

# Atmautluak Energy Efficiency Project

---

ANDREW STEVEN

DOE PROGRAM REVIEW

DECEMBER 2018

# Native Village of Atmautluak

---

- Yup'ik Alaska Native Village of 322 people.
- People have lived a subsistence lifestyle at the village site for thousands of years.
- The village is governed by a Traditional Council.
- People participate strongly in traditional arts and crafts.
- The community has one school, one health clinic, and one store.



# Background

---



- Atmautluak has a long-term goal to make the community sustainable, healthy, and safe.
- Atmautluak has already completed successful energy efficiency projects and the current project will continue this work.
  - Energy audit in 2016 for Washeteria.
  - Power plant heat recovery system directing waste heat to washeteria, store, and post office.
  - Constructed two super energy efficient prototype homes in 2013 with the Cold Climate Housing Research Center.

# Project overview

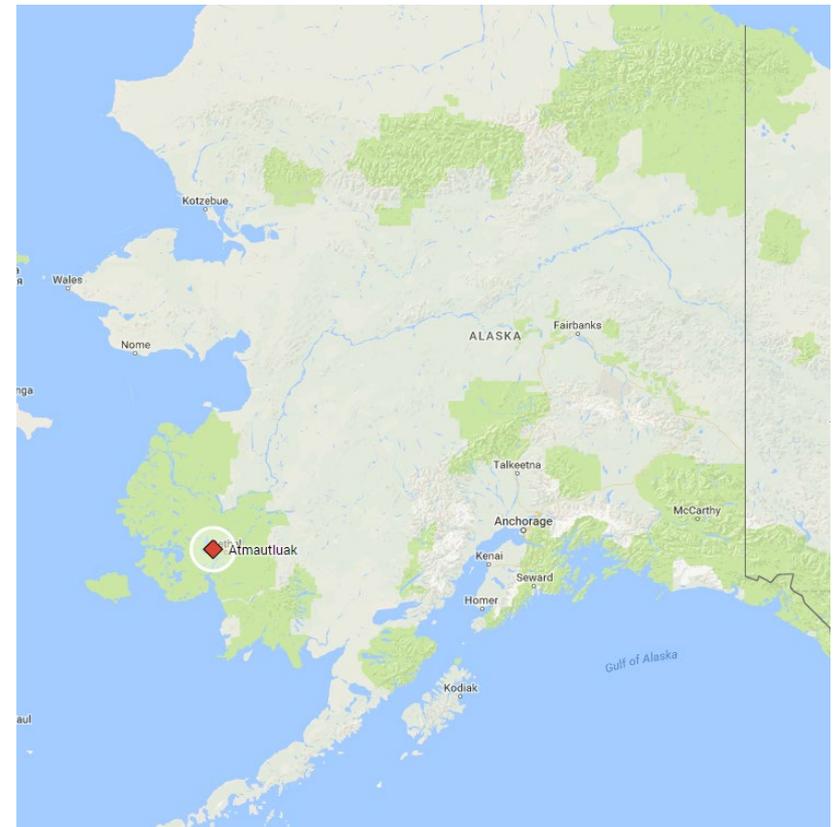
---

- This project will address the high energy costs in Atmautluak.
  - Electricity is \$0.34 / kWh (PCE) or \$0.80 / kWh without PCE
  - Gallon of heating fuel is \$4.86
- The goal of the project is to reduce the fuel oil and electrical energy use of tribal buildings.
- Strategy:
  - Identify tribal buildings with high energy use.
  - Conduct ASHRAE Level II energy audits.
  - Develop an Energy Action Plan for each building.

# Project location

---

- Atmautluak is not connected to the road system. Travel is by small plane or by boat when river is free of ice.
- Located on west bank of Pitmiktakik River in Southwest Alaska.



# Participants

---

- Andrew Steven – Tribal administrator
- Atmautluak Traditional Council – Project direction and oversight
- Cold Climate Housing Research Center (CCHRC) – Alaska nonprofit organization that conducted the energy audits and helped develop the Energy Action Plan



# Project objectives

---

- To reduce and stabilize energy costs in tribal buildings by setting energy efficiency improvement goals.
- These efficiency goals will provide direction for future retrofit projects.
- Demonstrate sustainable practices and behaviors to the entire community.



# Project buildings

---

- The Atmautluak Traditional Council chose 6 buildings to participate in the project:
  - ATC building
  - Gaming department & post office
  - Tribal police department building
  - Traditional Council shop
  - Tribal rental house
  - Washeteria (audit upgrade)



# Accomplishments

---

- The Traditional Council decided on goals for each building in the project.
  - Reduce energy use
- The project team collected baseline data for each building.
  - Data monitoring plan
  - Energy use and building condition
- The project team completed energy audits for each building.
  - Recommendations to reduce energy use
- The project team will present final audit results and draft report to the Council and go on a building walk-through with the Tribal office staff to show them each recommendation.

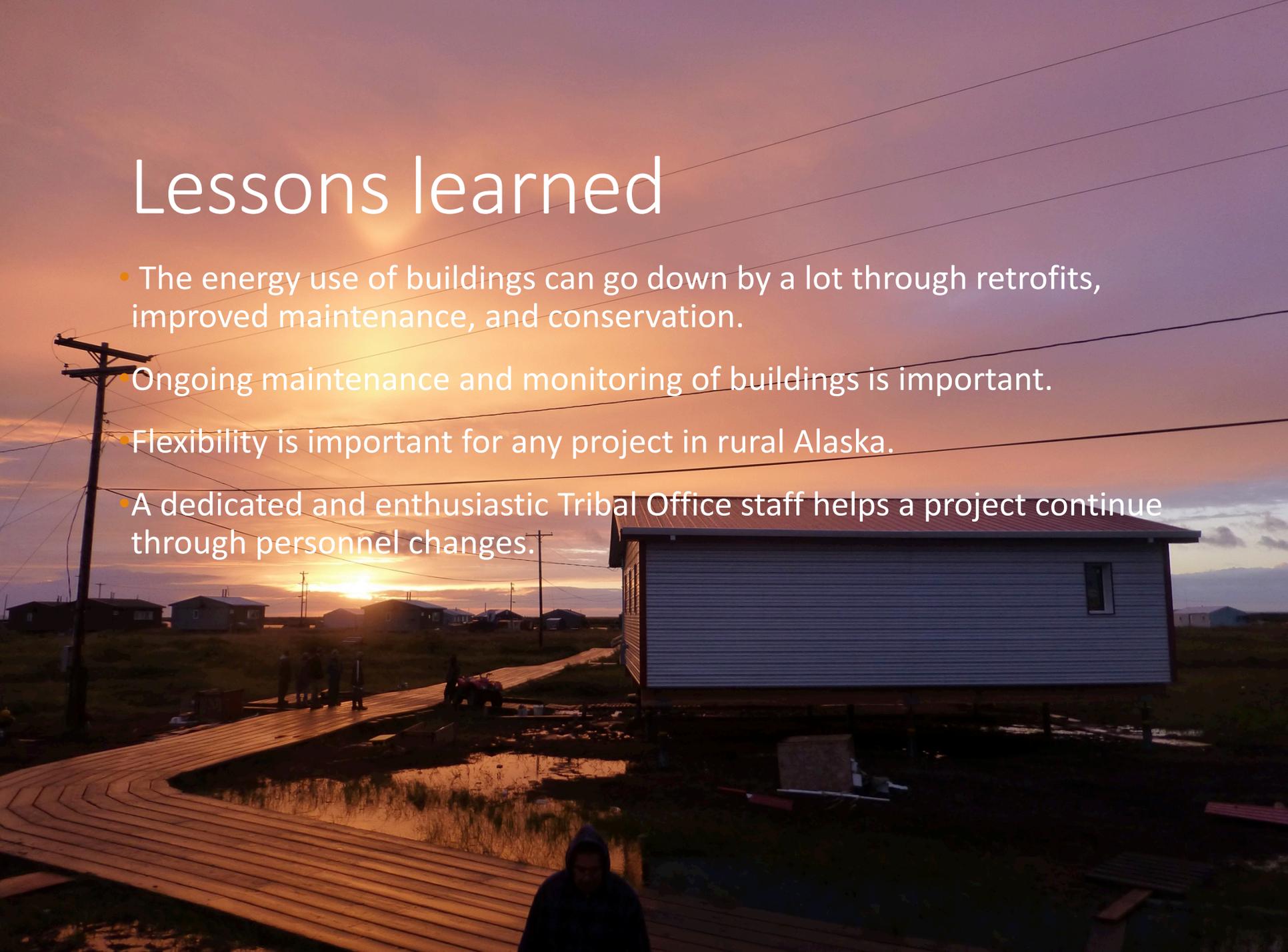
# Final activities

---

- The project team will complete an Energy Action Plan for tribal buildings.
  - Project information
  - Building descriptions and baseline data
  - Data monitoring plan
  - Energy audit summaries
  - Maintenance plan
  - Funding opportunities
  - Scope of work for contractors
- The project team will showcase the project to the community via a flyer and video, as they look toward next steps.

# Lessons learned

- The energy use of buildings can go down by a lot through retrofits, improved maintenance, and conservation.
- Ongoing maintenance and monitoring of buildings is important.
- Flexibility is important for any project in rural Alaska.
- A dedicated and enthusiastic Tribal Office staff helps a project continue through personnel changes.



# Future plans

---

- The Atmautluak Traditional Council will use the Energy Action Plan as a resource to search and apply for funding for a comprehensive retrofit project.
- The tribal office staff will immediately begin to address recommendations in the energy audits, such as programming thermostats and deferred maintenance.
- The building occupants will immediately begin to address energy conservation recommendations in the energy audits, such as performing maintenance checks and monitoring fuel use.

# Questions



For additional information, please contact:

- Andrew Steven, Tribal administrator
  - [atmaultluaktc@gmail.com](mailto:atmaultluaktc@gmail.com)
- Vanessa Stevens, Cold Climate Housing Research Center
  - [vanessa@cchrc.org](mailto:vanessa@cchrc.org)