

Bridging the Rural Efficiency Gap in Alaska

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ALASKA ENERGY AUTHORITY



SAFE,
RELIABLE, &
AFFORDABLE
ENERGY
SOLUTIONS

REDUCING THE COST OF ENERGY IN ALASKA



AEA's mission is to reduce the cost of energy in Alaska



ALASKA vs. THE LOWER 48

IF ALASKA WERE PLACED ON TOP OF THE CONTINENTAL U.S., IT WOULD STRETCH FROM NORTHERN MINNESOTA DOWN THROUGH TEXAS, FROM THE PACIFIC OCEAN OFF THE CENTRAL CALIFORNIA COAST TO SAVANNAH, GEORGIA.



PBS NEWSHOUR



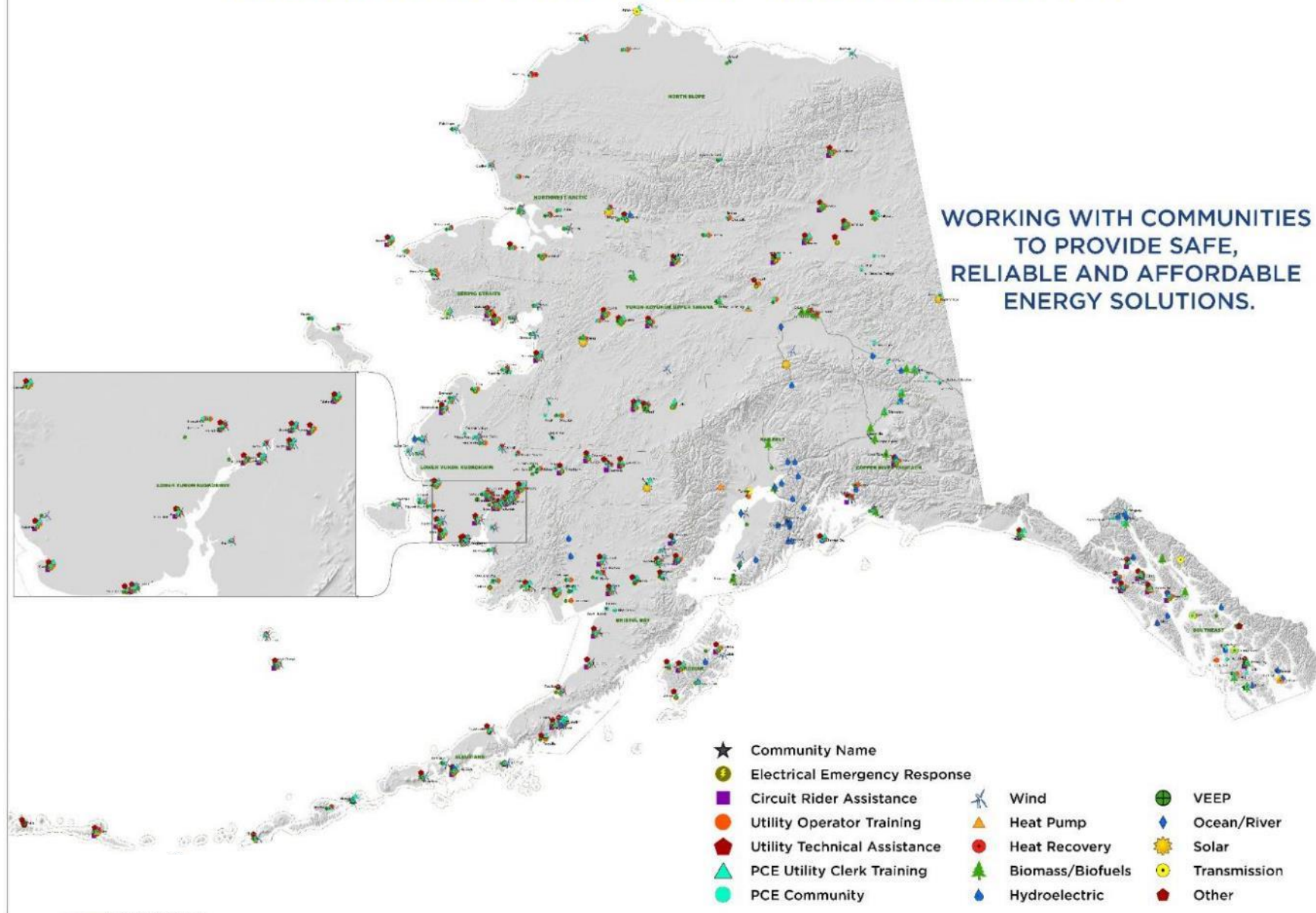
76% of Energy
(Natural Gas)

13% of Energy

11% of Energy



ALASKA ENERGY AUTHORITY



Assistance with statewide project development, financing, and long-term management of energy infrastructure

- Diesel powerhouses
- Heat Recovery
- Bulk Fuel
- Power Cost Equalization
- RE (wind, bio, hydro, solar)
- End-use efficiency
- Railbelt assets

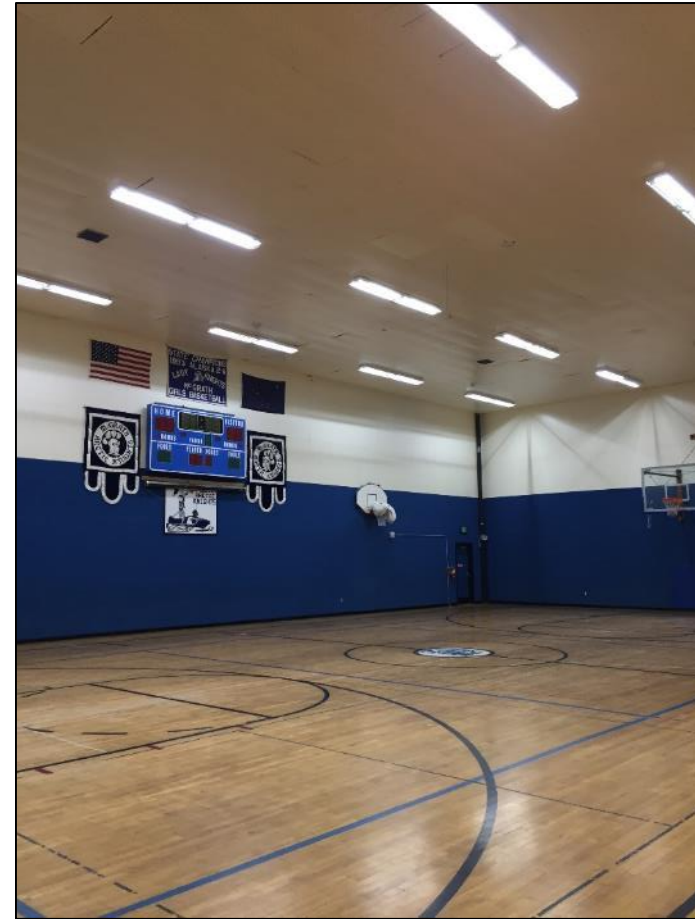


Quinhagak, AK



Energy Efficiency and Conservation in Alaska

- Village Energy Efficiency Program (VEEP)
- Whole Village Retrofit
- Energy Wise (RurAL CAP)
- Home Energy Leaders Program (SE Conference)



Whole Village Retrofit - Nightmute

- Power System Upgrade (Denali Commission and AVEC)
- Residential Weatherization (AHFC and RurAL CAP)
- Public Building Retrofit (AEA)
- Energy Education and Outreach (all agencies)



What was accomplished?

- 34 homes were weatherized (64% of the total homes)
- 10 community buildings were weatherized and provided lighting upgrades.
- The school received lighting upgrades.
- 4 teacher housing units received lighting upgrades.
- Total Investment: \$679,430, incl. \$75,700 local match (cash and in kind services)





Was it successful, can it be replicated?

Community buildings Wx estimated total savings:

- ~ 56% total fuel savings
- average per building annual heating reduced from \$5,096 to \$2,205
- Payback on air sealing and attic insulation: 6.7 years
- Projected annual fuel savings to village corporation store: \$10,639 (\$6.60/gallon)
- Annual gallons fuel saved: 4,834
- Annual dollar savings (at \$6.60/gallon): \$31,904
- Simple payback on full project: 7.5 years

Residential Wx estimated total savings:

- Budget for materials, labor, shipping: \$435,830
- Total annual gallons fuel saved for all 34 homes combined: 4,575
- 2008 village fuel price/gallon: \$7.90
- Comprehensive annual dollar savings: \$36,143
- Average annual fuel savings per home: \$1,063, or about 50%
- Simple payback on project funds: 12 years



Rural Alaska Community Action Program, Inc.'s

Energy W^{se} Program



HOME ENERGY LEADER PROGRAM

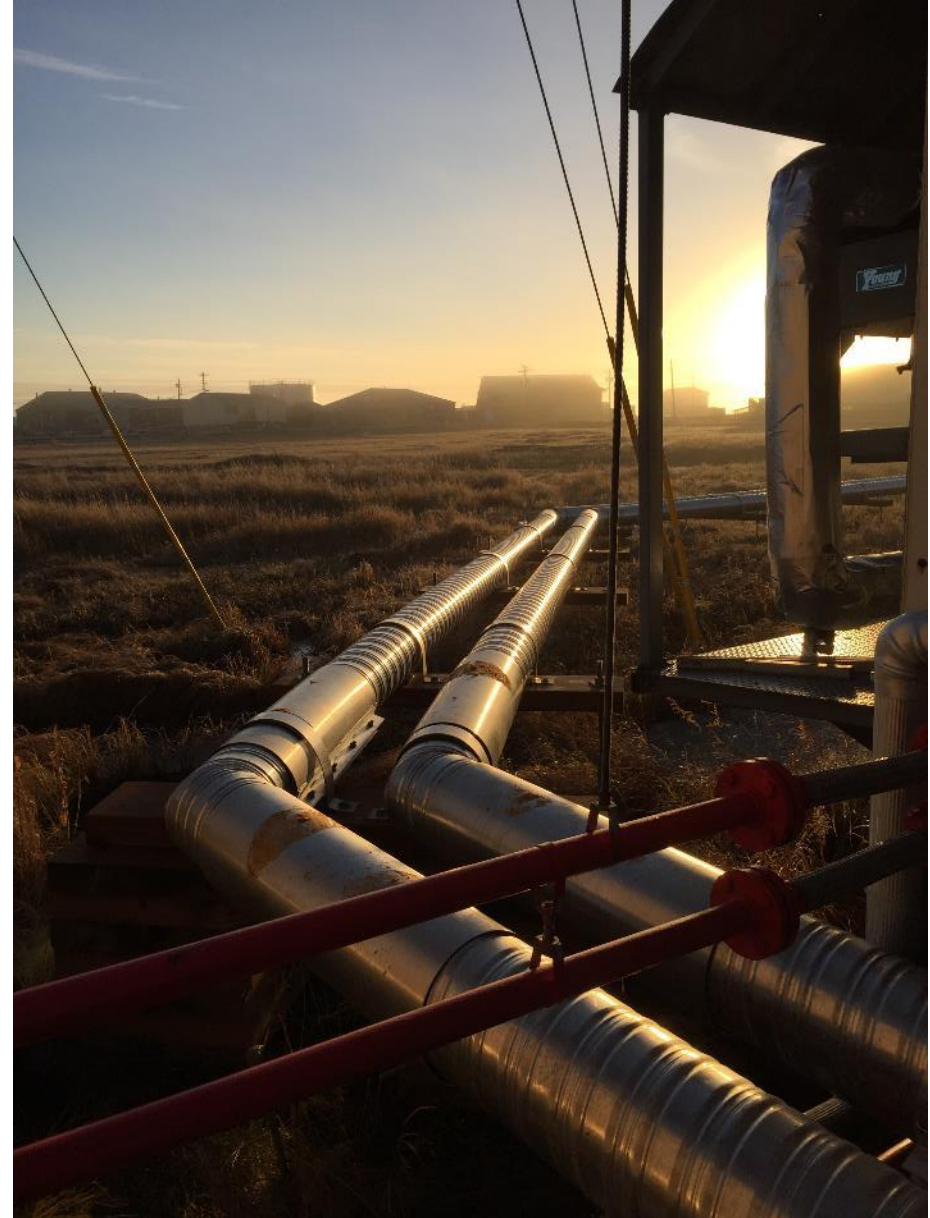


Some of Alaska's other solutions...

- AK Energy Smart Curriculum (K-12)
- Power Pledge Challenge (6-8)
- Energy Bike (any age, safe for bears)
- Local Energy Fairs
- Building Monitoring System (BMON)
- The Alaska Energy Efficiency Partnership



The path forward
points to innovation
and collaboration





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