

Yukon Kuskokwim Comprehensive Economic Development Strategy

Energy Summary: April 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 Power Cost Equalization (PCE) communities. ¹	Need to identify
Average of \$4,677 annually (2017)	Annual Household Cost: Total annual energy cost per household. ²	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. ²	Need to identify

Sources ¹ [AEA FY 2021 Power Cost Equalization Program Statistical Data by Utility](#), | ² [AHFC Statewide Housing Assessment, 2018](#)

Other Potential Indicators (need baselines and targets): Number of communities receiving Power-Cost Equalization (PCE) Program community facility benefits; number of communities in the YK region that are served by renewable energy; annual number of outages; age of infrastructure.

Proposed Energy Objectives *(adapted from 2018-2023 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. Invest in energy and maintenance training and capacity building.
 - Provide training for rate making to ensure communities are covering costs for fuel, routine operations and maintenance (O&M), and planning for equipment replacement.
2. Advocate for Alaska Energy Authority (AEA) to provide technical assistance for power outages.

Proposed Strategy B: Research and invest in renewable energy.

3. Fast-track solutions that can be realized within five years, such as pilot projects with Alaska Center for Energy and Power.
4. Focus on transitional energy projects to support the addition and incorporation of renewables. Include upgrades to existing community energy systems.
5. Retrofit schools and community buildings with clean energy.
6. Explore the use of thermal heaters that use excess electricity.
7. Collectively define the desired future of energy in the YK. This includes defining key terms like “renewable energy” and “clean energy.”

Other Potential Priority Actions

8. Increase weatherization funding, programs, and incentives.
9. Address high home heating fuel prices, potentially through consortiums or collaborations.
10. Advocate for Power-Cost Equalization (PCE) protection and expansion to ensure cost equity.
11. Develop Independent Power Producer (IPP) template agreements to generate funding for improvements (*Potential Partner: Alaska Native Tribal Health Consortium*).
12. Address challenges with Coast Guard certificates of inspection for receiving fuel, which can be a barrier for some communities.

Other Relevant Resources and Potential Funding Sources

Relevant Resources (listed alphabetically)

- Alaska Energy Authority's (AEA) Digital Library. Alaska Energy Authority. [View here.](#)
- Alaska Energy Hub: One-Stop Resource to Energy Project Sponsors. Alaska Municipal League. [View here.](#)
- Alaska Residential Energy Rates. Alaska Energy Authority and Alaska Housing Finance Corporation. [View here.](#)
- The Arctic Energy Ambassadors Program. [View here.](#)
- Promoting Clean Energy Career Pathways Throughout Alaska. Alaska Network of Energy Education and Employment. [View here.](#)
- Weatherization Services. Rural Alaska Community Action Program, Inc. [View here.](#)
- Village Energy Efficiency Program. Alaska Energy Authority. [View here.](#)
- Yukon-Kuskokwim Delta Regional Energy Plan. Nuvista, November 2015. [View here.](#)

Potential Funding Sources

- Energy Transitions Initiative Partnership Project: Coastal, Remote, and Island Community Technical Assistance. US Department of Energy (DOE) and National Renewable Energy Laboratory (NREL). [View here.](#)
- Technical Assistance. Office of Indian Energy Policy and Programs and NREL. [View here.](#)

Strengths and Opportunities

Internal and external factors that contribute to our success in this focus area (in alphabetical order)

- ANTHC grant application to the Environmental Protection Agency (EPA) on community action plans for reduced fossil fuel use.
- Completed community energy audits through Nuvista and Alaska Native Tribal Health Consortium (ANTHC).
- Completion of energy action plans for all TKC communities.
- Easier renewable energy integration into existing electric grids.
- Increased federal funding opportunities.
- Launch of the DOE Arctic Energy Ambassadors program with 12 Alaska ambassadors focused on energy security, including a YK representative.
- Newly available Alaska Energy Authority (AEA) online library with hundreds of past reports and feasibility studies.
- Nuvista nonprofit Light and Electric Cooperative supports for affordable development and sustainable energy solutions.
- Reduction of diesel fuel dependence and lowered costs through investment in wind energy, establishment of consortiums, and completion of community energy plans with the US Department of Energy (DOE), Office of Indian Energy Policy and Programs.
- Regional renewable energy potential, ranging from biofuels (wood), hydroelectric from river currents, geothermal, and wind.
- Rural residential (and eligible community buildings) electricity cost reduction through Alaska's Power-Cost Equalization (PCE) program.

Weaknesses and Threats

Internal and external factors that are barriers to our success in this focus area (in alphabetical order)

- High energy costs, including fuel, transportation and contractor costs.
- High household reliance on assistance programs to pay for heat and power, especially in the winter months.
- Lack of regional data regarding hydro, river, and solar energy potential.
- Limited capacity and workforce for ongoing energy-related maintenance and operations.
- Limited community capacity to pursue projects, even with available funding.
- Outdated power systems in existing homes.
- Potential cuts to the State of Alaska's PCE funding.