KOTZEBUE ELECTRIC ASSOCIATION

2026 Legislative Update

NOVEMBER 2024

Installed new converters in both 900kW wind turbines
Grant funded by UAF – Taikuu!
Installed by wind turbine manufactures EWT

- Project completed in December of 2024
- Failure of both wind turbines due to wiring issues 2 weeks later.
- Repairs took time due to logistics of repair personnel and parts.
- Wind Turbines not fully operational till February of 2025.

- **Replacing the converters in November was not an easy task!**

Winter 2025

- Diesel generation costs are high due to costly repairs on an aging fleet of diesel generators
- A load shedding plan was developed due to the number of generators unavailable for generation.
- Fortunately, repairs were made to the diesel generators, and the load shedding plan did not need to be implemented

- KEA will be replacing our diesel generators over the next 10 years with new higher efficiency and more reliable engines that will reduce fuel consumption
- These engines will increase fuel efficiency by 22%

- **KEA replaced the 40-year-old heat exchangers on our diesel generation plant.**
- **This was a 3-day project that required partial town outages.**
- **This was a critical piece of infrastructure that could have failed causing a prolonged outage.**

- KEA has two one-million-gallon fuel tanks
- The fuel is expensive and it is costly to maintain them and comply with state regulations
- KEA is helping to stabilize fuel costs in the community by leasing half of one tank to a new fuel supplier in town. That helps make a more competitive market.
- Our goal is still to work to decrease the amount of diesel needed and replace it with other sources of generation.

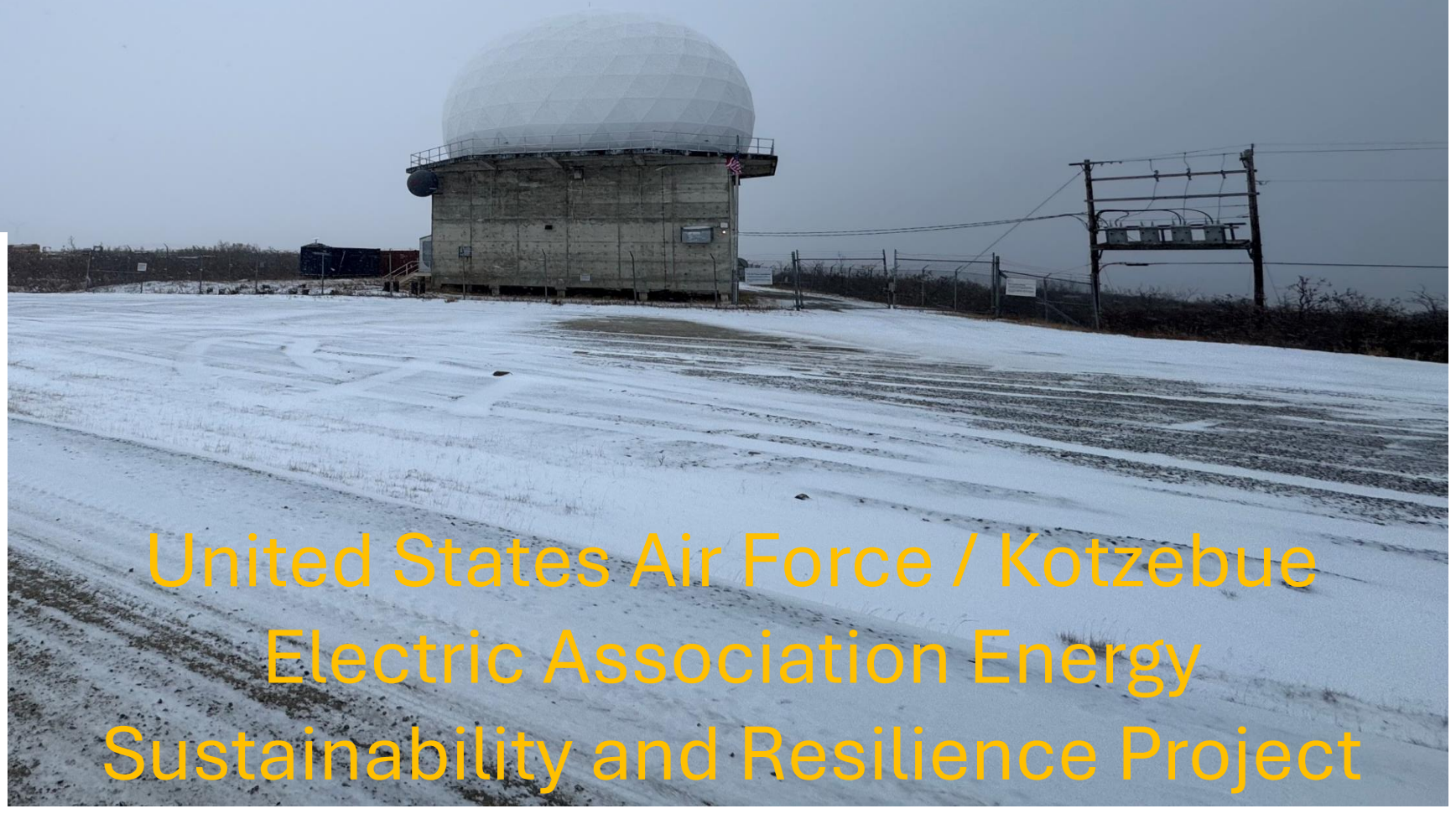
- Testing revealed that one of our substation transformers was rapidly degrading.
- If not taken out of commission, it could fail causing major damage and a prolonged outage.
- Maintenance work was completed to take it out of commission.
- We were able switch to a spare transformer to replace the failing transformer.
- All substation transformers will need to be replaced in the next 3 – 5 years. They are all 40+ years old.

- KEA replaced the inverters on our 1072 kW solar farm.
- The original inverters were Solar Edge which required frequent software updates resulting in significant down time
- Yaskawa inverters were installed in their place which are much more reliable.

- **KEA will be replacing it's 1MW SAFT Lithium Ion Battery with a 4MW battery**
- **Funding provided by a Congressionally Directed Spending Request from Lisa Murkowski's Office**
- **This project will enhance our grid forming abilities, create resilience for outages, and decrease diesel usage.**
- **Project slated for construction summer of 2026**

SAFT 950kWh Battery Container in Substation

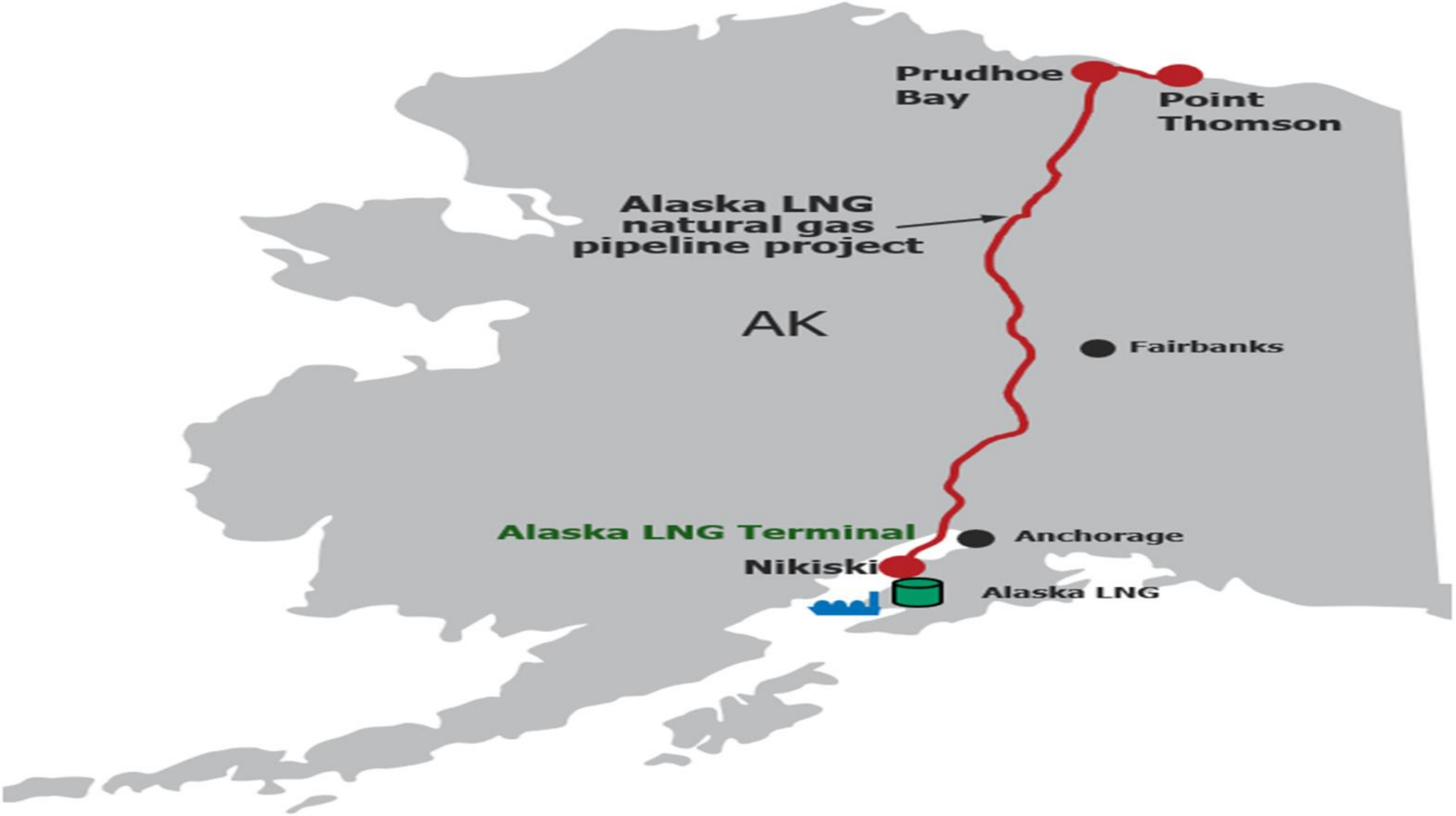
- **KEA is in negotiations with the USAF to construct a dual use 4MW Battery for redundant power to support their Long-Range Radar Site and community communication assets located in the same area.**
- **This also has an added benefit of creating another isolated grid that would not be as vulnerable to rising sea levels and more frequent storms causing flooding in Kotzebue.**
- **Project slated for construction in Summer of 2027**



United States Air Force / Kotzebue Electric Association Energy Sustainability and Resilience Project

This project will procure and install a BESS with an approximate capacity of 4 MW/8-12 MWh, This BESS will enable the battery system to power the LRRS for 24 to 48 hours.

- KEA will be replacing an underground transmission line at the airport.
- Constructed by AKNG in early 1980's
- Line was direct buried, no protective conduit.
- It has been failing and can no longer support the AKNG & USF&WS at the end of the line
- 5 state and federal entities are connected to this line.
- New line is slated for construction in the summer of 2026.


Prudhoe Bay
Point Thomson
Alaska LNG natural gas pipeline project
AK
Fairbanks
Alaska LNG Terminal
Anchorage
Nikiski
Alaska LNG

KEY TAKE AWAYS

- **Workforce Development:** In the past year KEA has focused on training and equipping its staff: PV Course at Votech, Climbing School, AVTEC training for operators. We can accomplish more if we are trained to do more in house.
- **Balanced Generation Development:** KEA remains committed to renewable energy development but realizes it must continue to maintain and improve its diesel generation during the transition.
- **IPP Development:** KEA welcomes and supports the development of IPP's to assist with grid capacity, beneficial electrification, and keeping more energy dollars in the community.
- **Future Load Growth:** With new and planned construction, Kotzebue will see an 10% load increase in the next 3 – 5 years. We must focus on the necessary improvements to infrastructure to support this i.e., replacement of all pole mounted transformers.
- **Resilience:** We need to develop more infrastructure to support electrification of areas outside of the current footprint of Kotzebue. We need more substations to help segment power.
- **Affordability:** We need to continue to develop strategies to stabilize if not reduce costs for our members.
- **Support:** Continue to fully fund and protect PCE and the Renewable Energy Fund. Create a permeant mechanism that allows rural communities to share in the savings from the LNG pipeline.