

Project Workplan: Enhancing Local Energy Connectivity in Tribal Regional Communities (ELECTRC) – Tanana Chiefs Conference

Section 1: Overall Project Summary and Approach

Description of GHG Reduction Measures

Tanana Chiefs Conference (TCC) is seeking \$95,647,305 from the EPA Climate Pollution Reduction Grant program to drastically reduce emissions and complete transformative community change to four tribal communities in the Interior of Alaska to include Dot Lake, Tok, Tetlin, and Tanacross. The proposed project in total will reduce emissions by 95,933 metric tons by 2050.

Measure 1: 69 kV Transmission Line Construction

The purpose of the proposed project is to construct a transmission line from the current Golden Valley Electric Association (GVEA) Delta Area 138 kV line near Delta Junction, Alaska, to Tok, Alaska. This will connect the Alaska Railbelt electrical system to the electrically islanded communities of Tok, Tanacross, Dot Lake and Tetlin, all of which are currently served by diesel generation provided by Alaska Power and Telephone (AP&T). The approach to the transmission line would be to maintain a route within the existing Alaska Department of Transportation and Public Facilities (ADOT) right of way (ROW) as much as possible. Such a line would connect Tok to the Railbelt and will both stabilize and lower energy costs in Tok, as well as reduce emissions through access to a more diverse energy mix and lower intensity emissions from generation. In the future, the line could be extended to communities surrounding Tok, such as Northway, via an already studied 35kV intertie between Tok and Northway.



TCC plans to install a 69kV transmission intertie from the endpoint of the GVEA electric distribution system, located near the Gerstle River on Quarry Access Road located at mile post 1388. The approximately 73.4-mile-long transmission line will carry optical ground wire (OPGW) with various segments of distribution under-build throughout the alignment. There will be a new 69 kV substation at Quarry Access Road to connect AP&T and GVEA transmission systems. The 69kV alignment will generally follow ADOT ROW from the Gerstle River to Tok.

Several capital projects, for example, the Fort Knox Mine and associated regional mining developments, would benefit from the intertie by connecting to man camps and mining operations. For Fort Knox, this will reduce the carbon footprint of the mining operation and contribute directly to the mining investor's (Kinross) Green Initiatives.

In a 2020 study led by the Denali Commission titled Roadbelt Intertie Reconnaissance Engineering Report (November 23, 2020), the technical feasibility of a much larger 230kV electric loop from Anchorage to Glennallen to Tok to Fairbanks was assessed and the cost for total project development was estimated at \$566 million. This included the cost to construct the entire line, with a substation at AP&T Tok. Benefits identified as a result of overall Roadbelt Intertie Project were numerous, including: total energy transfer capacity improvements, increased electric power reliability throughout the Alaska road system not subject to interruption by a single line outage, development of future power generation, increased ability for the grid to accept renewable energy and provide significant spatial diversity for these resources, economic benefits including reduced power costs for rural communities and support for regional economic development opportunities, and potential for additional Department

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of Defense facility resilience. This smaller 69kV line will be right sized for the present while allowing substantial opportunity for load growth in the future.

TCC plans to own and operate this transmission line as a tribal utility and will maintain the line long-term by charging a wheeling fee to AP&T. Revenue generated will be used for operations and maintenance and it is likely that TCC will initiate maintenance contracts with both AP&T and GVEA for sections of the line. This will bring jobs, economic diversity, and revenue to the region while allowing the critical asset to be owned by a 501c3 tribal entity owned by federally recognized tribe who have called the region's land home for millennia. The project will also reduce energy costs for rural, disadvantaged communities providing an exponential benefit to residents, tribal institutions, the education system, and beyond. Additionally, the system would be tribally owned, promoting tribal sovereignty in the region. Tasks and Milestones to Ensure Project Success

The proposed project is based upon an engineering feasibility study completed by EPS, an Alaskan electrical engineering firm focused on development of electric generation, transmission, and distribution. The project proposes specific technology for adoptions, routing of the transmission line, costs, environmental requirements, and other considerations around the feasibility and planning for the project.

If awarded funding, TCC intends to solicit services competitively and publicly for a qualified engineering firm to complete design and construction administration activities on the project. Anticipated engineering design deliverables include conceptual 35% design, 65% design and specifications, 95% design and specifications, and 100% IFC design and specifications. Additionally, TCC will include permitting activities in this design contract. If approved by EPA, TCC would initiate procurement of critical long lead items at the completion of the design stage while ROW permitting is underway to mitigate risks around a limited supply chain and critical electrical components.

Key Contracts and Procurement Plan:

TCC will adhere to their adopted Procurement Policies and follow procurement standards as outlined in the Code of Federal Regulations (CFR) Title 2, Part 200. These regulations govern the procurement of goods and services and provide guidance on competition, documentation, and oversight to ensure transparency, accountability, and cost-effectiveness in the use of federal grant funds. Following these codes will ensure transparency, accountability, and effective utilization of grant funds in all procurement processes related to this project.

Below is a list of the key contracts and agreements that are anticipated to complete the project.

Owner's Representative and Project Management Services Contract: TCC will competitively procure the services of a qualified Owner's Representative to provide project management support and assist TCC in overseeing the development of the project. The Owner's Representative will be selected by a Best Value Solicitation.

Developing Draft Contracts and Agreements: The Owner's Representative will develop draft contracts and agreements necessary for the successful execution of the project. This includes the following activities: Request for Proposals (RFPs) to solicit bids and proposals, drafting Memorandums of Agreement (MOAs) to establish formal understandings and commitments between project partners, preparing a Power Purchase Agreement (PPA), and overseeing any land acquisition or site control agreements. The selected Owner's Representative will collaborate closely with TCC and their legal counsel to incorporate revisions and finalize the documents for approval and execution and ensure that regulatory and legal requirements are met for the project.

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Communication and Coordination: The Owner’s Representative will serve as a primary point of contact for project contractors, coordinating activities and resolving and mediating disputes or conflicts. In general, they will attend meetings with contractors on behalf of TCC and provide status updates to TCC throughout the course of the project. These notes will document any decisions, action items, or relevant information that needs to be conveyed to TCC or other stakeholders.

Contract Oversight, Deliverable Review, and Contractor Accountability: The Owner’s Representative will oversee contractors to ensure that contract deliverables and terms are met, as well as advocate for and ensure the interests of TCC are met through delivery of each contract. The Owner’s representative will review deliverables to ensure they are satisfactory, complete, and actively seek changes and improvements. The Owner’s Representative will manage the overall schedule and budget as well as provide review and recommendation of change orders and invoices to TCC.

Engineering Services: A single contract will be competitively solicited based upon qualification to secure the services of a qualified Engineering firm. This contract is anticipated to include subcontractors to perform geotechnical, survey, environmental, archaeological and all other disciplines required to fully design and permit the project for construction.

Engineering Drawings: The contractor will develop detailed engineering designs and specifications for the Transmission Line and substations. Drawings are anticipated to include conceptual, 35%, 65%, 95%, 100%.

Permitting: The engineering contractor will oversee activities related to permitting. These tasks will include development of NEPA documents, field work, data collection, report development, and for all permits required for the project to include environmental permits, safety permits, regulatory permits, and any other permit required for construction of the project.

Design Coordination: The contractor will work with TCC and the Owner’s Representative to ensure that the design intent is informed by all relevant disciplines and considerations to include site control, permitting, geotechnical, cost, and other factors. They will provide necessary clarifications, resolve design-related issues, and review construction drawings and documentation for compliance with the design specifications.

Construction Administration: Upon advancement to construction phase of the project, the engineering contractor will provide technical oversight of the contractor for construction administration functions. They will develop a submittal register and participate in submittal review for all critical equipment and contractor provider’s submittals. They will provide clarifications, resolve design-related issues, and review construction drawings and documentation for compliance with the design specifications. They will conduct inspections throughout the course of the project to include interim inspections, substantial completion and final completion.

Commissioning: The Engineering Contractor will collaborate with construction contractor, utilities, and other stakeholders to develop a commissioning plan for the project. The contractor will provide oversight and management during the commissioning process. They will coordinate with the Construction Contractor, other relevant contractors, and project stakeholders to ensure that the commissioning activities are executed according to the established plan and that all necessary tests and inspections are conducted.

Documentation and As-Builts: The engineering contractor will maintain records throughout the process and will complete stamped As-Built drawings with support from the construction contractor to verify the final completed project.

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Construction Services TCC will competitively solicit a construction contractor using a low bid solicitation method. Price will be considered the most important factor but not the only factor for consideration. Given the remote and unique arctic conditions, other factors such as experience and project approach will be considered in selection. The selected contractor will oversee all subcontractors, coordinate with the Engineering contractor, and be responsible for adherence to all permits and follow the design drawings and specifications and adhering to codes and regulations.

Procurement and Logistics: The contractor will procure the necessary materials and equipment for the project, as well as any supplies or other items. The contractor will develop a cost loaded schedule for delivery of the project and coordinate required workforce needs, workforce housing, equipment availability and other considerations.

Construction: The contractor will be responsible for all construction activities to include civil site work, substation construction, assembly, and erection of the transmission line, as well as integration into the existing distribution and transmissions systems, respectively, from each contractor.

Quality Control: The contractor will implement a comprehensive quality control program, conducting inspections and tests to verify the compliance of the constructed systems with the specified technical requirements in close coordination and under review of the Engineering contractor.

Health and Safety: The contractor will prioritize the health and safety of their workers and adhere to all relevant health and safety regulations. They will implement appropriate safety measures, provide necessary training, and maintain a safe working environment throughout the construction process.

Testing and Verification: The construction services contractor will collaborate with stakeholders to include the utilities and the engineering contractor to conduct testing and verify operations of the project.

Performance Optimization: The Construction Contractor will assist in optimizing the transmission line during startup and commissioning. They will work closely with the engineering services contractor to identify and resolve any issues that impact the overall performance of the systems.

Develop O&M Manuals: The contractor will develop operations and maintenance manuals for the project to provide guidance in maintenance for TCC and the utilities the project serves. Manuals will include equipment installed, redline drawings for verification and as-built development by the Engineering contractor, as well as all procedures, testing, and permitting documentation for future repair, replacement, and general operations of the systems.

Power Purchase Agreement (PPA): Alaska Power and Telephone will enter into a Power Purchase Agreement (PPA) with Golden Valley Electric Association. The PPA will outline the pricing, payment terms, performance requirements, and contract duration. Additionally, this PPA will establish a wheeling price to be provided to TCC for any energy transmitted over the transmission line.

Site Control Agreements: To secure the necessary site control for the project, it is anticipated that multiple agreements will be required, to include potential land acquisition by TCC and agreements such as leases with multiple landowners. In general, the project is anticipated to be entirely within the ADOT ROW for the entirety of the line, however minor deviations may be identified during design that provide cost efficiencies or technical solutions to routing of the transmission line. These agreements will outline the terms and conditions for the use of the land, including the duration of the agreement, access rights, environmental considerations, and any associated compensation or benefits for the landowners. The agreements will provide the necessary legal framework to ensure the rights and interests of all parties involved are protected throughout the project's lifecycle.

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Operations and Maintenance Contracts: To effectively maintain the transmission line and substations, TCC anticipates entering operations and maintenance contracts with three entities.

The first contract will be for brushing and clearing of the transmission line to reduce the risk of tree fall damaging the transmission line, providing adequate and safe access for maintenance, and reducing the risk of impacts from forest fires. Given that the project is located primarily within DOT ROW's, TCC will coordinate with DOT to identify and secure a contractor to perform these tasks to the satisfaction and requirements of TCC and DOT .

The second contract will be for operations and maintenance to include monitoring and repairing of all transmission lines and substations located within the AP&T service territory , specifically within the Tok microgrid. AP&T is anticipated to accept a contract for this scope of work and to oversee maintenance of the transmission line and substations.

The third contract will be for operations and maintenance to include monitoring, upkeep, and repair of all transmission lines and substations located within the GVEA territory. GVEA is anticipated to accept a contract for this scope of work and oversee maintenance of the transmission line and substations.

Underlying Assumptions and Risks

The following risks, potential impacts, and mitigation measures have been identified for the project at the time of this application. Upon award, TCC will further evaluate risks and finalize a comprehensive risk management plan.

1. **Commercial Risk:** Insufficient market demand for power, or reduced price of fuel. Probability: 10%
 - Potential Impact: Reduced benefits for TCC, rate payers and AP&T based upon reduced savings relatively on the AP&T grid.
 - Mitigation: The project is valuable independent solely of financial savings benefits due to increased access to clean energy and improved reliability.
 - The primary economic condition that would decrease the viability of this project is a steep decline in fuel prices. While it is nearly impossible to predict future fuel prices with any certainty, fuel cost projections used in the economic analysis of this project are based on National Institute of Standards and Technology forecasts. Additionally, historical precedent suggests that over the long term, fuel prices reliably increase. Therefore, we do not anticipate that the project will become less financially viable in the future.
2. **Technical Risk:** Uncertain reliability and maintenance requirements of transmission. Probability: 5%
 - Potential Impacts: If not maintained properly or installed improperly, the operations and maintenance of the line may be excessive or reduce the reliability of transmission from the GVEA to AP&T grid.
 - Mitigation: Close inspection and adherence to proper means and methods and the design, as well as regular inspection will ensure proper construction of the project.
3. **Climate Related Risk:** Increased permafrost degradation and fire risk. Probability: 25%
 - Potential Impacts: fast warming climate could increase the likelihood of wildfire impacting the line and increase the likelihood of foundation damage increases due to likely degrading permafrost.
 - Mitigation: geotechnical and survey analysis will identify potential high-risk areas for permafrost melt and fire risk. Permafrost sites will be identified and appropriation support for transmission line poles will be identified as necessary to include helical anchoring and/or thermosyphons, if necessary. Clearing and protections for the line will be maintained to

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ensure reduced risk of fire, pricing for O+M will account for clearing and brushing at double the rate of typical transmission line costs in Alaska.

4. Construction Risks: River Spans require unique construction approaches. Probability: 30%
 - Potential impact: This could potentially delay completion of the project, require additional permitting, and increase costs.
 - Mitigation: Early analysis and creative engineering will address potential alternatives for bridging significant river crossings.
5. Construction Risk: Transmission equipment is unavailable. Probability: 15%
 - Potential impact: Supply chain constraints could potentially delay completion of the project and increase costs dramatically.
 - Mitigation: Creative construction scheduling and early procurement, when possible, will reduce impacts
6. Regulatory and Permitting Risk: Unidentified Historical and/or contaminated sites are identified during construction. Probability: <25%
 - Potential Impact: This risk has a high potential impact. If, during design and/or construction, grave sites or contaminated sites are identified, then alternative routing or mitigation measures may be required, schedule delays incurred.
 - Mitigation: Early coordination with ADOT, Tribal coordination, archaeological studies will minimize risk. Soil disturbances will be minimized during construction generally, which should reduce the risk of identifying contaminated sites.
7. Budgetary Risks: Costs are higher than originally estimated. Probability: 20%
 - Potential Impact: This risk has a medium potential impact. Cost estimation is difficult in rural Alaskan due to the remoteness of the communities and logistical challenges. This might force us to stop work until more funding is found.
 - Mitigation: Feasibility analysis, materials sourcing, competitive bidding, regular cost estimates, and value engineering activities will be undertaken early and throughout the project to regularly identify potential cost escalation risk and identify lower cost alternatives.
8. Emissions Reductions: Emissions reductions are not likely to be impacted by various aspects of the project with the exception of delays in completing the project.

PCAP Measure Identification:

The Intertie project is identified in multiple Tribal PCAP's to include Dot Lake, Tanacross, and Tetlin. In each PCAP, the Reduction Measure is identified as the Tribe's highest priority as Measure 1. This measure directly reduces significant emissions as well as provides for Tribal ownership and control of energy transmission and centralizes financial benefits of energy production in disadvantaged communities, especially in Tribal communities. This project will reduce the costs of electricity, increase access to power, and allow for future benefits from emissions reductions on the GVEA grid. This project also improves reliability of power and reduces impacts of blackout events that can be particularly negatively impactful on cold weather communities dependent on electricity for heating and lighting during extremely cold weather events.

Measure 2: Solar PV and Battery Energy Storage

The project will install 4 MW of Solar PV generation facility as well as a 4 MWh of Battery Energy Storage. The solar PV will be a ground mounted bi-facial panel array located on Tribal land and will dramatically reduce cost of energy as well as emissions and dependency on fossil fuels. The planned battery system will be a modular containerized Lithium Ferrous Phosphate battery system. The BESS will allow for maximizing benefits of the solar PV array and provide improved resilience against blackout

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events in this remote grid. Numerous renewable energy projects, including a nearby hydroelectric project, isolated wind resources, and solar PV are currently infeasible due to an inability of the utility with existing infrastructure to manage distributed generation from these sources. The utility upgrades and the BESS will allow for incorporating solar PV and expand opportunities for these other renewable resources. The solar-battery project would be tribally owned as well; net revenues after covering expenses for operations and maintenance would be directly shared with Tribal members in the region, anticipated through application of net revenues to tribal electric utility bills. Current estimates forecast the potential direct financial benefit to tribal households of over \$1,000 annually.

Tasks and Milestones to Ensure Project Success

The following milestones have been identified to achieve 90% design of the Solar PV and Battery Energy Storage system. TCC will competitively procure a qualified design team with experience in High Penetration Solar in remote Alaska to ensure success of the project.

- Develop competitive RFP for procurement of the Engineering Design and Permitting Team including performance specifications of the Solar PV system.
- Form a selection committee to review the proposals and select the most qualified and cost-effective firm.
- Conduct a kick-off meeting with the Electric Utility, Engineering Contractor, and the Project Team to clearly identify project deliverables, roles, timelines, and cost constraints.
- Perform 65% Design and Permitting Review. Provide feedback to the Contractor.
- Perform 95% Design Review.
- Submit Permit Applications
- Release Construction Ready Drawings

Several key agreements are required to complete the proposed project:

Power Purchase Agreement (PPA) – A finalized PPA is required before further development of the project. A draft agreement has been developed and agreed in general terms by AP&T and TCC. The final document will be completed within the first three months of the project.

Land Lease Agreement – Leases and site control provision for placement of the BESS on the AP&T power plant property and the solar PV on Tanacross Native Corporation (TNC) property are required before advancing the project. AP&T and TNC have signed letters of commitment to provide leases and site control for the proposed infrastructure. Final signed documents will be completed within the first three months of the project.

The project team will perform project management services to include procurement and oversight of engineering and construction contractors for the project, as well as community engagement and grant requirements. The following steps will be undertaken during the construction and commissioning phase of the project:

- Develop competitive RFP for procurement of a construction contractor to complete equipment procurement and construction of the project.
- Form a selection committee to review the proposals and select the most qualified and cost-effective firm.
- Work with previously selected engineering firm and newly selected construction contracting firm to complete schedule of values, submittal register, etc.
- Complete submittal exchange and RFI process for material selection
- Procure Materials and Mobilize to Site
- Complete Site Clearing and Site Prep

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- Complete Solar PV Construction and Battery Placement
- Complete Power Plant Upgrades
- Complete Utility Interconnection and Commissioning of System
- Conduct Substantial Completion Inspection, Develop Punchlist
- Conduct Operator Training
- Complete Punch list and conduct final completion inspection

Underlying Assumptions and Risks

Design and construction in remote and sub-Arctic Alaska are challenging. Construction is often delayed due to inclement weather limiting access to sites and delays in construction activities. The TCC team has established a realistic project schedule that accounts for rural Alaskan work.

Procurement risks of delayed delivery of critical path equipment will be mitigated by regular communications with suppliers, quality inspections in manufacturing facilities, if required, and tracking of deliveries. Shipping equipment to Alaska can be challenging, so realistic timelines are being developed for critical path items.

Lack of skilled labor or contractor availability to work in the rural project area could delay the project or increase costs. The project team plans to issue long-term contracts to make projects attractive to contractors and to utilize local labor as much as possible.

Challenges in integrating with the existing transmission grid and providing stable operation could impact the output of the proposed system. It will be important to select an engineering firm that is experienced in Diesel-Renewable integration. Further, TCC is already working extensively with Alaska Power and Telephone to coordinate details of the project.

Fluctuations in the cost of equipment, materials or labor that could impact the project budget are a real risk, and fluctuations in the cost of diesel fuel could change the project economics. The project team will closely manage the project budget and adjust the scope or pursue loans or additional funding if inflation or equipment cost escalations impact the project objectives. If funded, the project economics has significant room for reductions in revenues with the ability to maintain positive net incomes.

Delays or complications in obtaining necessary permits or approvals from regulatory authorities could impact on the project timeline. The project team will regularly engage permitting agencies to proactively address any concerns.

Emissions reductions are not likely to be impacted by various aspects of the project with the exception of delays in completing the project.

PCAP Measure Identification:

The Solar-Battery project is identified in multiple Tribal PCAP's to include Tanacross, and Tetlin. In each PCAP, the Reduction Measure is identified as the Tribe's highest priority as Measure 1. This measure directly reduces significant emissions as well as provides for Tribal ownership and control of energy generation and centralizes financial benefits of energy production in disadvantaged communities, especially in Tribal communities. This project also improves reliability of power and reduces impacts of blackout events that can be particularly negatively impactful on cold weather communities dependent on electricity for heating and lighting during extremely cold weather events.

B. Demonstration of Funding Need

The proposed project would be transformative for the Tok Microgrid comprising the communities of Tok, Tanacross, Tetlin and Dot Lake. The relatively high cost of development due to the vast distances

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between communities in Alaska, the limited construction season and unique technical development requirements to address a sub-arctic environment, means that the project is not a suitable project for traditional loan financing. The large scale of the project means that most traditional funding sources for both energy projects, emissions reduction projects, and Tribes are not large enough to provide funding.

Previous Attempts and Alternative Funding

TCC and AP&T have sought funding for this project previously through the Department of Energy Office of Clean Energy Development (OCED), but the funding application was not successful. Both parties have considered traditional loan financing. The State of Alaska has suffered from financial and budget challenges for many years and has not provided significant opportunities for capital investments for many years, including for projects such as that proposed. Tax Credits are not available for distribution and transmission infrastructure.

TCC has applied for several opportunities seeking funding for this project.

- The Department of Energy Office of Clean Energy Deployment Rural and Remote Fixed Award Program, seeking \$5M to implement a small portion of the proposed solar and battery measures proposed within this application. Funding for that award is anticipated to be announced in April 2024.
- The Department of Energy Office of Clean Energy Deployment Rural and Remote. TCC submitted an application for the Intertie portion of this proposal through this program and was not selected for funding. Notice of unsuccessful funding was provided in February 2024.

Transformative Impact

The proposed project will be transformative for the Upper Tanacross region of Alaska, allow for the essential closure of the regions only power production facility – an aging diesel power plant, and will reduce emissions from the regional microgrid's electricity by over 40%.

Reducing electric rates may help the local economy. The communities of Dot Lake, Tanacross, Tetlin, and Tok rely on 100% diesel generation for their electricity, which is expensive and fluctuates frequently. Several of these communities are on the Denali Commission's list of distressed communities as this area is experiencing a significant economic downturn. An intertie appears to be one of the few options to decrease electrical utility costs in Tok, Tetlin, Dot Lake, and Tanacross. The residential rate of electricity in the Tok area is \$0.57/kWh. This is over three times the national average of \$0.137/kWh.

The high cost of electricity is a stress on residential customers, schools, and businesses, suppressing economic and population growth. The increasingly expensive electrical rates may drive people, including Tribal members with ancestral ties to their homeland, away from these communities. This economically disadvantaged area will continue to struggle with increases in the cost of diesel fuel.

Through multiple features, the particular proposed measures will allow for future reductions of emissions to help achieve the Tribes and regions emissions reductions goals. Specifically, the inclusion of a large Battery Energy Storage system will allow for further growth of local wind and solar resources. Perhaps more significantly, Golden Valley Electric has established a utility goal to reduce emissions by 26% by 2030, with further anticipated reduction beyond. The efforts of GVEA to reduce their emissions profile in the years ahead will further reduce emissions for the Upper Tanacross subregion.

Lastly, the combination of a battery energy storage system and intertie will allow for islanded potential renewable energy projects to be developed, specifically both the *7-Mile Wind Project* and *Yerrick Creek*

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Hydro have been substantially developed and rely on the intertie to be more financially viable. Providing the intertie would unlock the renewable energy potential in the region and allow the power to be shared across a larger grid.

After the intertie is constructed, it would also provide readiness to continue an expansion of the transmission line towards Glenallen. This would serve additional Tribal communities including Northway, Mentasta Lake, Slana, Chistochina, and Gakona.

Section 2: Impact of GHG Reduction Measures

Together, the proposed measures will result in over 95,000 MT of GHG emissions reductions for a cost of \$997.02/MT. The assumptions are described in additional detail in the technical appendices. In general, they represent conservative estimates of renewable generation, assume limited load growth (and thus conservative emission reductions over time), and make use of publicly available and verified data to establish actual energy consumption and the resulting emissions impacts.

	2025-2030	2030-2050	2025-2050		
	Short Term Emissions Reductions (MT)	Long Term Emissions Reductions (MT)	Total Emissions Reduction (MT)	Capital Cost	Capital Cost/MT
Measure 1: 69 kV Intertie	1,463.75	14,637.46	16,101.21	\$79,493,403	\$4,937
Measure 2: Solar PV and BESS	13,305.38	66,526.89	79,832.27	\$16,153,902	\$202
Total	14,769.12	81,164.35	95,933.48	\$95,647,305	\$997.02

*MT of GHG emissions

The following table represents reductions of specific emissions due to the proposed measures. Additional details on the sources and methods for these factors can be found in the appendices.

Emissions Reductions (Annually)		Reduced Emissions - EPA Factors (kg/gallon)				
		CO2	-NH4	- N2O	NOx	Total
		10.21	0.41	0.08	0.00515	10.71
Measures	Reduced Diesel	CO2 (MT)	NH4 (MT)	N2O (MT)	NOx (MT)	Total (MT)
Measure 1: 69 kV Intertie	456,326	697.24	28.00	5.46	0.35	732
Measure 2: Solar PV and BESS	311,289	3,172.49	127.40	24.86	1.60	3,326
Total	767,605	3,869.73	155.40	30.32	1.95	4,058

Magnitude of GHG Reductions from 2025 through 2030

The proposed measures are anticipated to have the following short-term emissions impacts. These numbers are further detailed in the technical appendices. These emissions consider a project completion date of 2029 for Measure 1 and 2027 for Measure 2. Measure 1 is anticipated to have a minimum 40-year design life and will provide emissions reductions benefits beyond 2050. Measure 2 has a 25-year design life and is anticipated to provide emissions reductions benefits until 2050.

Two years of emissions reductions are assumed for Measure 1 during this period.

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4 years of emissions reductions are assumed for Measure 2 during this period.

	2025-2030
	Short Term Emissions Reductions (MT)
Measure 1: 69 kV Intertie	1,463.75
Measure 2: Solar PV and BESS	13,305.38
Total	14,769.12

Magnitude of GHG Reductions from 2025 through 2050

The proposed measures are anticipated to have the following long-term emissions impacts. These numbers are further detailed in the technical appendices. These emissions consider a project completion date of 2029 for Measure 1 and 2027 for Measure 2. Measure 1 is anticipated to have a minimum 40-year design life and will provide emissions reductions benefits beyond 2050. Measure 2 has a 25-year design life and is anticipated to provide emissions reductions benefits until 2050.

Cost

	2025-2050
	Long Term Emissions Reductions (MT)
Measure 1: 69 kV Intertie	16,101.21
Measure 2: Solar PV and BESS	79,832.27
Total	95,933.48

Effectiveness of GHG Reductions

The proposed project represents the incredibly high capitals costs of working in remote and rural Alaska.

The following numbers represent the emissions per capital cost aspects for each Measure:

	2025-2050		
	Total Emissions Reduction (MT)	Capital Cost	Capital Cost/MT
Measure 1: 69 kV Intertie	16,101.21	\$79,493,404	\$4,937
Measure 2: Solar PV and BESS	79,832.27	\$16,153,901	\$202
Total	95,933.48	\$95,647,305	\$997.02

Documentation of GHG Reduction Assumptions

Detailed descriptions of reduction assumptions are provided in the technical appendices. Solar PV generation estimates were developed using helioscope modeling software. Actual utility generation data for calendar year 2023 from the State of Alaska PCE program was used to determine actual current emissions of the existing utility and the utility to be connected via transmission intertie. EPA factors were used to determine emissions reductions. Cost Estimates were based upon recently completed Engineering Feasibility studies for the specific projects with professional cost estimates.

Section 3: Environmental Results – Outputs, Outcomes, and Performance Measures

Expected Outputs and Outcomes

Anticipated Outputs

- **Miles of Installed Transmission Line:** 73.4 Miles of 69 kV
- **Constructed Substations:** Two 69 kV substations.
- **Annual kWh Purchased over Intertie:** 6,745,600 kwh
- **Annual Solar PV kWh generated:** 4,603,960 kwh

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- **Communities Served:** This project will serve 4 Tribal Communities, 1,471 residents, in 861 households, 44 community facilities, 216 other electric utility customers including community-based small businesses
- **Local Jobs Created-** 30 seasonal FTEs during 18 months of construction over 2 years, 2 permanent FTE O&M position's

Anticipated Outcomes

- **Reduced Diesel Fuel Use** - diesel fuel consumption will be reduced by 767,605 gallons/year, and 30,704,200 gallons over the 40-year project life
- **Reduced Electricity Rates:** Up to \$0.10/kwh on AP&T grid
- **Local Jobs Created-** 30 seasonal FTEs during 18 months of construction over 2 years, 2 permanent FTE O&M position's
- **Greenhouse Gas Emission Reductions** – reduction of 4,058 metric tons of CO2 annually and 95,933 metric tons by 2050
- **Tribal Net Revenue's generated annually:** \$313,270 – distributed amongst 274 Tribal households annually - \$1,143.32 per household

- **Reduction in cumulative metric tons of GHG emissions from 2025 through 2030: 14,769**

The intertie project is not anticipated to complete construction until 2029. Annual Emissions reductions are estimated at 732 MT/year. Over a two-year period, 1,463.75 MT is estimated to be offset by the project. The Solar PV and BESS project is anticipated to be completed in 2027. With annual emissions reductions of 3,326 MT this results in a 13,305 MT annual reduction in remissions. Together the two measures will reduce a total of 14,769.12 MT.

- **Reduction in cumulative metric tons of GHG emissions from 2025 through 2050: 95,933.48**

The project is anticipated to offset 95,933.48 MT over the period of 2025 through 2050. This is based upon an annual emissions reduction of 4,058/MT year multiplied by 20 years, plus the initial 14,769.12 MT of emissions reductions during 2025-2030. The solar project is anticipated to have a useful life of 30 years and the intertie an at least 40 years.

Performance Measures and Plan

Key project performance measures for both metrics will be provided as follows:

Schedule Performance: The primary tracking measure will be months ahead of or behind key tasks to include Procurement, Engineering, Construction and other critical tasks.

Schedule performance will be monitored against the initial proposed schedule. Contractors responsible for carrying out individual tasks will submit monthly and quarterly reports tracking progress towards deliverables identified in each key task. Through this % complete tracking mechanism, TCC will monitor performance of the project schedule against expectations throughout the project.

Budget Performance: The primary tracking measure, to be tracked on a monthly basis and reporting on a quarterly basis, is dollars expended towards key tasks to include Project Management, Engineering, Construction and other critical tasks.

Budget performance will be monitored against the initial proposed budget. Contractors responsible for carrying out individual tasks will submit monthly invoices tracked with costs tracked against key tasks and deliverables. Through this % complete tracking mechanism, TCC will monitor performance of the project schedule against expectations throughout the project.

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Project Impact Performance: Once measures are completed, TCC will, on a monthly basis, maintain records of kwh of electricity generated from the Solar PV identified in Measure 2 and will document the kwh's transmitted across the Transmission line in Measure 1. Additionally, TCC will monitor the "average generation mix" on an annual basis from Golden Valley Electric Association to determine the emissions of source generation for all kilowatt hours transmitted across the Transmission Intertie. Lastly, TCC will monitor the generation of the existing AP&T Tok Diesel power plant (none is expected) to ensure that the avoided emissions continue to be monitored and realized on an annual basis.

Authorities, Implementation Timeline, and Milestones

Tanana Chiefs Conference will be responsible for implementing 100% of the proposed measures. They will be cooperating with two utilities (Golden Valley Electric Association – who will sell power across the transmission line) and Alaska Power and Telephone (who will purchase power across the transmission line and from the Solar PV) to enable operations, support maintenance, and support project implementation.

Tanana Chiefs Conference has the authority to carry out each measure, per the PCAP authorities, legal requirements, and the documented support of eligible entities. The local electric utilities of GVEA and AP&T are necessary partners who are in support of the application and have provided letters of commitment. Additional partners that will be necessary include landowners. The majority of Measure 1: Transmission Intertie will be built within existing State of Alaska Department of Transportation Right of Way's. Any deviation from this space will be identified during the engineering design phase and right of way will be obtained at this time.

Measure 2: Solar PV and BESS will require provision of site control from the local Alaska Native corporation Tanacross Inc., a letter of commitment has been secured supporting this partnership. Additional site control will be required from the local electric utility; a letter of commitment has been secured for this as well. Competitively selected contractors will be responsible for design and construction activities; however, the specific entities will not be known until the procurement process is completed during the course of the project.

The below timeline provides guidance for Measure 1: Transmission Intertie. The Implementation steps and procedures for Measure 2: Solar PV and BESS are nearly identical but will occur on a much shorter timeline – completing construction in 2027.

Measure Implementation Timeline

Performance Period: September 2024 – August 2028

Task 1.0: Project Planning (September 2024 – August 2025)

Task Details: The project planning task includes RFP development, contract procurement, stakeholder engagement, pre-design tasks, and the draft power and purchase agreement.

Subtask 1.1: Procurement

Subtask Details: Negotiate with EPA for award allocation, formalize written agreements, develop RFPs and complete competitive bid process.

Deliverables: Project and Risk Management Plans, RFPs, and contracts

Subtask 1.2: Community Engagement

Subtask Details: Community meetings, informal interviews with village leadership, develop stakeholder engagement plan, presentations and listening sessions at annual and subregional meetings, coordinate and schedule trainings, contemplate cooperative labor agreements.

Deliverables: Documented engagement plan for life of project

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Subtask 1.3: Power Purchase Agreement

Subtask Details: Negotiate PPA with AP&T and GVEA. The PPAs will establish a fair price, payment terms, performance requirements, and contract duration in compliance with the rules and regulations of the Regulatory Commission of Alaska (RCA).

Deliverables: Draft PPAs

Task 2.0: Project Development (September 2025 – March 2027)

Task Details: The project development task includes design, permitting, site control, and associated activities to prepare for construction, as detailed in the subtasks below.

Subtask 2.1: Engineering Design

Subtask Details: Complete 35%, 65%, 95%, and construction ready drawings through standard engineering design and review process.

Deliverables: Construction ready drawing set, calculations, basis of design, specifications

Subtask 2.2: Permitting and NEPA

Subtask Details: Prepare permit applications and Environmental Assessment, review, and submit to jurisdictional agencies for approval.

Deliverables: Secured permits

Subtask 2.3: Site Control

Subtask Details: Survey and acquire ROW and land use authorizations.

Deliverables: Site Control maps and diagrams, ROW and/or other land use permission for transmission line and ancillary infrastructure begin and negotiated

Subtask 2.4: Community Engagement

Subtask Details: Community meetings, implement stakeholder engagement plan, collect feedback and respond, create project webpage, post project information publicly, presentations and listening sessions at annual and subregional meetings, assess community needs for local workforce, coordinate training opportunities, draft collective labor agreements as applicable, establish workplace committees for project hires.

Deliverables: Formal coordination and documentation of workforce development requests, project webpage, community needs assessment

Subtask 2.5: Procurement

Subtask Details: Develop RFP for construction contract, develop safety plan.

Deliverables: RFP, safety plan

Subtask 2.6: Power Purchase Agreement

Subtask Details: Finalize and approve PPA with utility partners.

Deliverables: Fully executed PPAs

Task 3.0: Construction and Integration (April 2027 – August 2029)

Task Details: The construction and integration task includes pre-construction activities, construction, inspection, and closeout, as detailed in the subtasks below.

Subtask 3.1: Pre-construction

Subtask Details: Select contractor, review construction plans with selected contractor and confirm schedule, finalize contract, procure materials and mobilize.

Deliverables: Construction contract, bill of materials

Subtask 3.2: ROW Acquisition: Final acquisition of ROW permits and negotiation of site control to include land acquisition is completed during material procurement.

Deliverables: ROW permits for all construction activities

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Subtask 3.3: Construction

Subtask Details: Site preparation, construction of transmission lines and substations, interconnect with existing power, conversion of existing power plant

Deliverables: Installed assets

Subtask 3.4: Community Engagement

Subtask Details: Community meetings, update project webpage

Deliverables: Updates to project webpage, community meetings report

Subtask 3.5: Inspection and Closeout

Subtask Details: Substantial completion inspection and punch list, address punch list items, final and regulatory inspections, troubleshooting, operator training

Deliverables: Punchlist, inspection reports, training logs, signed transmittal from contractor to owner indicating completion and turnover

Section 4: Low-Income and Disadvantaged Communities

Community Benefits

The following census tract's will be direct beneficiaries of this project.

- Census Tract Number: 02240000400, Southeast Fairbanks Census Area, Alaska, Population: 4,436
- Census Tract Number: 02240000100, Southeast Fairbanks Census Area, Alaska, Population: 2,442

The communities to benefit from this project are located in the Southeast Fairbanks Census area of Alaska. All four are defined as disadvantaged due to being overburdened and underserved in climate change, energy, health, housing, legacy pollution, transportation, water and wastewater, and workforce development (Climate and Economic Justice Screening Tool). The socioeconomic indexes, national percentiles for health, and limited access to broadband and fresh, reasonably priced foods illustrate these disparities. Many data points were lacking for rural Alaska. For example, housing cost burden as reported in the 2018 State of Alaska Housing Assessment showed 10% of homes lacked complete plumbing, 40% were built pre-1980's with no subsequent energy retrofit, and 9% were overcrowded. All 4 communities are on the State of Alaska's list of Environmentally Threatened Communities and have been rated for threats to infrastructure of flooding, erosion and permafrost thaw. Wildfire risk for the project communities is rated high to very high.

The current residential rate of electricity on the Tok microgrid is \$0.57/kWh. This is over four times the national average of \$0.137/kWh. Annual home energy costs in the TCC region are \$5,254, 2.3 times the national average (2018 Alaska Housing Assessment, Doyon Region). Reducing electric rates will help the local economy. The communities of Dot Lake, Tanacross, Tetlin, and Tok rely on 100% diesel generation for their electricity, which is expensive and fluctuates frequently.

		Dot Lake	Tanacross	Tetlin	Tok
Climate & Economic Justice Screening Tool	Disadvantaged	yes	yes	yes	yes
Justice40- EPA EJ Screening Tool Data	Demographic Index	73	73	73	57
	Supplemental Index	74	74	74	64
	low life expectancy	69	69	69	69

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	heart disease (adults)	83	83	83	83
	asthma	69	69	69	69
	persons with disabilities	97	97	97	97
	limited broadband	98	98	98	72
	food desert	yes	yes	yes	yes
USDA & USFS Wildfire Risk to Communities Data	wildfire risk to community	very high	very high	very high	very high
	% of US communities with lower risk	96	93	99	99

Assessment of Project Benefits

Benefits from the proposed projects are numerous, including total energy transfer capacity improvements, increased electric power reliability throughout the Alaska road system not subject to interruption by a single line outage, development of future power generation, increased ability for the grid to accept renewable energy, reduced power costs for rural communities, and support for regional economic development opportunities. The 69kVa line will be right sized for the present while allowing substantial opportunity for the future.

This project and the benefits outlined below align with priorities in Community Action Plans, the 2022-2026 Comprehensive Economic Development Strategy, and the eight Justice40 policy priorities identified and outlined by DOE. Simply put, the high capital cost of the project, combined with the relatively small ratepayer base, means that this project is not economically feasible through traditional financing means—certainly not without drastic rate increases to an already high-cost energy system. As the rest of the nation looks toward microgrid development for resilience, our region is looking for economies of scale and the elimination of microgrid diesel generation for the following reasons:

Price stability via protection against volatility of fluctuating diesel costs	Decrease outmigration of our Tribal members caused by high-cost electricity and resulting stress on small, disadvantaged communities
Unlock access to large renewable projects , lower carbon footprint and contribute to State of Alaska goal for 50% of electricity generated by renewable resources by 2025	Pave way for intertie connection to other Tribal islanded microgrids , including Mentasta Lake, Slana, Chistochina, Gakona, and Northway
Reduce fuel spills and related environmental threats to Tribal Lands from high volume transport and use of diesel fuel transport, including ground contamination and particulate matter and CO2 emissions	Cost/Benefit of Operations and Maintenance , line maintenance cost would be far outweighed by lower maintenance in moving the Tok diesel power plant from prime to emergency or standby generation

TCC will document changes in electric rates, evaluate local Tribal populations, observe development of additional renewable projects, pursue funding for extensions of the intertie to additional communities, compare fuel spill frequency, and maintain records of financial disbursements to tribal households.

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Assessment of Negative Impacts

Reduced use of diesel fuel will create some negative impacts. The Tok power plant will be a standby generator and no longer require as many full-time employees as possible. The loss of these job(s) is expected to be offset by increased job opportunities related to maintenance of the intertie and solar PV. Waste heat generated by diesel power is commonly used to heat some community buildings, with fewer hours of runtime, heating costs for these facilities will likely increase. These costs are anticipated to be offset by electrical cost savings realized from the intertie project and solar battery projects.

Community Engagement

The applicant, Dena' Nena' Henash (AKA Tanana Chiefs Conference or TCC) is a non-profit, tribal consortium of 42 members, including 37 federally recognized tribes. TCC's mission is to provide a unified voice in advancing sovereign tribal governments by promoting physical and mental wellness, education, socioeconomic development, and culture of Interior Alaska Native people. Since 1962, TCC has been assisting Interior Alaska Tribes with self-governance, access to needed services and infrastructure, and serves as the regional Tribal Healthcare Organization (THO). TCC manages over 130 programs including health, social services, energy, employment, planning, development, construction, subsistence, and self-governance. TCC's regionalized approach maximizes community benefits while minimizing costs and adding capacity for grant and project management in all areas.

The TCC Energy Program partners with Tribal Councils in community and energy planning to reduce burdens of high energy costs and support tribal energy sovereignty. Past projects include community scale solar, diesel generator replacements, and community-wide energy efficiency projects. Previous and ongoing efforts to engage communities are below.

- During TCC's Annual Meeting in March, the 42 Tribal government representatives comprising of TCC's Full Board hold elections for the Executive Board, Chief, and Chairman, and consider resolutions from tribal members to guide organizational activities.
- TCC's Self-Governance Division supports quarterly subregional meetings with representatives of each member Tribal government.
- In 2011, TCC passed a Board Resolution committing to creating one job per community and employing personnel within those communities. Since 2013, TCC has awarded over 100 employment contracts.
- Community Plans are regularly updated with TCC support and approved by local community governments. Each plan involves extensive community input, including public meetings and surveys.
- In 2015, TCC contracted with the Alaska Energy Authority to complete the *Interior Region Energy Plan*, which identified community and regional priorities for energy infrastructure. Community meetings and interviews were held in each TCC subregion and with major energy stakeholders in each community, including municipalities, tribes, utilities, school districts, and residents.
- The *2022-2026 Comprehensive Economic Development Strategy* prioritizes constructing interties between nearby TCC region communities. A *2021 Community Energy Action Plan* for Tanacross recommended the community continue to advocate for further analysis of this intertie project's cost-benefits.
- TCC Energy Program has successfully worked with "energy champions" in communities to develop local energy efficiency and renewable energy projects, creating a direct line of two-way communication on energy priorities and projects.

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The project team will continuously evaluate the community and labor engagement process through regular engagement opportunities with the general public and specific stakeholders. The evaluation methods listed below have been used effectively by TCC on other planning and energy projects.

- Conduct an initial survey to gauge stakeholder and affected workers' perception of the project and to take stock and prepare to respond to any concerns early and often in the engagement process.
- Hold informational and strategic planning presentations in each community prior to each project phase to draft and adjust project goals and objectives.
- Seek feedback through an informal interview process from key members of each community Native Association and/or Village Council at least once per project phase.
- Launch and maintain project webpage to serve as a central location for information on and status of the project, include a comment form monitored by the project team.
- Hold informational and listening/feedback sessions at quarterly subregional meetings and at the TCC annual meeting.
- Conduct quarterly reviews of community engagement feedback and incorporate this feedback into the project planning process and use it to inform the community and labor engagement moving forward; and
- At project close, conduct external evaluation of both community and labor engagement strategies and outcomes based on level of engagement, incorporation of feedback, and stakeholder input.

Section 5: Job Quality

Annually, TCC manages an operating budget of \$240M which includes more than \$40M worth of subcontracted projects. We have sufficient systems and policies in place to ensure employment and procurement are successfully managed and executed. TCC does not currently have qualified employees to directly design, engineer, and construct the proposed transmission line intertie project. If awarded, TCC will complete this project through effective and efficient hiring and procurement policies and standards of direct employees and contractors to ensure the use of quality, skilled workers and minimize disruptive and costly delays. For all employment contracts and procurements associated with this program, TCC will comply with applicable federal procurement guidelines and follow our own personnel and procurement guidelines noted above, which were developed to keep TCC in line with both state and federal grants requirements. Not all contractors and subcontractors have been contractually identified at this time.

For construction projects in Interior Alaska, plans to attract and retain a skilled, local, and diverse workforce for design, engineering, and construction and ongoing operations must include flexibility and back-ups for seasonal work, fair and equitable pay and benefits, support for skill development, and a healthy, safe, and supportive work environment. TCC expects construction will create local jobs for line installation and solar panels in the region. This will likely be seasonal, part time work which would provide meaningful employment that aligns with traditional subsistence lifestyles, including seasonal hunting and gathering that determine the lifestyle and day to day schedules of rural Alaska Native residents.

With the expectation of dozens of jobs being created, the goal is to recruit a diverse pool of workers that is also representative of the communities in our region. We do this with intentional effort to recruit in communities that have been traditionally underrepresented in clean energy jobs. TCC does not have

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formal Project Labor Agreements, but our existing policies and practices offer equivalent protection and enhanced actions for local hire for staff and contractor positions:

Transparency: TCC ensures the use of an appropriately skilled and credentialed workforce through thorough job descriptions and hiring methods and established internal policies. Policy 10-505 Educational Reimbursement allows educational reimbursement to TCC employees, and policy 10-404 Participation in Trade and Professional Association encourages TCC employees to participate in certain trade and professional associations.

Fair & Equitable Wages: Per the Davis-Bacon Act wages (in accordance with subchapter IV of chapter 31 of title 40, United States Code) for construction, TCC fully intends to follow federal guidelines by including clauses in construction contracts that require construction contractors and subcontractors to pay wages at rates not less than those prevailing, as determined by the Davis-Bacon Act wages and submit certified payroll when necessary. Applicable wage scales and overtime payment practices for all union employees expected to be directly involved in the construction will follow union standards. For direct employees and subcontractors, this information will be established upon hiring.

Local Hire & Native Preference: TCC does not have a specific local hire provision but does follow a Native preference policy per the requirements of section 7 of Public Law 93-638. As with most projects in Alaska, those with Alaska experience are preferred. TCC will provide evaluation factors during competitive contracting to prioritize proposals planning to use local hire, as well as provide preference to Alaska Native and/or American Indian owned firms.

Equitable On-ramps: TCC will provide targeted opportunities and resources to Alaska Native and local job seekers and contractors by leveraging our relationships with Tribal Governments and associations, local contractors, and regional organizations, including the Interior Regional Housing Authority, Doyon Limited, University of Alaska's Alaska Native Science & Engineering Program (ANSEP), and explore options to expand an existing Cooperative Labor Agreement with the Alaska Native Villages partnered on this project. See Community and Labor Engagement section for details on engagement strategies.

Required Certifications and Training: TCC requires professional licensure and training for specific areas of work. All electrical work will be overseen and signed off on by an Electrical Administrator licensed with the state of Alaska. All civil, structural and foundation work will need to be signed off on by an Alaska stamped Professional Engineer. All workers that are hired as part of this project will need to have at least an OSHA 10 card for safety training. These requirements will be clearly stated in any procurement documents and be included in all construction contracts for this proposed project. TCC regularly holds DEIA and anti-harassment training for employees.

Maintaining a diverse workforce: TCC complies with 41 CFR §§ 60-1.4(a), 60- 300.5(a) and 60-741.5(a). These regulations prohibit discrimination against qualified individuals based on their status as protected veterans or individuals with disabilities and prohibit discrimination against all individuals based on their race, color, religion, sex, sexual orientation, gender identity, national origin, or for inquiring about, discussing, or disclosing information about compensation. Moreover, these regulations require that covered prime contractors and subcontractors do the same.

Minimize labor disputes: TCC will ensure compliance with labor and employment laws by appropriate use of the personnel and procurement policies and commits to strong labor standards and protections

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for the entire project workforce.

Workforce Development

TCC's workforce development programs, housed within a fully staffed Employment and Training Department (E&T), provide employment, career, and economic development opportunities to identify the strengths and potential of tribal members, remove barriers to employment, and ensure members are prepared for the workforce. Education and training opportunities aim to build occupational skills, technical skills, provide necessary tools, and knowledge to perform current or future labor market needs. TCC's existing workforce development programs will focus on engaging partner communities, employees, and contractors to co-design training opportunities. Formal coordination on workforce development is planned to ensure TCC's holistic service suite supports the on-ramps to equitable recruitment and employment.

For TCC, training is initiated by the Tribal Governments we serve, based on upcoming projects and job needs identified in their communities. The E&T Department develops and schedules training courses, where trainers either travel out to the community to provide training or have a training set up in Anchorage or Fairbanks. Training can accommodate up to 200 tribal members and a variety of topics. TCC works to support and develop apprenticeship programs and strongly encourages apprentices in TCC-led projects. Cooperative Labor Agreements with unions (Laborers 942 and Operating Engineers Local 302) and the Interior Regional Housing Authority enable tribal members to accrue hours, receive training to join unions, make Davis-Bacon wages, and live in their community and work onsite on projects.

Worker Rights

TCC strongly values and invests in policies and practices to protect workers on TCC-affiliated projects. Specific practices and agreements currently in place, engagement with labor unions and worker classification, are below. TCC will explore workplace committees and work with partners to engage in additional cooperative labor agreements with all Tribal Government partners.

Labor Agreements: TCC currently has a Cooperative Labor Agreement (CLA) with two communities not partnered on this project. If initiated by the sovereign Tribal Governments of the partner communities, TCC will develop and implement CLAs with these governments. TCC has also operated a Tribal Employment Rights Office (TERO) Program for over a decade to help support tribal employment rights of its member villages. This resource will be available to all tribal members employed on the proposed projects.

Labor Unions: TCC abides by a Protected Concerted Activity policy, which ensures employees covered by the National Labor Relations Act are afforded certain rights to join together to improve their wages and working conditions, with or without a union. Further, TCC encourages labor union affiliated contractors to bid on construction projects.

Worker Classification: TCC ensures correct classification of workers through policy 10-213 Employment Classification which states that it is the policy of TCC to classify employees as full-time regular, part-time regular, Health Aide Practitioner, part-time Health Aide, temporary or emergency and as exempt or nonexempt for the purposes of compensation administration. In addition, TCC may supplement the regular workforce, as needed. TCC follows all applicable state and federal laws that pertain to employee classification.

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Workplace Committees: TCC will establish workplace committees for all project workforce as needed, to raise health, safety, compensation, and harassment/discrimination concerns in connection with project work.

Section 6: Programmatic Capability and Past Performance

Past Performance and Reporting Requirements

Tanana Chiefs Conference oversees and delivers dozens of grants and assistance agreements from the federal government, the State of Alaska, private foundations and other entities every year, in addition to hundreds of millions in federal contracts from the BIA and Indian Health Service to carry out health care services. TCC has received funds from nearly every federal agency, including the EPA. TCC additionally works with our members Tribes to oversee and deliver federal assistance agreements provided directly to the Tribe, if assistance is requested and capacity is available at TCC.

Five federal assistance award agreements completed within the last three years are identified below to highlight the breadth of awards as well as general experience with the EPA and relevant experience to the EPA Climate Pollution Reduction Grant opportunity. Additional information on these awards, and any other federal assistance agreement active or completed at TCC is available upon request.

1. Award Name: Fed Supporting Tribal Public Health Capacity in Coronavirus Preparedness and Response FY20

Funding Source: USDHHS CDC Prevention and Health Promotion

Funding Source Award #: 1NU1ROT000087-01-03

Funded Amount: 6,139,156.00

Start Date: 18-May-20

End Date: 10-Jun-22

Award Status: COMPLETE

Description: This grant from the CDC Grant was expended during the peak of the COVID-19 Pandemic. The grant provided funding for salaries for health care, purchasing additional equipment for covid including, portable hand washing units, shuttles for clinics, air filtration units. Equipment was additionally purchased for TCC's Remote Maintenance Workers who travel out to various villages to work on providing maintenance support for water and sewer systems in remote Tribal villages, such as helping prevent or thaw out household piping for water and sewer systems from freezing up. Funds were also used for construction of the University Building to provide an offsite clinic for healthy patients who need to be seen in person.

Reporting History and Status: TCC provided regular and timely reporting per the terms of the grant and completed delivery of the varied scope of work.

2. Award Name: Federal Headstart FY22

Funding Source: USDHHS Administration for Children & Families

Funding Source Award #: 90BF000008-03-00

Funded Amount: 3,058,736.31

Start Date: 1-Dec-21

End Date: 30-Nov-22

Award Status: COMPLETE

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Description: This grant administered by TCC provided for preschool services for children over the age of 3 in multiple rural and remote Tribal communities who are members of TCC. Funds were used for staff salaries, supplies for classrooms, cooks in some of the villages, rent and leasing of classrooms and office space. The funds additionally provided students with monthly Highlights magazine, home packets for literacy activities to help with child development.

Reporting History and Status: TCC provided regular and timely reporting per the terms of the grant and completed delivery of the varied scope of work.

3. Award Name: Federal Low Income Home Energy Assistance Program

Funding Source: USDHHS Administration for Children & Families

Funding Source Award #: 21PNAKE5C6

Funded Amount: 2,342,089.00

Start Date: 11-Mar-21

End Date: 30-Sep-22

Award Status: COMPLETE

Description: This grant provides funds for The Low-Income Home Energy Assistance Program (LIHEAP) helps keep families safe and healthy through initiatives that assist families with energy costs. LIHEAP provides federally funded assistance to reduce the costs associated with home energy bills, energy crises, weatherization, and minor energy-related home repairs. This is an Income based program, individuals have to submit application to qualify.

Reporting History and Status: TCC provided regular and timely reporting per the terms of the grant and completed delivery of the varied scope of work.

4. Award Name: Federal Diesel Emission Reduction Project Manley Hot Springs

Funding Source: USEPA GAP Program

Funding Source Award #: DE-01J89201

Funded Amount: 519,716.00

Start Date: 1-Oct-20

End Date: 30-Jun-23

Award Status: COMPLETE

Description: The project replaced two unregulated diesel gen-sets located in Manley, AK that were producing at a very inefficient rate with two Tier 3 diesel gen-sets that are more efficient for the community. The project also includes the replacement of manual switchgear with an automatic control system to safely switch between gen-sets, balancing runtime and maximize the life of the system; as well as allow for the power generation system to be prepared to accept renewable power in the future. The project dramatically reduced emissions (75.7% reduction in NOx and 81.5% reduction in PM2.5) positively impacting community health and wellbeing simply by the increased efficiency and is expected to reduce annual diesel usage in the community by 16.4% or 7,154 gallons. This project will reduce emissions from the power plant and lead to lower emissions around the major community facilities – school, clinic, water plant.

Reporting History and Status: TCC provided regular and timely reporting per the terms of the grant and completed delivery of the varied scope of work.

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5. Award Name: Federal Environmental Health IGAP FY20

Funding Source: USEPA GAP Program
Funding Source Award #: GA-01J55101
Funded Amount: 494,100.00
Start Date: 1-Oct-19
End Date: 30-Sep-23
Award Status: COMPLETE

Description: These funds were used to help our TCC communities to address environmental issues. Support for Interior Tribes included providing onsite and remote assistance to tribes for clean drinking water and wastewater utilities, along with building activities in all areas of operations and maintenance. Long term is to provide safe drinking water to residents and provide a properly managed wastewater utilities.

Reporting History and Status: TCC provided regular and timely reporting per the terms of the grant and completed delivery of the varied scope of work.

Staff Expertise

All aspects of the project would be overseen by the Tanana Chiefs Conference. **TCC Rural Energy Department** has led the design and construction of \$15 million in energy projects in the last ten years; TCC's program has added four staff in the last year and is currently overseeing **\$41 million** in clean energy projects to be deployed in Tribal communities. TCC's tribal communities pay some of the highest energy costs in the nation, some as much as \$1.00 per kilowatt hour. The TCC Energy Program works in partnership with our tribes to develop projects that can reduce the burden of high energy costs and encourage tribal energy sovereignty. This includes power generation and distribution system upgrades, renewable energy integration, waste heat recapture, bulk fuel storage upgrades, and energy efficiency projects.

TCC commits to tracking and reporting data on the project cost, activities, and the improved resilience of the ability of the power grid to withstand disruptive events. TCC will leverage our internal experience managing large, complex federal grants and infrastructure projects in our region, and we will manage the grant, contracting, and overall coordination with stakeholders in accordance with pertinent federal and program guidelines. TCC's programs that will engage on this project include our Financial and Accounting Department, our Contracting Department, and our Rural Energy Department. Dave Pelunis-Messier, Infrastructure Director will oversee the project and conduct community engagement activities as well as oversee staff working on the day-to-day activities of the project. Ben Shilling, CFO, will oversee the financials and financial compliance for the project.

TCC Rural Energy Department – TCC's Rural Energy Department is housed under the Infrastructure Division of TCC. This division assists TCC's member communities in developing infrastructure including housing, energy, and broadband. TCC's Energy Department has led the design and construction of \$18 million in energy projects in the last few years. The department leverages in-house project management support from **Dave Pelunis-Messier** in coordination with external contractors and consultants to develop projects, develop financing plans (grants/loans), and assists communities in managing funded projects by leveraging TCC's contracting department to contract design, permitting, and construction activities in coordination with local leadership.

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TCC Finance & Accounting Department – The TCC Finance and Accounting department will provide financial oversight, ensuring grant compliance, and providing timely documentation as required for reporting purposes to EPA. The Finance and Accounting department processes all fiscal transactions that flow through TCC. The department verifies all expenses, ensuring that they follow federal procurement regulations and internal TCC policies, and that they are compliant with granting agencies overseeing all financial transactions on over 300 grants and 700 individual programs TCC’s FY23 revenue totaled \$279 million, up \$23 million from the previous year. A companywide grant management tool tracks all TCC grants, and Oracle Software is used for our accounting program. Overseeing financial and accounting efforts will be CFO Ben Shilling.

TCC Contracting and Procurement Department – TCC’s contracting, and procurement team will assist the TCC Project Manager to set up contracts in compliance with grant requirements to carry out the proposed work under the grant funded project. These departments of TCC are well equipped and well versed in complying with Federal regulations and CFR 200 – Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards, including subpart D – Post Federal Award Requirements.

Dave Messier, Infrastructure Division Director | Dave Messier will serve as the Project Manager for the project. He has overseen more than \$15M in grant funded infrastructure projects in rural, Tribal communities over the past 10 years. Dave is well equipped to manage the team, develop contracts, provide contract oversight, and operate in accordance with grant provisions. Dave will act as the liaison for all the stakeholders including participant Tribal communities, landowners, contractors, the utility, and Tanana Chiefs Conference. Dave has an undergraduate degree with a minor in business from Cornell University, received his MBA in 2012 and is a Certified Project Management Professional (PMP).

Ben Shilling, TCC Chief Financial Officer | Ben Shilling will oversee all financial aspects of this grant. Ben oversees TCC’s financial reporting, accounting and procurement departments which are directly responsible for the financial management of grants and managing procurement. Within these departments Ben has a team of 22 employees under him at TCC. TCC has over \$470 million in assets and over \$250 million in annual revenues. Under Mr. Shilling’s leadership TCC has maintained an A+ Bond Rating and has many years of clean audits with no findings. Ben has been a certified CPA since 1989 and Certified Information Systems Auditor since 1994. Ben also leads the distribution of both restricted and unrestricted funds to our tribes. In 2020, that amount was over \$40M.

7. Budget

Across both measures, TCC is seeking \$95,647,305 to complete transformative change in four tribal communities and drastically reduce emissions in the Interior of Alaska. Additional details are available in the attached budget narrative and budget worksheet. Budgets were prepared based upon feasibility studies prepared by qualified engineering firms.

Emission Reduction Measure 1: Transmission Intertie is anticipated to cost \$79,493,405. Costs are broken down by category as follows:

Budget Table						
CATEGORY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
TOTAL PERSONNEL	\$37,177	\$38,571	\$40,017	\$41,518	\$43,075	\$200,359
TOTAL FRINGE BENEFITS	\$20,869	\$21,652	\$22,464	\$23,306	\$24,180	\$112,472

**Project Workplan: Enhancing Local Energy Connectivity in Tribal Regional Communities
(ELECTRC) – Tanana Chiefs Conference**

TOTAL TRAVEL	\$ 1,805	\$ 1,805	\$ 1,805	\$3,609	\$ 3,609	\$12,632
TOTAL EQUIPMENT	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL SUPPLIES	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL CONTRACTUAL	\$1,762,000	\$2,649,100	\$2,699,100	\$34,092,621	\$34,092,621	\$75,295,442
TOTAL OTHER	\$0	\$0	\$0	\$0	\$0	\$0
TOTAL DIRECT	\$1,821,851	\$2,711,127	\$2,763,386	\$34,161,055	\$34,163,486	\$75,620,905
TOTAL INDIRECT	\$107,911	\$152,986	\$156,234	\$1,727,283	\$1,728,087	\$3,872,500
Total Funding	\$1,929,761	\$2,864,114	\$2,919,619	\$35,888,337	\$35,891,573	\$79,493,405

Emissions Reduction Measure 2: Solar-Battery is anticipated to cost \$16,153,902; costs are broken down by category as follows:

BUDGET BY YEAR				
CATEGORY	YEAR 1	YEAR 2	YEAR 3	TOTAL
TOTAL PERSONNEL	\$93,236	\$96,733	\$100,129	\$290,098
TOTAL FRINGE BENEFITS	\$52,338	\$54,301	\$56,208	\$162,847
TOTAL TRAVEL	\$ 3,174	\$ 1,805	\$ 1,805	\$6,783
TOTAL EQUIPMENT	\$0	\$0	\$0	\$0
TOTAL SUPPLIES	\$0	\$0	\$0	\$0
TOTAL CONTRACTUAL	\$424,321	\$7,188,793	\$7,188,793	\$14,801,907
TOTAL OTHER	\$0	\$0	\$0	\$0
TOTAL DIRECT	\$573,070	\$7,341,631	\$7,346,935	\$15,261,636
TOTAL INDIRECT	\$70,452	\$410,029	\$411,785	\$892,266
TOTAL FUNDING	\$643,522	\$7,751,661	\$7,758,719	\$16,153,902