

2024-2028 Yukon Kuskokwim Comprehensive Economic Development Strategy

Energy Summary: Work Session Draft – February 2024

Where We Are	What data indicators can we monitor to track progress? Where do we want to be in 5 years?	Where We Aim to Be in 2028
6.86 million gallons (2022)	Diesel Use: Average [#] diesel fuel used for electricity generation for participating YK region PCE communities.	Decrease to [#] million gallons
Average of \$4,677 annually (2017)	Annual Household Cost: Total annual energy cost per household.	Need to identify
Average of 132 million BTUs (2017)	Annual Household Energy Use: Average annual energy use in million [#] British Thermal Units (MM BTUs) used to heat single-family homes.	Need to identify

Other potential indicators (need baselines and targets): Number of communities receiving Power Cost Equalization (PCE) community facility benefits; number of communities in the YK region that are served by renewable energy.

Proposed Energy Objectives *(adapted from previous CEDS)*

1. Build renewable energy infrastructure.
2. Address barriers to building affordable energy infrastructure in the YK Delta.

Energy Strategic Direction: Potential Strategies and Actions

Proposed Strategy A: Improve utility operations, reliability, and data collection.

1. Assist communities in taking advantage of operator training opportunities.
2. Promote PCE clerk training, especially to communities not maximizing PCE benefits.
3. Provide training opportunities for administrative support skills including grant writing and grant management, PCE, and QuickBooks.
4. Provide training opportunities for operator skills including power plant and bulk fuel storage operations.
5. Assist communities with adequate services and appropriate technology.

Proposed Strategy B: Research and invest in renewable energy.

6. Implement community energy plans.
7. Develop renewable energy feasibility studies for six priority communities identified by Nuvista and ANTHC, to be used for capital project funding requests.
8. Identify and secure land in communities for future renewable energy projects.
9. Explore partnerships between communities, organizations, and governing entities; outline responsibilities and expectations in project development and discuss capacity and staff needs to fulfill a project from start to completion.
10. Invest in data collection to assess renewable energy potential for emerging technologies such as in-river hydropower.

Other Potential Actions

11. Construct a gas line to deliver natural gas to the region, providing an alternative source for energy and heat generation if the opportunity presents.

Guiding Questions for YK CEDS Work Session Breakouts

1. What strategies or actions are missing?
2. Which strategies and actions are the most important to achieve first and over the next five years?
3. How can we collaborate to make progress?

Other Relevant Resources and Potential Funding Sources

- AEA Digital Library. Alaska Energy Authority. www.akenergyauthority.org/library.
- HOMES Rebate Programs. Alaska Energy Authority and Alaska Housing Finance Corporation. <https://www.ahfc.us/efficiency/programs-for-homeowners/alaska-residential-energy-rebates>.
- Resources for rural utilities and capacity development in the energy sector. Alaska Network of Energy Education and Employment. aneetworks.org/.
- RurAL CAP Weatherization Services. Rural Alaska Community Action Program, Inc. ruralcap.org/client-services/housing/weatherization.
- Village Energy Efficiency Program. Alaska Energy Authority. <https://www.akenergyauthority.org/What-We-Do/Renewable-Energy-and-Energy-Efficiency-Programs/Energy-Efficiency-Conservation/Village-Energy-Efficiency-Program>.

Strengths and Opportunities

Internal and external factors that contribute to our success in this focus area

- Increased federal funding opportunities.
- Communities in the region are lowering costs and reducing dependence on diesel fuel by investing in wind energy, establishing consortiums, and completing community energy plans with the Department of Energy (DOE), Office of Indian Energy Policy and Programs. The Kuskokwim Corporation (TKC) has completed energy action plans for all TKC communities, and they are ready to implement.
- The non-profit Nuvista Light and Electric Cooperative is helping communities plan for and develop affordable, sustainable energy solutions.
- Alaska's Power-Cost Equalization (PCE) program helps reduce the cost of electricity in rural communities for residential homes and eligible community buildings.
- Many communities in the region have renewable energy potential, ranging from biofuels (wood), hydroelectric from river currents, geothermal, and wind.
- Technology is advancing and it is becoming easier to integrate renewable energy into existing electric grids.
- Nuvista and Alaska Native Tribal Health Consortium (ANTHC) have completed and collected energy audits for communities.
- ANTHC is applying for an Environmental Protection Agency (EPA) grant to create community action plans for fossil fuel use reduction.
- Alaska Energy Authority (AEA) established a new online library with hundreds of past reports and feasibility studies.
- The DOE Arctic Energy Ambassadors program will launch soon, establishing 12 Alaska ambassadors to focus on energy security. A representative from the YK region was selected.

Weaknesses and Threats

Internal and external factors that are barriers to our success in this focus area

- Energy costs remain high, including costs for fuel, transportation, equipment, and contractors.
- A high number of households are reliant on assistance programs to pay for heat and power, especially in the winter months.
- Power systems in existing homes are outdated.
- There is limited community capacity to pursue projects, even if funding is available.
- There is limited capacity and workforce for ongoing energy-related maintenance and operations.
- There is a lack of data in the region regarding hydro, river, and solar energy potential.
- Potential cuts to the State of Alaska's PCE funding.