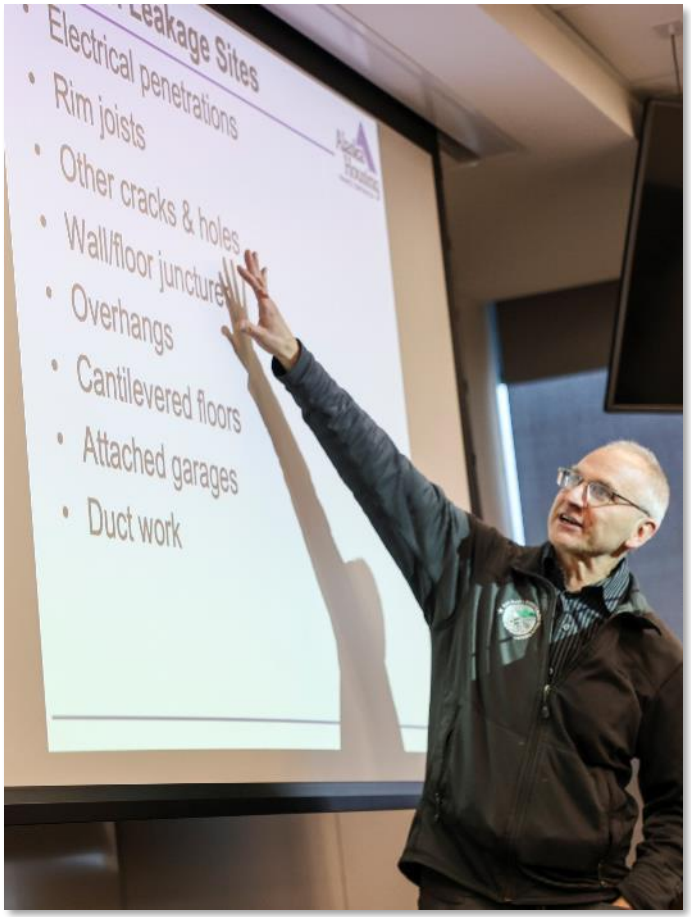
Overview and purpose of the framework:

Development of a code adoption process that will respect the common building practices of local jurisdictions while delivering a consistent, effective methodology for energy efficiency and resiliency in newly constructed homes.

This will pave the way for Alaskan communities to implement codes that ensure housing is safe, functional and accessible.

Framework for Responsive Code Development



Goal 1: Code development that is uniform and locally responsive.

- Objective 1A: Building code best practices that identify carbon reduction strategies, tools and technologies, including energy efficiency.
- Objective 1B: Locally responsive implementation that is informed by the needs of vulnerable populations and disadvantaged communities.

Framework for Responsive Code Development

Goal 2: Consensus building and stakeholder engagement.

- Objective 2A: Partnerships that identify commonalities and common goals to improve community conditions.
- Objective 2B: Training and technical assistance that leads to more resilient buildings.

Federal Energy Rebates

AHFC preparing $75 million application for U.S. Department of Energy in 2024.

- Home Efficiency Rebate Program
- Home Electrification and Appliance Rebate Program

U.S. Department of Energy Timeline

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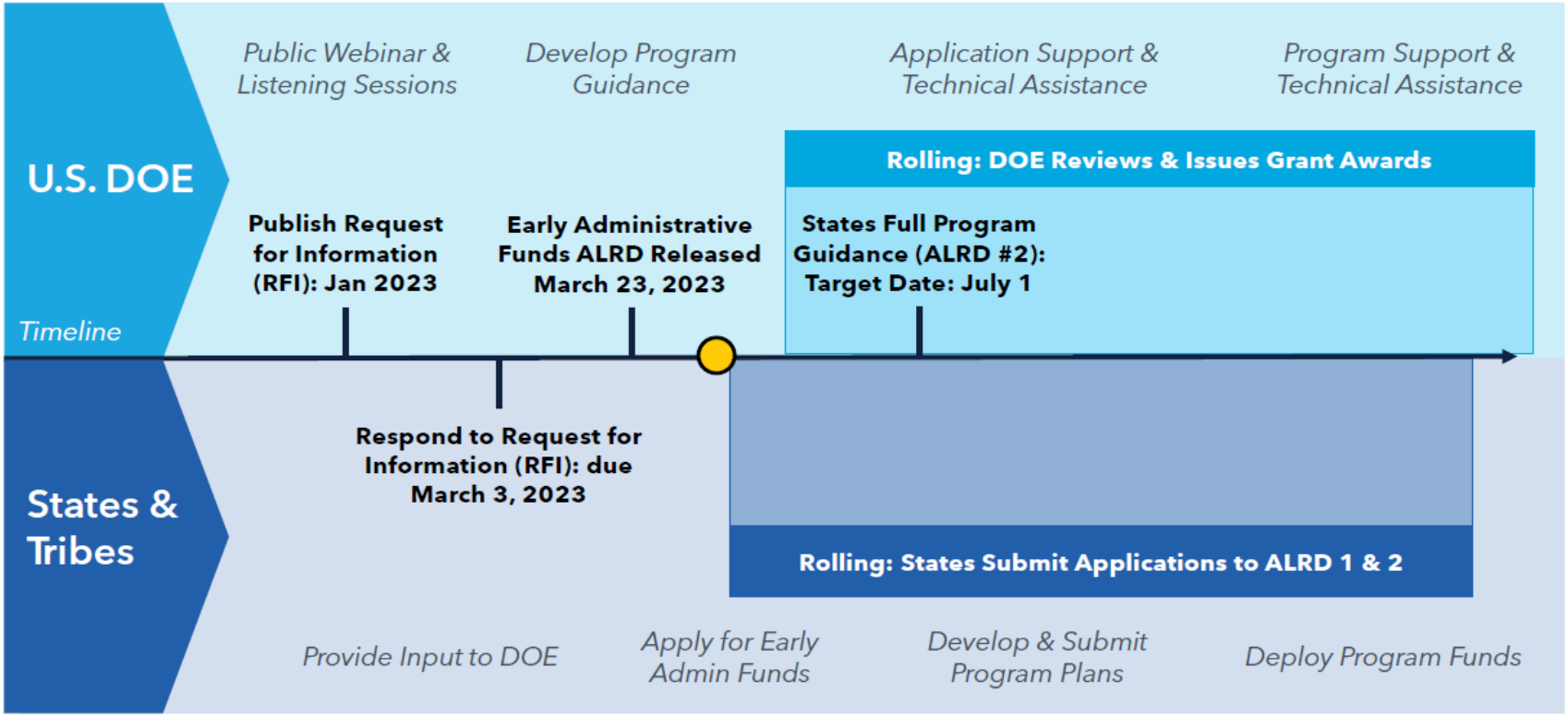
Home Energy Rebates Program Development Timeline



U.S. DEPARTMENT OF ENERGY | OFFICE OF STATE & COMMUNITY ENERGY PROGRAMS | 5

Home Efficiency Rebate Program

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Energy Savings	Rebate Amounts			
	Single Family	Single Family LMI	Multifamily	Multifamily LMI
20-35% modeled savings	Lesser of $2,000 or 50% of project costs	Lesser of $4,000 or 80% of project costs	$2,000 per dwelling unit, maximum $200,000 per building	Lesser of $4,000 per dwelling unit or 80% of project costs
35% or more modeled savings	Lesser of $4,000 or 50% of project costs	Lesser of $8,000 or 80% of project costs	$4,000 per dwelling unit, maximum $400,000 per building	Lesser of $8,000 per dwelling unit or 80% of project costs

- Reduction in home energy use incentivized with rebates for whole-home retrofits.
- Homeowners must begin with an energy assessment to identify options for a improvements and model savings.
- Lower Median Income (LMI) = 80% of Area Median Income as determined by HUD.

Qualifying Criteria Includes Area Median Income

State Area Median Income (AMI), family of 4	$106,900
50% AMI	$53,450
80% AMI	$85,500
150% AMI	$160,350

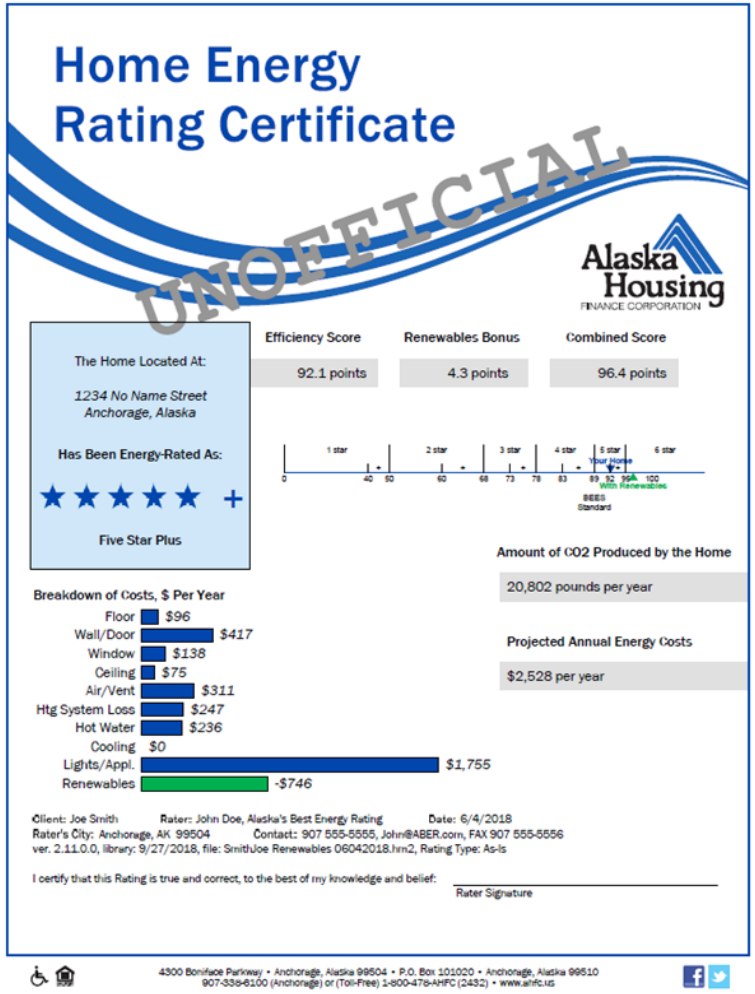
Source: https://www.huduser.gov/portal/datasets/il.html#2023_faq

Home Electrification and Appliance Rebates

	Up to 80% AMI	81-150% AMI
Electric Load Service Center upgrades/Breaker Box	$4,000	$2,000
Electric Stove, Cooktop, Range and/or Oven	$840	$420
Electric Wiring	$2,500	$1,750
Heat Pump Clothes Dryers	$840	$420
Heat Pump Heating/Cooling	$8,000	$4,000
Heat Pump Water Heaters	$1,750	$875
Weatherization (Insulation, Air Sealing, Ventilation)	$1,600	$800

- $14,000 maximum benefit per household.
- Households above 150% of AMI as determined by HUD are not eligible.
- Intended to be provided a the “Point-of-Sale”, amount to be deducted upfront.

Home Energy Rating Certificate



Home Energy Rating Certificate

UNOFFICIAL

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The Home Located At:

1234 No Name Street
Anchorage, Alaska

Has Been Energy-Rated As:

★★★★★+

Five Star Plus

Efficiency Score	Renewables Bonus	Combined Score
92.1 points	4.3 points	96.4 points

1 star 2 star 3 star 4 star 5 star 6 star
0 40 50 60 68 73 78 83 89 92 96A 100
Your Home
with Renewables
HERS Standard

Amount of CO2 Produced by the Home
20,802 pounds per year

Projected Annual Energy Costs
$2,528 per year

Breakdown of Costs, $ Per Year

Floor	$96
Wall/Door	$417
Window	$138
Ceiling	$75
Air/Vent	$311
Htg System Loss	$247
Hot Water	$236
Cooling	$0
Lights/Appl.	$1,755
Renewables	-$746

Client: Joe Smith Rater: John Doe, Alaska's Best Energy Rating Date: 6/4/2018
Rater's City: Anchorage, AK 99504 Contact: 907 555-5555, John@ABER.com, FAX 907 555-5556
ver. 2.11.0.0, library: 9/27/2018, file: SmithJoe Renewables 06042018.hm2, Rating Type: As-Is

I certify that this Rating is true and correct, to the best of my knowledge and belief:

Rater Signature

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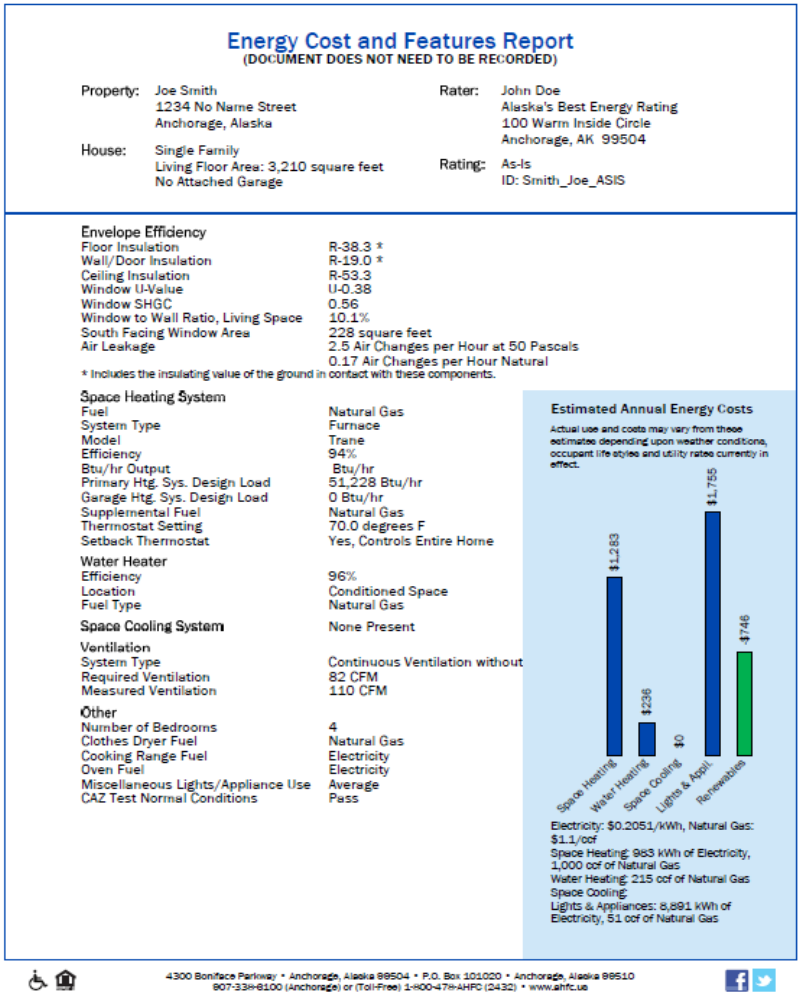
907-338-6100 (Anchorage) or (Toll-Free) 1-800-478-AHFC (2432) • www.ahfc.us

- AkWarm Energy Modeling Software
- Energy Rating Certificate (3 parts)
  - Certificate
  - Energy costs and features
  - Improvement Options

Energy Cost and Features



Energy Cost and Features Report
(DOCUMENT DOES NOT NEED TO BE RECORDED)

Property: Joe Smith
1234 No Name Street
Anchorage, Alaska

House: Single Family
Living Floor Area: 3,210 square feet
No Attached Garage

Rater: John Doe
Alaska's Best Energy Rating
100 Warm Inside Circle
Anchorage, AK 99504

Rating: As-Is
ID: Smith_Joe_ASIS

Envelope Efficiency

Floor Insulation	R-38.3 *
Wall/Door Insulation	R-19.0 *
Ceiling Insulation	R-53.3
Window U-Value	U-0.38
Window SHGC	0.56
Window to Wall Ratio, Living Space	10.1%
South Facing Window Area	228 square feet
Air Leakage	2.5 Air Changes per Hour at 50 Pascals 0.17 Air Changes per Hour Natural

* Includes the insulating value of the ground in contact with these components.

Space Heating System

Fuel	Natural Gas
System Type	Furnace
Model	Trane
Efficiency	94%
Btu/hr Output	Btu/hr
Primary Htg. Sys. Design Load	51,228 Btu/hr
Garage Htg. Sys. Design Load	0 Btu/hr
Supplemental Fuel	Natural Gas
Thermostat Setting	70.0 degrees F
Setback Thermostat	Yes, Controls Entire Home

Water Heater

Efficiency	96%
Location	Conditioned Space
Fuel Type	Natural Gas

Space Cooling System None Present

Ventilation

System Type	Continuous Ventilation without
Required Ventilation	82 CFM
Measured Ventilation	110 CFM

Other

Number of Bedrooms	4
Clothes Dryer Fuel	Natural Gas
Cooking Range Fuel	Electricity
Oven Fuel	Electricity
Miscellaneous Lights/Appliance Use	Average
CAZ Test Normal Conditions	Pass

Estimated Annual Energy Costs

Actual use and costs may vary from these estimates depending upon weather conditions, occupant life styles and utility rates currently in effect.

Electricity: $0.2051/kWh, Natural Gas: $1.1/ccf
Space Heating: 983 kWh of Electricity, 1,000 ccf of Natural Gas
Water Heating: 215 ccf of Natural Gas
Space Cooling:
Lights & Appliances: 8,891 kWh of Electricity, 51 ccf of Natural Gas

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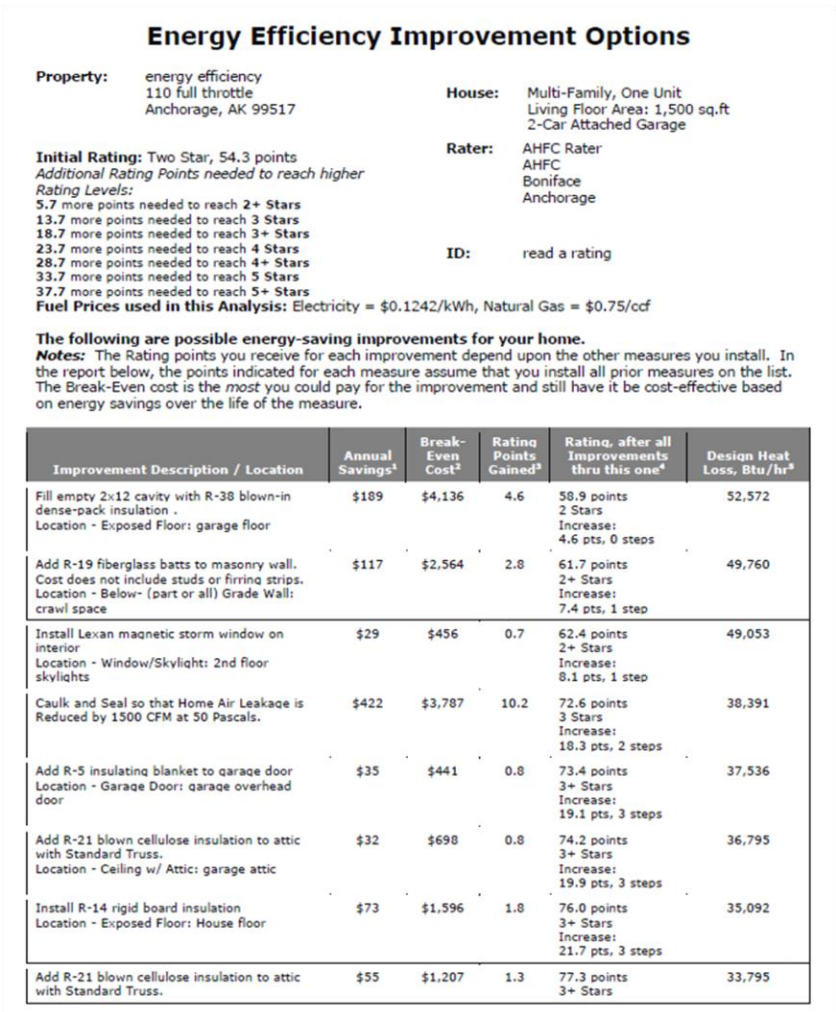
Shows current energy features of home.

The Home Efficiency Rebate Program



Energy Efficiency Improvement Options

Property: energy efficiency
110 full throttle
Anchorage, AK 99517

House: Multi-Family, One Unit
Living Floor Area: 1,500 sq.ft
2-Car Attached Garage

Rater: AHFC Rater
AHFC
Boniface
Anchorage

ID: read a rating

Initial Rating: Two Star, 54.3 points
Additional Rating Points needed to reach higher Rating Levels:
5.7 more points needed to reach **2+ Stars**
13.7 more points needed to reach **3 Stars**
18.7 more points needed to reach **3+ Stars**
23.7 more points needed to reach **4 Stars**
28.7 more points needed to reach **4+ Stars**
33.7 more points needed to reach **5 Stars**
37.7 more points needed to reach **5+ Stars**
Fuel Prices used in this Analysis: Electricity = $0.1242/kWh, Natural Gas = $0.75/ccf

The following are possible energy-saving improvements for your home.
Notes: The Rating points you receive for each improvement depend upon the other measures you install. In the report below, the points indicated for each measure assume that you install all prior measures on the list. The Break-Even cost is the *most* you could pay for the improvement and still have it be cost-effective based on energy savings over the life of the measure.

Improvement Description / Location	Annual Savings[1]	Break-Even Cost[2]	Rating Points Gained[3]	Rating, after all Improvements thru this one[4]	Design Heat Loss, Btu/hr[5]
Fill empty 2x12 cavity with R-38 blown-in dense-pack insulation . Location - Exposed Floor: garage floor	$189	$4,136	4.6	58.9 points 2 Stars Increase: 4.6 pts, 0 steps	52,572
Add R-19 fiberglass batts to masonry wall. Cost does not include studs or firring strips. Location - Below- (part or all) Grade Wall: crawl space	$117	$2,564	2.8	61.7 points 2+ Stars Increase: 7.4 pts, 1 step	49,760
Install Lexan magnetic storm window on interior Location - Window/Skylight: 2nd floor skylights	$29	$456	0.7	62.4 points 2+ Stars Increase: 8.1 pts, 1 step	49,053
Caulk and Seal so that Home Air Leakage is Reduced by 1500 CFM at 50 Pascals.	$422	$3,787	10.2	72.6 points 3 Stars Increase: 18.3 pts, 2 steps	38,391
Add R-5 insulating blanket to garage door Location - Garage Door: garage overhead door	$35	$441	0.8	73.4 points 3+ Stars Increase: 19.1 pts, 3 steps	37,536
Add R-21 blown cellulose insulation to attic with Standard Truss. Location - Ceiling w/ Attic: garage attic	$32	$698	0.8	74.2 points 3+ Stars Increase: 19.9 pts, 3 steps	36,795
Install R-14 rigid board insulation Location - Exposed Floor: House floor	$73	$1,596	1.8	76.0 points 3+ Stars Increase: 21.7 pts, 3 steps	35,092
Add R-21 blown cellulose insulation to attic with Standard Truss.	$55	$1,207	1.3	77.3 points 3+ Stars	33,795

Energy Efficiency Improvement Options Report

- Shows the eligible improvements.
- Listed in order of most cost-effective to least cost-effective improvements

Solar For All

Joint application due Oct. 12

Residential rooftop and multi-family focus

Federal focus on disadvantaged communities and low-income Americans

$25 million	Single-Family Residential rooftop solar to AHFC
$12.5 million	Single-Family Residential rooftop solar from TCC
$10 million	Multi-family rooftop solar
$10 million	Training, Outreach & Administration
$5 million	Financing opportunity

State-Based Home Energy Efficiency Contractor Training Grants

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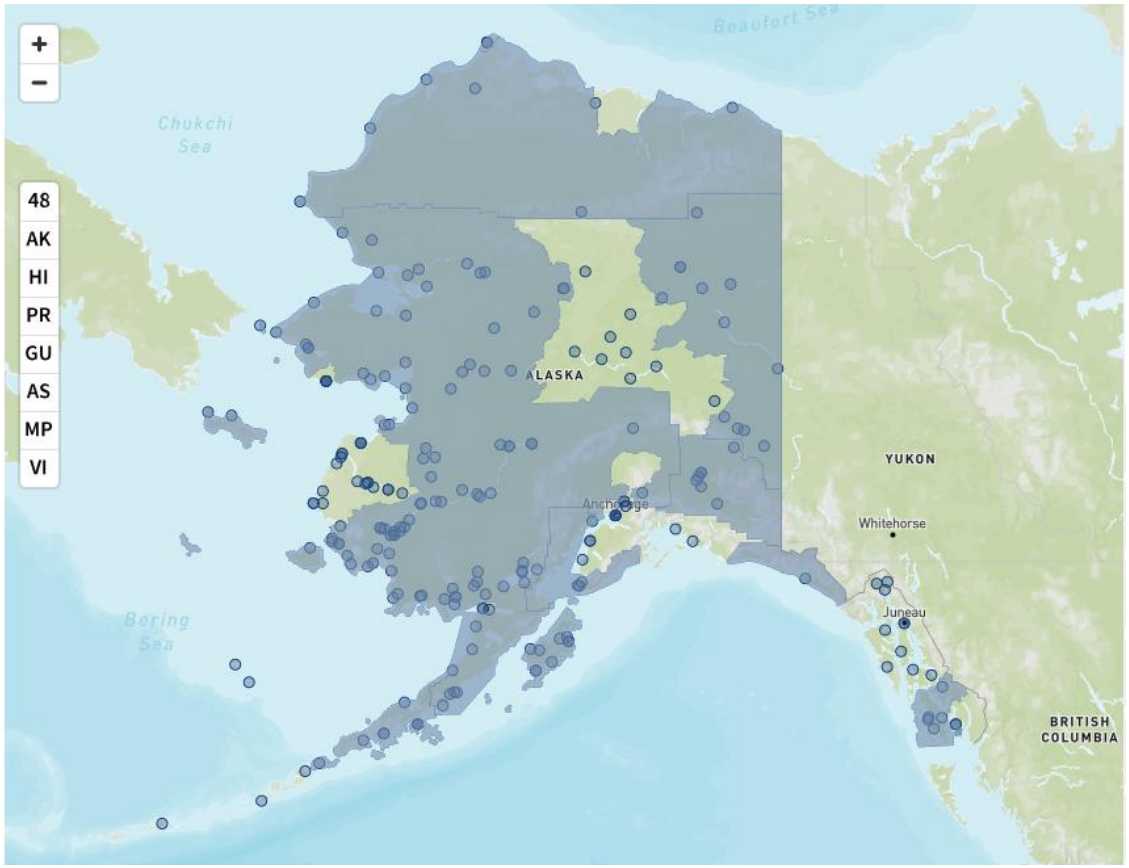
Funding Available to Alaska: $1,296,870.00

Application Deadline: Jan 31, 2024

This funding can be used on programs that:

- Reduce the cost of training contractor employees;
- Provide access to workforce development tools for contractors including, but not limited to, testing and certification; and
- Partner with community organizations or non-profits to develop and implement an equitable state workforce program.

Justice40 Initiative



Council of Environmental Quality's Climate and Economic Justice Screening Tool (CEJST)

https://toolkit.climate.gov/tool/climate-and-economic-justice-screening-tool

Resources

https://www.ahfc.us/efficiency/programs-for-homeowners/alaska-residential-energy-rebates

https://akrebate.ahfc.us/Resources/Rater/List

https://www.ahfc.us/blog/posts/tax-saving-opportunities-energy-efficiency-improvements

Questions?

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