



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

Sustainable Energy Solutions and Priority Climate Action Plans for Rural Alaska Native Communities

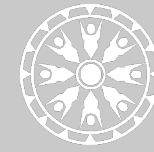
Dustin Madden, CEM
Rural Energy Program Manager

Anne Kelly, PhD
Project Manager II

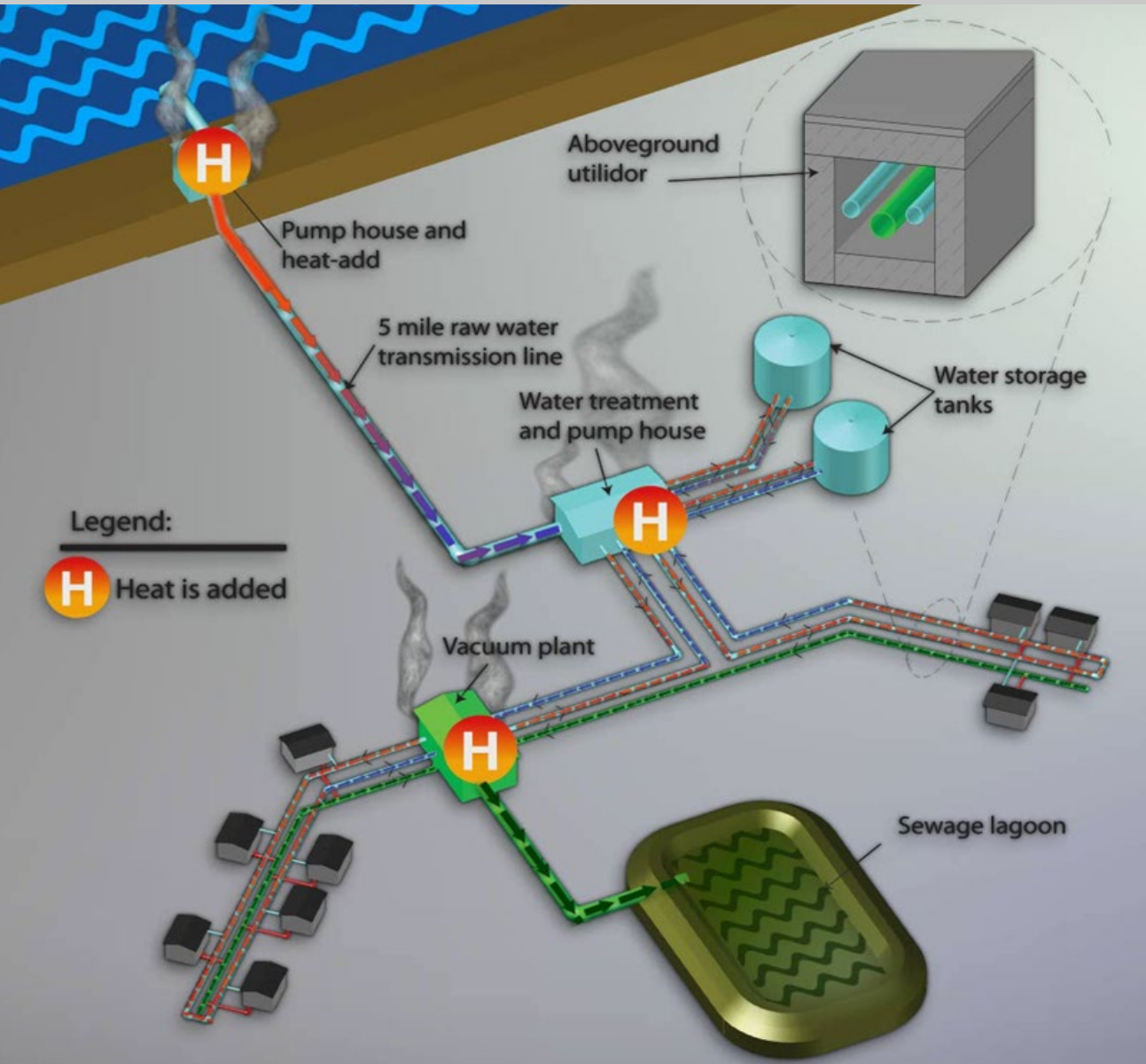


- **Sustainable Energy Solutions (Dustin):**
 - Energy and affordability of rural water systems
 - Rural Energy Program
 - Impacts
 - Services
 - Project types
- **EPA CPRG Grant Opportunity (Anne):**
 - Overview
 - Planning process and PCAPs
 - How to apply

Water / sewer is energy intensive

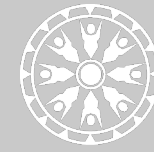


ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

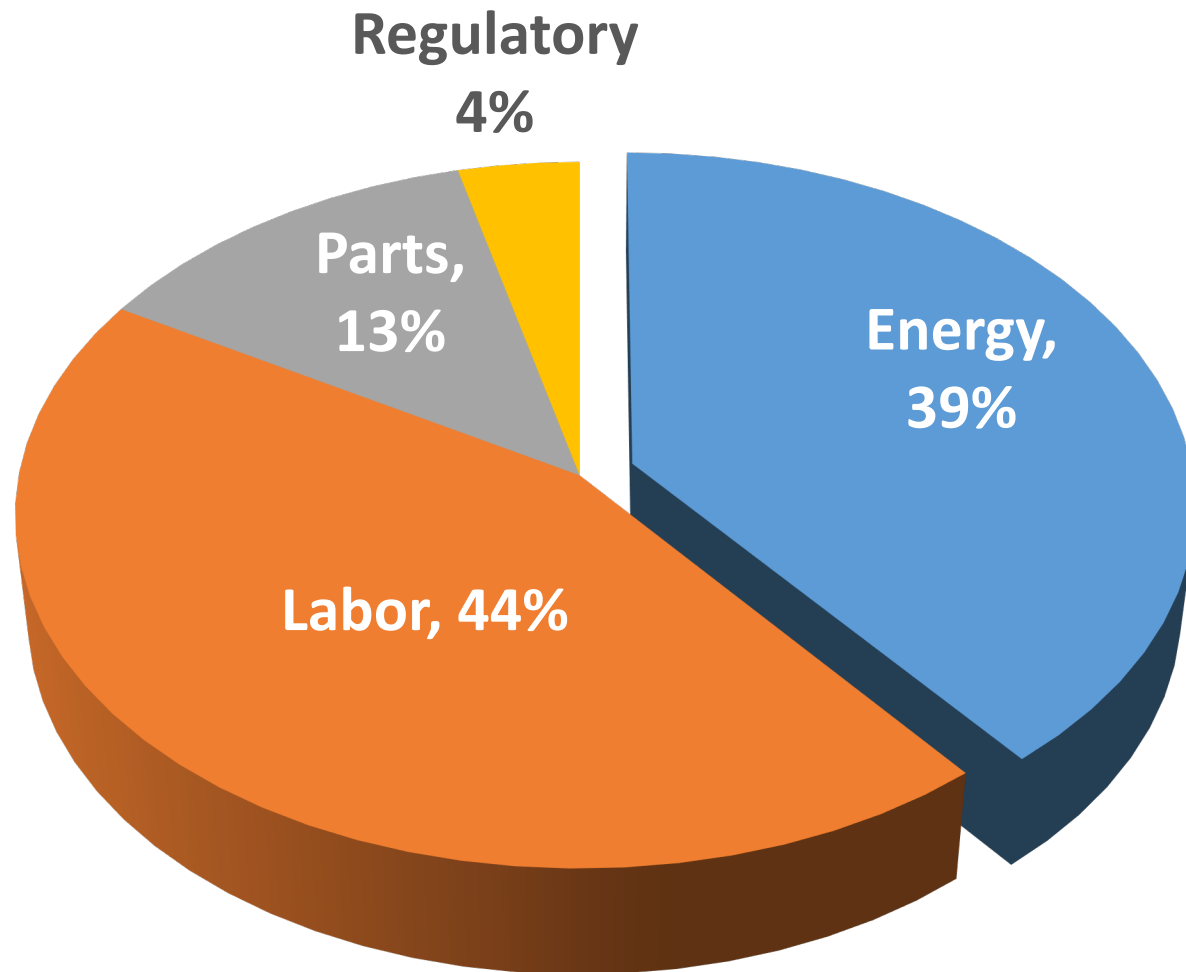


Water and Sewer Utilidor in Saint Michael, Alaska

Energy Costs in Rural Sanitation Facilities

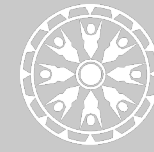


ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM



- Rural sanitation can account for up to **1/3 of total community energy costs**
- 60 – 260 times higher per capita than national average
- Sanitation *energy* costs = **4 to 7% of median household income**

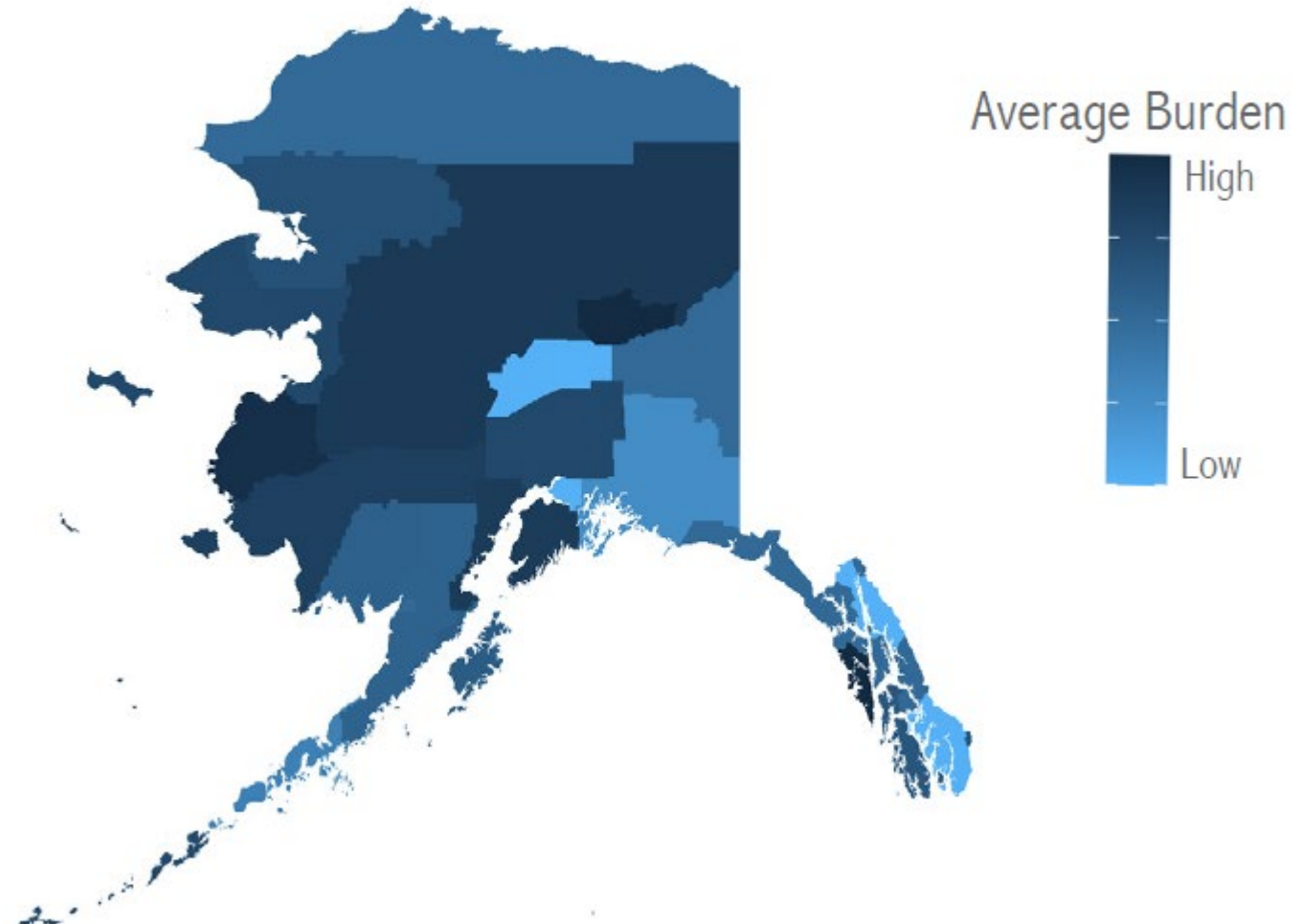
Affordability of water and sewer



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

Average Burden of Residential Rates By Borough

- AK DEC: “High burden” water bills in **56%** of rural communities
- Two options for water utilities:
 - Cut off service
 - Not enough funding for O&M
 - **This jeopardizes billions in infrastructure investments**



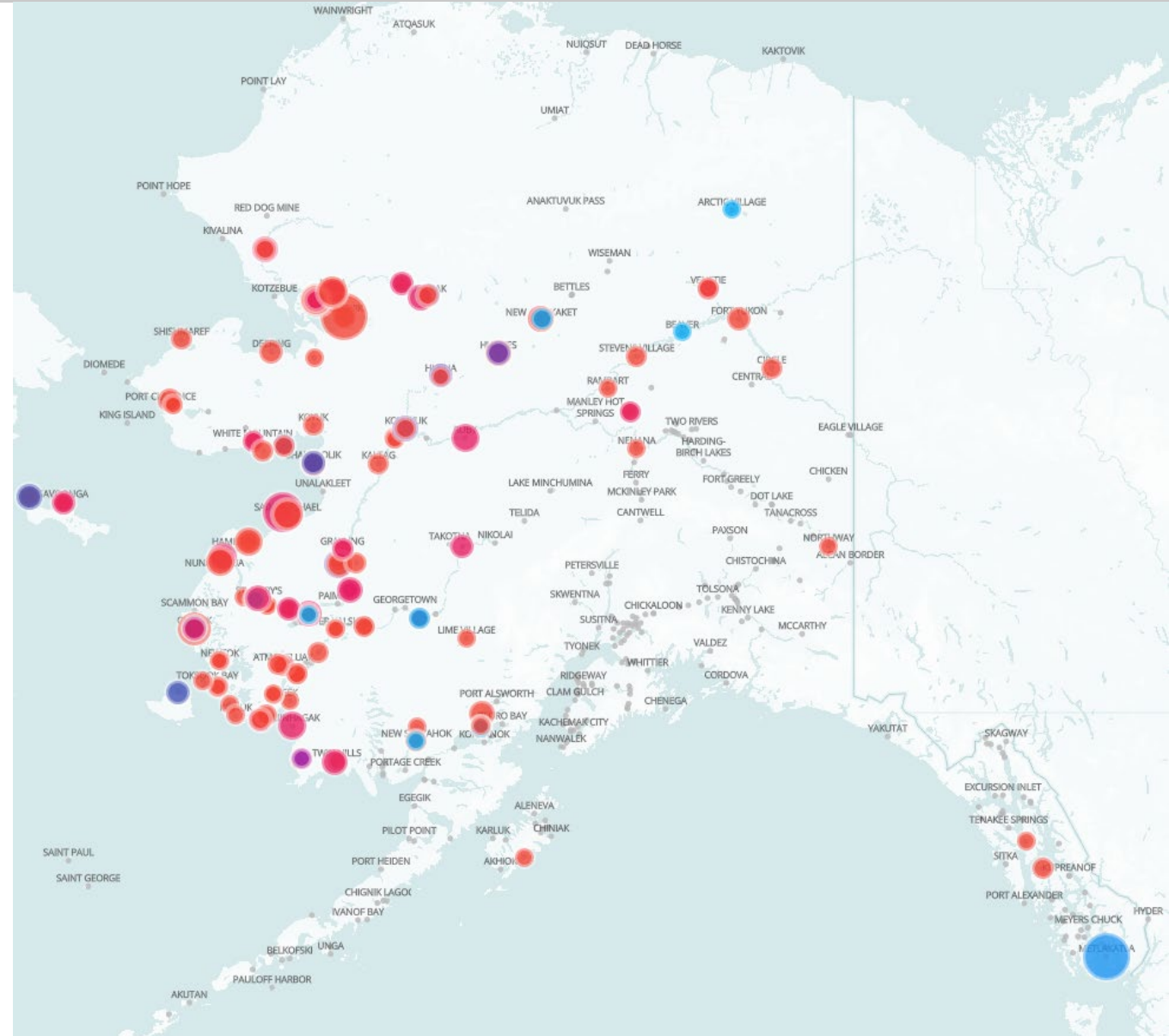
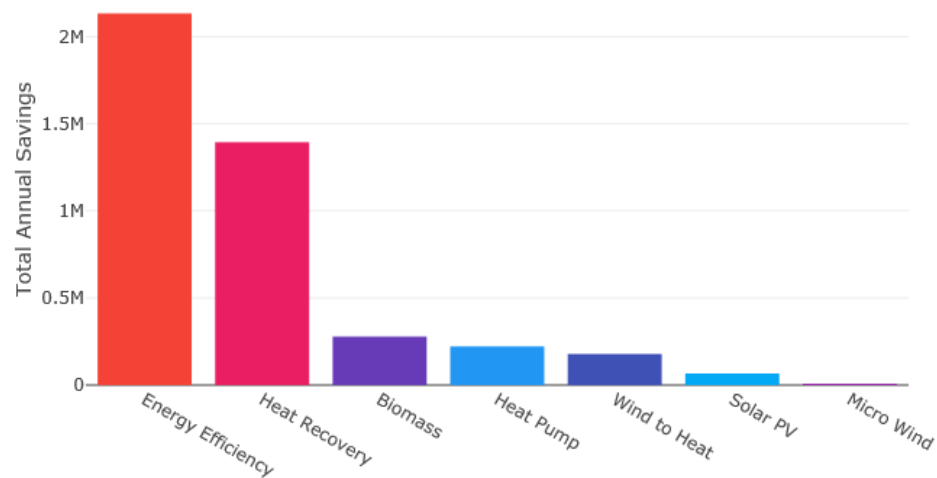
Rural Energy Program



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

- Program began in 2011
- \$4.7M ongoing annual savings (2022 est.)
- \$30.0M cumulative savings in 2022 dollars
- Total homes in 86 served villages: 7,745
- **Annual energy savings per family: \$609**

Total Annual Savings by Project Category



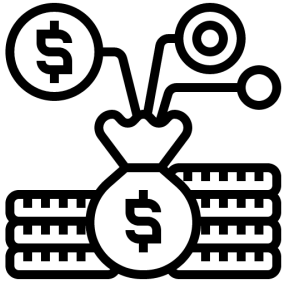
How ANTHC's Rural Energy Program Supports Communities



Identify



Analyze & Develop



Fund

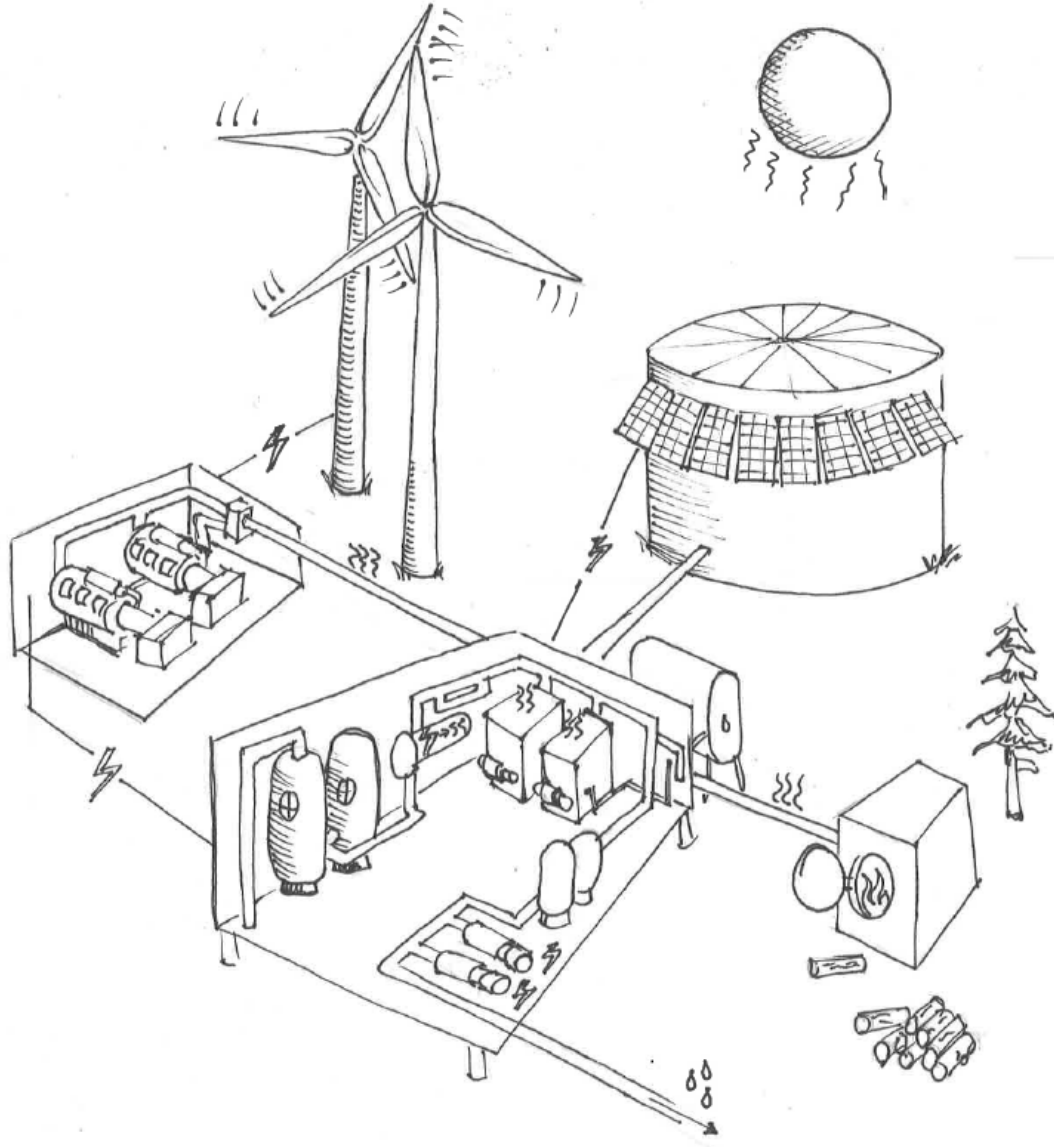
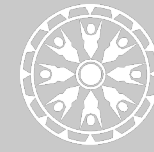


Implement



Save

Project types



- Energy Efficiency:
 - Most cost-effective
- Heat Recovery
 - Biggest savings
 - <1,000 feet from sanitation infrastructure
- Biomass heating
 - Local jobs / resources
- Renewables:
 - Wind-to-heat
 - Rooftop solar PV

Rural Energy Impacts Case Study: Chevak – Increased Financial Sustainability

- **Heat Recovery:** Offset diesel fuel by applying heat recovered from diesel gensets to meet WTP thermal loads
- **Energy Efficiency:** Conduct WTP energy audit, retrofitting and tailored operator training
- **Wind Integration:** Excess energy from local wind farm utilized to meet WTP thermal loads, offsetting diesel

These efforts helped lower customers' monthly water and sewer rates by 48 percent (from \$165 per month to \$85 per month)

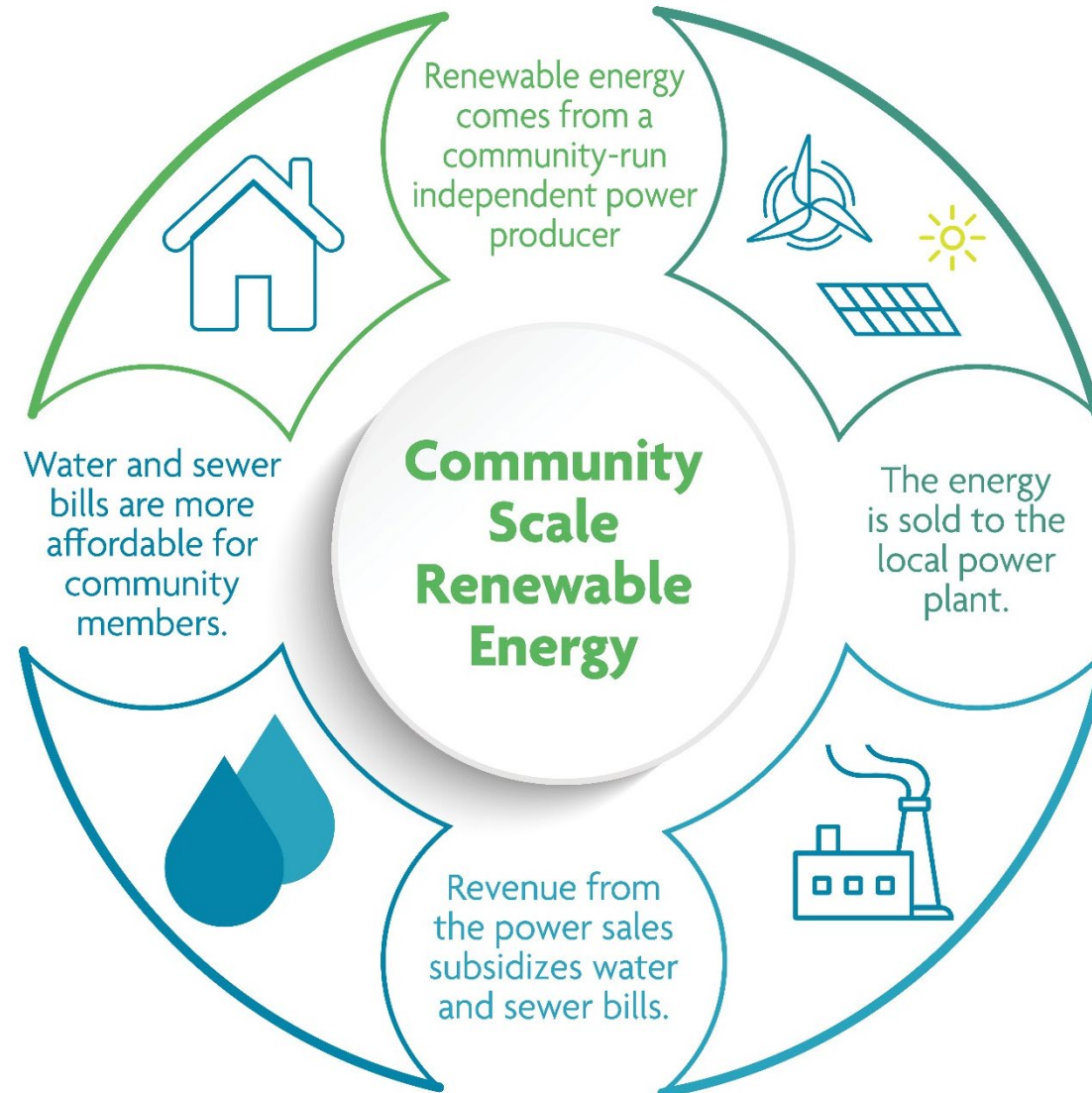


ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

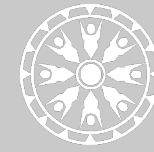
Community Scale Renewable Energy Projects



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM



Teller case study

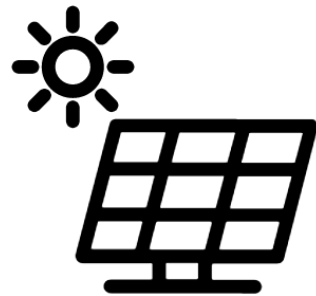
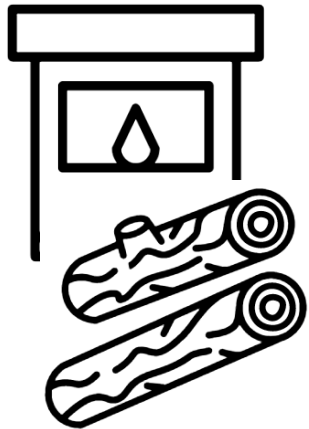
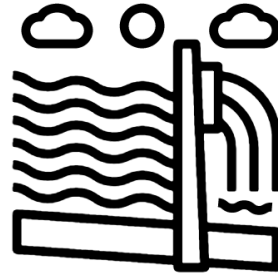
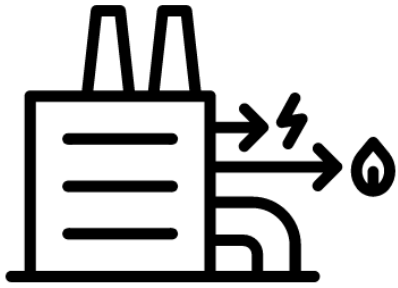


ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

- Unserved; doing PER to get piped water and sewer
- 220 kW solar + battery energy storage
- Sell power to electric utility at avoided fuel cost: ~\$40,000 in annual revenue
- 73 residential connections → ~\$550 subsidy per family annually



FREE Technical Assistance for Project Development



- **Technical Assistance via DOE Office of Indian Energy**
 - **Strategic Energy Planning**
 - **Feasibility Studies:** heat recovery, solar, wind, biomass, hydro, and existing system optimization.
 - **Troubleshooting and Engineering design review**
- **Support Finding Funding:** Connecting you with funding opportunities, grant writing support.

[Request Technical Assistance Now](#)

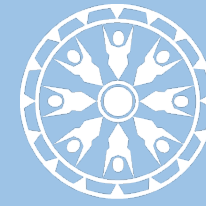
Questions?

Dustin Madden
Program Manager
Rural Energy Program
dmmadden1@anthc.org



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

Grant opportunity: EPA CPRG

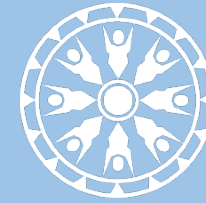


ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

EPA Climate Pollution Reduction Grant

- Overview
- Deadlines
- Process
- Example projects





For implementation of programs, policies, projects, and measures that reduce greenhouse gasses through 2030 and beyond

Tribal competition

- \$300M available
- Grants \$1M-25M
- Due May 1, 2024
- Tribal entities only

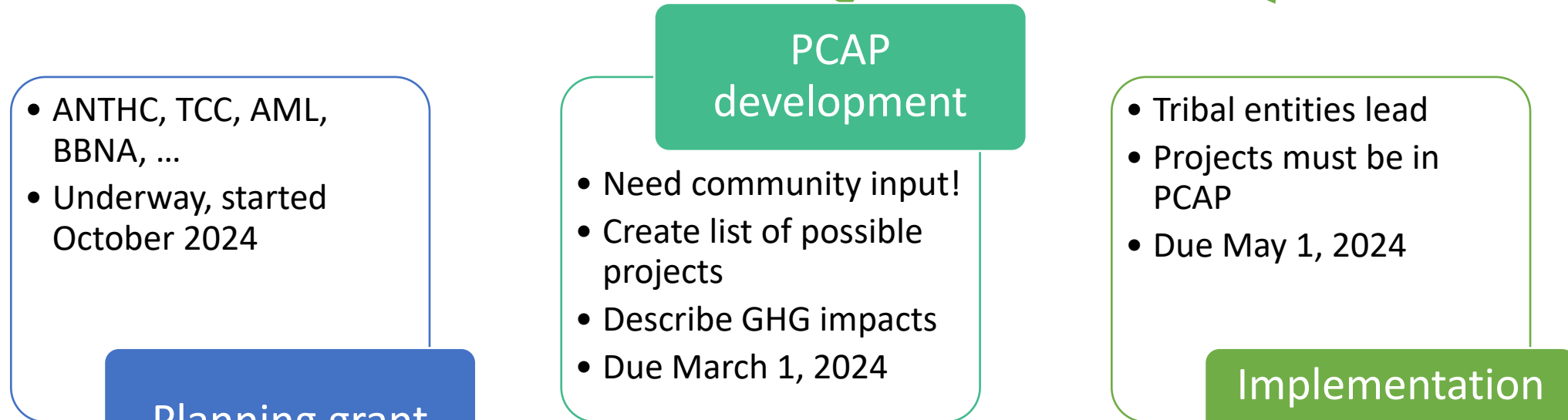
General competition

- \$4.3B available
- Grants \$2M-500M
- Due April 1, 2024

EPA CPRG Process



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM



- ANTHC, TCC, AML, BBNA, ...
- Underway, started October 2024

Planning grant

PCAP
development

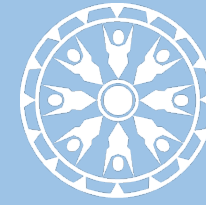
- Need community input!
- Create list of possible projects
- Describe GHG impacts
- Due March 1, 2024

- Tribal entities lead
- Projects must be in PCAP
- Due May 1, 2024

Implementation
grant writing



PCAP development

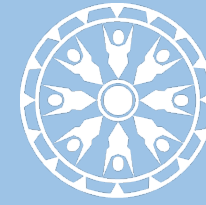


ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM



- Lead by regional Native Assoc, ANTHC, AML, or others
- Rough description of any potential projects and estimated GHG impacts
- Project must be in a PCAP to be eligible to apply for EPA CPRG funding
 - *Make sure your projects are included!*
- Due March 1, 2024

EPA CPRG - Possible projects



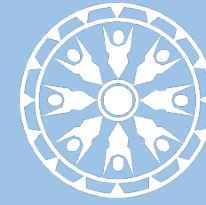
ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

Anything that replaces or diminishes fossil fuel use

- Renewables (solar, wind, hydro, biomass)
- Efficiency upgrades to power systems
- Heat recovery systems
- Building weatherization & efficiency upgrades
- Efficient heating stoves, heat pumps
- Electric vehicles



EPA CPRG – Applying for implementation \$

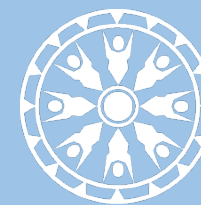


ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

- Tribal entities (but not ANCs) must lead for the Tribal opportunity
- Coalitions encouraged – start organizing!
- Projects
 - Must be in a PCAP
 - PCAPs can be divided into different applications
- EPA looking for
 - Developed projects ready to go
 - Greenhouse gas reduction through 2030, 2050
 - Economic benefit, workforce benefit to community members
 - Innovative and scalable
- **Due May 1, 2024**, project must be complete by December 2029.



EPA CPRG - Questions?



ALASKA NATIVE
TRIBAL HEALTH
CONSORTIUM

- Any questions?

