

Meeting Notes

Yukon-Kuskokwim Comprehensive Economic Development Strategy (CEDS)

2022 Quarter I Energy Working Group Meeting, March 25, 2022 | 10:00 am – 12:00 pm

Attendees

Name	Affiliation	Email
Andrea Gusty	The Kuskokwim Corporation	andrea.gusty@kuskokwim.com
Bertha Prince	Nuvista	energy@nuvistacoop.org
Brian Hirsch	Deerstone Consulting	brian@deerstoneconsulting.com
Eric Evon	AVCP Community Development Division	EEvon1@avcp.org
Miranda Strong	Calista Corporation	mstrong@calistacorp.com
Natalie Hanson	Nuvista	nhanson@nuvistacoop.org
Molly Mylius (facilitator)	Agnew::Beck Consulting	mmylius@agnewbeck.com

Meeting Objectives

- Discuss and confirm a set of indicators that can be tracked by CEDS partner(s) to measure whether the region is moving toward our desired outcomes within this focus area.
- Confirm key information for priority actions.

YK CEDS Action Planning Discussion

Lead/Partners: Is there at least one organization committed to leading the action/project? This organization will seek funding, manage the implementation and report on the status of the project over the life of the project.

1. If a committed leader does not exist for this project, can one be recruited?
2. If a committed leader cannot be recruited, is this action/project really a priority at this time?

Actions: Are the lead organization(s) for each action clear on what the action is and how it will be implemented?

3. Does the action have a realistic scope of work? Is it doable within the next 1-5 years?
4. Should this Working Group coordinate with partners in other Working Groups?

Energy

STRATEGY 6: Build renewable energy infrastructure and address barriers to building more renewable energy infrastructure in the YK Delta.

PRIORITY ACTIONS	LEAD/PARTNERS
<p>6-A. Implement energy action plans for The Kuskokwim Corporation (TKC) communities. Priorities include biomass infrastructure investment and household LED lighting. TKC (with the U.S. Department of Energy [DOE] Office of Indian Energy and ANTHC) created an energy plan of immediate actionable items for each of their 10 member communities. ANTHC continues to install remote monitoring systems to prevent catastrophic failure and collect real-time data on energy use.</p> <ul style="list-style-type: none"> • 	<p>Lead: TKC Partners: DOE Office of Indian Energy/ANTHC</p>

6-A Discussion

- Action plans completed – one for each of TKC’s ten communities; also completed a regional plan.
- Plan implementation
 - TKC changed out 10,000 incandescent lightbulbs for LED in the region; changed out bulbs in all shareholder homes on the river at no cost to homeowners.
 - TKC is submitting grant applications in for 2 test projects (wind in Kalskag, and hydro in Sleetmute or Chuathbaluk).
 - Biomass projects are moving forward (see notes below).
 - There are now 14 sawmills in the Middle Kuskokwim region; Wood Innovations grant will retrofit at least some of them to make them more productive. Biomass harvests on TKC lands have reforestation requirements.

- Data collection underway to fill in some of the gaps in modeling for renewable potential, and to update less relevant data (e.g., where modeling was done at a less effective site).
 - Current data shows wind is not feasible in TKC communities and we know that’s not true. Modeling test sites need to be in the correct location and at the appropriate height. Kalskag as an example.
 - Also getting more familiar with hydro data.
- TKC is prioritizing energy efficient construction with locally sourced wood. Consider adding as an action.
 - In addition to supporting energy efficiency and conservation, this is also a major workforce development and job creation driver, and will be addressing the housing need. Lots of overlap with other CEDS topics.
 - TKC received a 2-year grant, harvesting will (hopefully) be happening over coming weeks to use to build a test home, using construction methods from Canada.
 - Project is in partnership with Cold Climate Housing Authority, and incorporates indigenous knowledge into the design.

PRIORITY ACTIONS	LEAD/PARTNERS
<p>6-B. Collect energy audits that have been completed but not actioned. If possible, bundle projects for implementation. Nuvista conducted community audits in cooperation with AVEC and worked through a heat recovery database. Older audits also need to be updated to reflect emerging technology including heat recapture and wind turbines.</p>	<p>Lead: Nuvista, Renewable Energy Alaska Project (REAP)</p> <p>Partners: ANTHC has energy audits for water treatment plants and community facilities; AHFC audits</p>

6-B Discussion

- REAP is not actively involved in this effort and should be removed from the lead list
- Nuvista took the database of audits from ANTHC, updated based on outreach to communities, returned to ANTHC
- There were three incomplete projects, and helped fund completion of those projects (Hooper Bay, Kipnuk, Marshall)
- Nuvista did not identify any obvious opportunities for bundling projects for water treatment facilities and heat recovery. There is no further work here – it can come off the list.

PRIORITY ACTIONS	LEAD/PARTNERS
<p>6-C. Establish a Regional Utility Facility Support Collaborative to advocate for rural utilities. Nuvista is identifying proposed membership for the collaborative and working through business plan proposals.</p>	<p>Lead: Nuvista</p> <p>Partners: REAP</p>

PRIORITY ACTIONS	LEAD/PARTNERS
Pull out as a separate action: Create an inventory of existing/needed feasibility studies and bundle implementation of related projects.	

6-C Discussion

- This is in progress; NuVista is working on a business plan and financial model, with estimated magnitude of impact of offering an utility support program
- Identifying funding sources – grant funding or a recurring funding source (e.g., Indian Health Service funding)
- Membership has been identified – any independently operated utility or cooperative in YK Delta.
- Inventory line in the action – should be added as a separate action. Could be generation, construction, etc. Lead/partner for implementation would vary based on the specific project.
- As part of TKC’s regional energy plan, TKC identified some utility needs in each community (including in AVEC and MKEC served communities). In some cases there are no clear lead to address those needs/gaps, and TKC is not in a position to take the lead. For example – Aniak’s utility is for sale and no one is stepping in to purchase it.

PRIORITY ACTIONS	LEAD/PARTNERS
6-D. Construct a gas line to deliver natural gas to the region, providing an alternative source for energy and heat generation. A gas line from Cook Inlet could serve the Donlin mine and also deliver natural gas at lower cost to communities.	Lead: Donlin Partners: Utilities

6-D Discussion

- There has been some progress on permitting.
- AIDEA has proposed a road along part of the pipeline corridor (see Anchorage Daily News article [here](#)); some opposition from lodge owners.
- Some concern about the cost of constructing a pipeline and whether it would be a reliable source of fuel for the region; would require additional investment to bring the gas to communities, plus retrofits of current infrastructure to run off natural gas.
- If this does move forward, it would probably not come online in the next five years – it would be a longer-term project.
- Calista is working on intertie plans so communities could have shared power plan generation. There are some barriers including the need for substations to step down power and required upgrades to participating power plants. This project could be eligible for federal infrastructure funds.

Measures of Success Guiding Questions

- What are the most effective measures of success **each strategy**? What measures will tell an accurate story of what is going on with this specific sector and our region’s economy?
- Which agency/organization(s) report these data?
 - If no one – Would we have to collect the data ourselves? If so, who would do that and how? Can they commit to doing that data collection and reporting on a consistent basis?
- If we can’t track our most desired/the best indicator, what proxy indicator(s) can contribute to telling the story (for now)?

Priority Measures of Success

Priority Measures of Success	Data Source(s)	Where this is at Today	Where we want to be in 5 Years
Renewable Energy: [#] communities in the YK region are served by renewable energy Need to define “served” – at least 50%?	Count – Nuvista could count # of communities with some sort of renewable project Penetration (at least 50% served) – this is a better measure but would require survey of utilities	[#] communities in the YK region are served by renewable energy	All [#] communities in the YK region are served by renewable energy.
Diesel Use: Average [#] of gallons of diesel fuel used for community energy production.	Electricity – pull from PCE reports (via AEA) Heating – school district use as a proxy	Average [#] of gallons of diesel fuel used for community energy production. 6.86 million gallons of diesel fuel used for electricity generation for participating YK region PCE communities. [added after meeting]	Average [#] of gallons of diesel fuel used for community energy production. [#] gallons of diesel fuel used for electricity generation for participating YK region PCE communities.
Diesel Use: Percent of kWh generated from diesel for electricity in the region for all participating PCE communities.	PCE Program Data as reported by utility to Alaska Energy Authority	92% of kWh generated from diesel for participating YK region PCE communities. [added after meeting]	50% of kWh generated from diesel for participating YK region PCE communities. [added after meeting]
Annual Household Cost: Total annual energy cost per household <ul style="list-style-type: none"> • Likely doesn’t capture electricity 	AHFC Statewide Housing Assessment, 2018	Average of \$4,677 annually in 2017. <i>Statewide average is \$4,186 and national average is \$2,307.</i>	Average of [#] annually.

Priority Measures of Success	Data Source(s)	Where this is at Today	Where we want to be in 5 Years
<p>Annual Household Energy Use: average annual energy use in million [#] British Thermal Units (MM BTUs) used to heat single-family homes</p> <ul style="list-style-type: none"> Want to define – is this only heating oil? 	AHFC Statewide Housing Assessment, 2018	<p>Average of 132 million BTUs used annually to heat homes in the YK region in 2017.</p> <p><i>This is the lowest in the state; it is 58% of the state average (227 MM BTUs) and 1.3 times the national average (104 MM BTUs).</i></p>	Average of [#] million BTUs used annually to heat homes in the YK region.

Measures of Success Discussion:

- Renewable Energy Projects (first line in table)
 - Missing from the list: initiation of projects (takes a few years before projects come online) – capture interim projects, not just completed projects as proposed in the first line in the table. Alternate measures:
 - Funds coming in/secured for energy priorities (via survey of communities)
 - Community plans, feasibility studies – status by community (via survey of communities) (**identified as long-term priority measure of success)
- Diesel Use (2nd line in table)
 - Diesel is challenging to measure; potential proxy for diesel for home heating would be schools (likely tracked at the school district level – often the largest consumer). (*identified as a short-term priority measure of success)
 - Diesel reporting is challenging in PCE reports, but the best information we have for use of diesel to generate electricity. Could request from Alaska Energy Authority (AEA). (*identified as a short-term priority measure of success)
 - Eric will reach out to AVCP Housing Authority to see what, if any, data they track on fuel use, energy efficiency, etc.
 - Future metric: space heating.
- Annual Household Energy Cost (3rd line in table)
 - Likely doesn't capture electricity
 - This metric is not as helpful for tracking progress on the actual strategy – recommend using the metrics above
- Annual Household Energy Use
 - Is this only heating oil? Would be good to further define.
 - This metric is not as helpful for tracking progress on the actual strategy – recommend using the metrics above
- Proposed future metric: # of new homes that meet energy efficiency standards (see TKC design standards) (**identified as long-term priority measure of success)
 - This is also relevant to housing, workforce development, and natural resources/timber.

Previously Identified Measures of Success (for reference)

Indicator of Success/Positive Change	Next Steps
<p>Tasks E-F. Number of jobs or internships created or retained for regional residents in the energy sector (e.g., in studying, planning for, building/maintaining operating traditional utilities, and new renewable energy infrastructure).</p> <p><i>Creating a meaningful target for this indicator requires baseline information that is not readily available. An input-output model may have to be done to estimate current energy-related jobs and set a meaningful target.</i></p>	<p>Where to find the data: TBD at future Working Group meeting.</p> <p>Who will collect it: TBD at future Working Group meeting.</p>
<p>Tasks A, B, D, F. Amount of public and/or private funding invested in YK energy projects (e.g., state/federal, foundation grants awarded, investments in a utility or renewable energy development project).</p> <p><i>An input-output model may have to be done to estimate current energy-related investment and set a meaningful target.</i></p>	<p>Where to find the data: TBD at future Working Group meeting.</p> <p>Who will collect it: TBD at future Working Group meeting.</p>
<p>Task E. Number of people who complete the Alaska Center for Energy and Power (ACEP) Rural Electric Utility Operation Training and Internship Program (as an education metric for utilities).</p> <p><i>Creating a meaningful target for this indicator requires baseline information from the UAF-Bristol Bay partners.</i></p> <p><i>UAF Bristol Bay Occupational Endorsement in Sustainable Energy, i.e. enrollment, student success, post-graduation recruitment</i></p>	<p>Where to find the data: UAF-Bristol Bay partners</p> <p>Who will collect it: TBD at future Working Group meeting.</p>
<p>Task E. Number of people who receive facilities maintenance training.</p> <p><i>Creating a meaningful target for this indicator requires baseline information from the facilities directors at YK region school districts, who would know what the training needs are, who is getting them and who needs what.</i></p>	<p>Where to find the data: facilities directors at YK region schools</p> <p>Who will collect it: TBD at future Working Group meeting.</p>
<p>Tasks A, B, D, F. Number of new energy projects/ upgrades/ improvements in planning or development.</p>	<p>Where to find the data: TBD at future Working Group meeting.</p> <p>Who will collect it: TBD at future Working Group meeting.</p>
<p>Tasks A, B, D, F. Number of new renewable energy projects in operation.</p>	<p>Where to find the data: TBD at future Working Group meeting.</p> <p>Who will collect it: TBD at future Working Group meeting.</p>
<p>Tasks A-F. Number of new local or regional energy-related businesses.</p> <p><i>Creating a meaningful target for this indicator requires baseline information that was not readily available during discussion. Participants noted that at a regional scale, Donlin may be the major private energy-related business, and that small businesses development (e.g., diesel mechanic, trainer) will require more small business finance education.</i></p>	<p>Where to find the data: TBD at future Working Group meeting.</p> <p>Who will collect it: TBD at future Working Group meeting.</p>

Indicator of Success/Positive Change	Next Steps
Seeking effective, sustainable, and long-term CARES and ARPA funding opportunities	

Next Steps & Wrap Up

- Note: A couple folks dropped off early, so we were a small group by the end and did not discuss timing to reconvene. Nuvista will be undergoing a leadership transition over the coming months, so would be good to connect with the incoming Executive Director once they're brought on to catch them up on the CEDS effort.