



Aniak Energy Efficiency Project

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*A collaboration between the Aniak Traditional
Council (ATC) and the National Renewable
Energy Laboratory's Campus in Fairbanks,
Alaska*

2024 Program Review

US Department of Energy

Office of Indian Energy

Wed, November 20th, 2024

Project Partners and Contractors



At its northern campus in Fairbanks, Alaska, the National Renewable Energy Lab advances building technologies for extreme environments and pushes the limits of renewable energy.

Implementing energy efficiency in commercial, industrial, and municipal buildings.

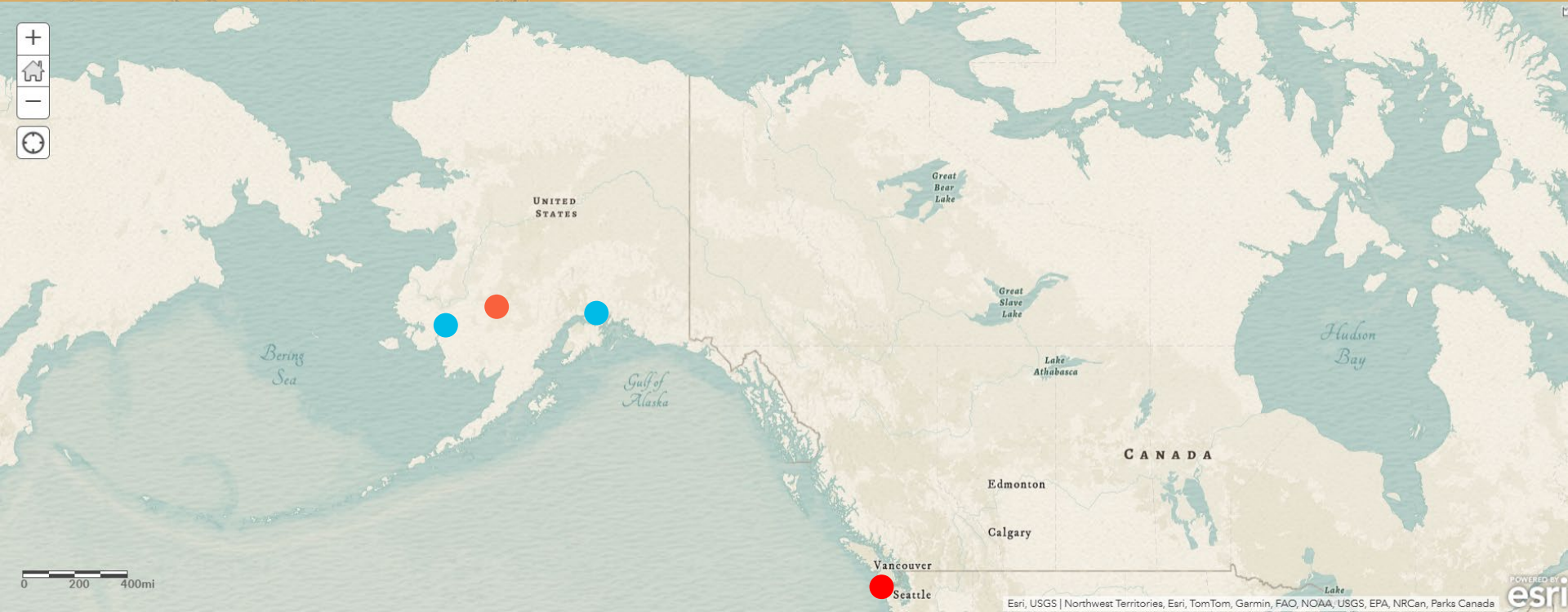
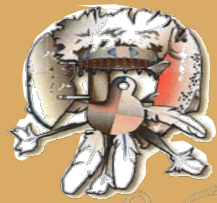


**COLD CLIMATE HOUSING
RESEARCH CENTER**



Promoting and advancing the development of healthy, durable, and sustainable shelter for Alaskans and other circumpolar people.

Aniak Native Community



Village of Aniak

- The City of Aniak was incorporated in 1972, and the Village of Aniak was formed in 1978.
- Two schools: Elementary (K-5) and a High School (6-12).
- Two stores: Alaska Commercial Company and Kuik Run Store owned by TKC our Native Corporation.
- Airlines Carries Northern Air Cargo, Everts Air Cargo Ryan Air Alaska and Lake and Peninsula Air, Ravn Alaska no longer service Aniak.
- Aniak Light and Power, a privately owned company, provides electricity to the village.



Aniak Pop: ~501



Energy efficiency improvements based on (two) energy audits.

- October 2017: first audit
 - Negotiations
- December 2022: re-evaluation
- Jan – Aug 2023: SOW, bids and contracting
- January 2024: retrofit work
- January 2024-present utility monitoring



Aniak residents shocked by quadrupled power bills

By Sunni Bean, KYUK - Bethel - June 27, 2023



An aerial view of Aniak (Amazon River Adventure photo via Creative Commons)

- In May 2023, RCA commissioners approved a 300-400% rate increase in Aniak **without requiring advanced notification of rate payers.**
- The RCA instituted a monthly fee over the following two years to pay off the electric company's debt.
- AFN 2023 resolution identified RCA's lack of understanding of the unique energy challenges facing rural Alaskan communities.
 - Called for additional training on rural energy issues for RCA staff and for legislation requiring that at least one RCA commissioner be an Alaska Native tribal member.

Electricity in Aniak

- **\$1.03** (\$0.45/kW base price + \$0.58/kW COPA)
- **\$0.30/kW** with PCE
- **\$0.55** (pre-pandemic)

Electricity in Colorado

- **\$0.15/kWh** (avg)

Stove oil in Aniak

- **\$9.77/gal.** (2024)
- **\$5.69/gal.** (pre-pandemic)

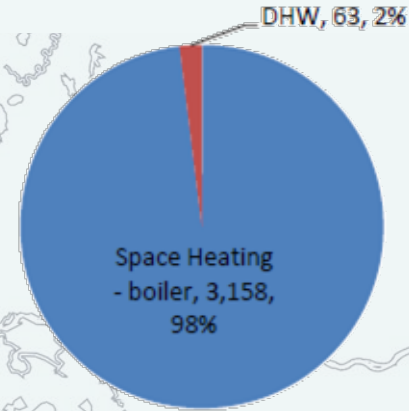
Cost of heating and powering buildings

Commercial buildings used to be billed at a lower rate than residential, but within the last decade, that changed when the utility company raised it to match the residential rate.

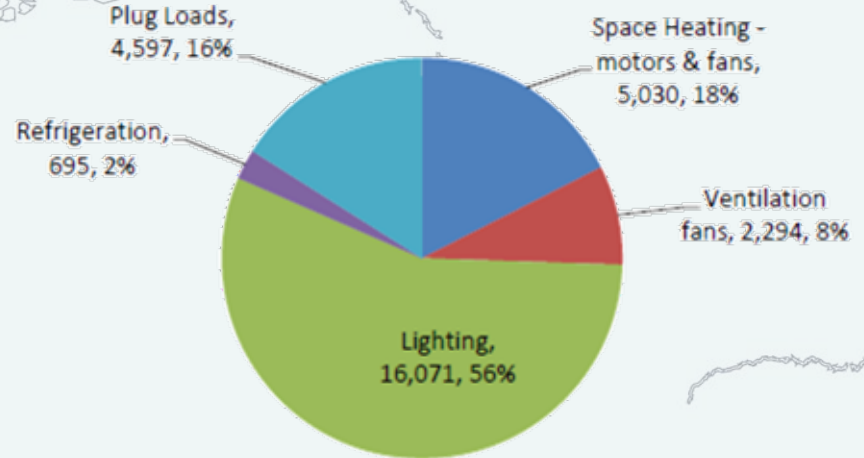
1. Community Center
2. Tribal office
3. ICWA and DOJ office
4. Duplex

- Preliminary information, e.g., utility data
- → or use AKWarm
- Interviews with owner/occupants --> goals
- Building surveyed
 - envelope
 - HVAC
 - lighting and controls
 - equipment
 - plug loads
- Occupancy schedules

Distribution of Fuel Oil Consumption (gallons)



Distribution of Electric Consumption (kWh)



Aniak Tribal Office

Executed upgrades:

- Thermostat setbacks
- Replaced boiler
- Replaced zone valves
- Replaced circulation pumps
- Replaced 98 lighting fixtures and removed resulting hazardous waste

Price increases and supply chain bottlenecks slowed progress.



Built: 1985

Two-story 6,561 ft² office space

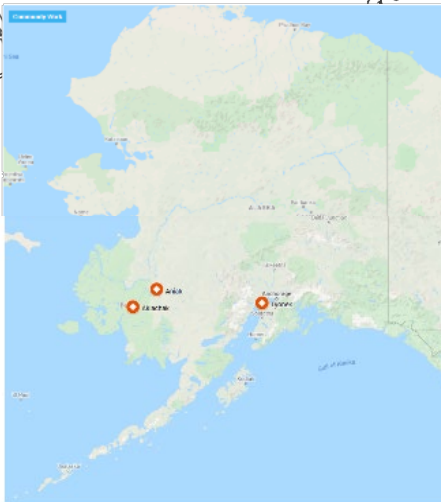
Occupancy: 14 staff, ~10-20 daily visitors

Spaces: administrative hub for the Native Village of Aniak



Efficiency Upgrades in Tribal Buildings

Home / Project / Overview / Efficiency Upgrades in Tribal Buildings



CCHRC is working with these counties like to act as recommendations from energy audits of local community buildings. In these projects, CCHRC staff and local partners are documenting current conditions of buildings, creating sources of work for high-potential energy efficiency improvements, completing the improvements, and conducting a second energy efficiency project that will measure savings and before and after the improvements, to document the real-world savings.

Resources

Title	Type	Resource Link
Alcoholic Beverage Management Plan		Download
Alcoholic Beverage Plan		Download
Alcoholic Beverage Management Plan		Download

Activities

Current tasks:

- Analyzing savings: collecting utility bills to create a before-and-after comparison

Future tasks:

- Continue to analyze savings
- Final reporting

Other Notes

- Hazardous waste removal from rural and remote areas can be a substantial part of the budget.**
 - Electronics and old lighting ballasts

Quyana! Thank you!

