Tule River
Indian Tribe of California

PRIORITY CLIMATE ACTION PLAN 2024

PREPARED FOR:

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Tule River Indian Tribe
of California with the assistance
of Blue Strike Environmental

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EXECUTIVE SUMMARY

CALL TO ACTION

Tule River Indian Tribe of California (TRITC) is a proud sovereign nation that strives to improve the livelihood of their members, their community and their surrounding communities. The purpose of the Priority Climate Action Plan (PCAP) is to guide our tribal community's response to the challenges posed by climate change and help TRITC achieve our goals for sustainable, resilient development. Climate change is a pressing global challenge that requires collective action and sustainable solutions to safeguard our planet's future. Greenhouse gasses (GHG) emitted from the cars we drive, the energy we consume, the way we develop the built environment, and the products we buy are having a harmful effect on our environment and are increasing temperatures to dangerous levels which will threaten our way of life, our food systems, and our safety.

This PCAP presents four immediate high priority measures to guide our efforts for emissions reduction in our tribal community in the near-term. These measures align with key existing policy documents and technical analyses completed to date, positioning each for immediate action. These measures represent important opportunity areas to mitigate the potential impacts of climate change, while also increasing our community's resilience to such changes. Following the completion of this PCAP, the TRITC will launch a more comprehensive process, which include inclusive community and stakeholder engagement, to develop a Comprehensive Climate Action Plan (CCAP) to expand, enhance and refine our near, mid and long-term efforts across additional climate solution sectors, aligned with our community goals and tribal traditions.

PRIORITY MEASURES	YEAR	ASSOCIATED GHG REDUCTIONS (MTCO2e)
MEASURE 1: Complete a feasibility study and implementation plan to develop a Tribal Energy Authority	In 2025	**2,457**
	Through 2045	**24,567**
MEASURE 2: Transition all Government Buildings to SMART Meters	In 2025	**614**
	Through 2045	**6142**
MEASURE 3: Upgrade entire water, gray-water and wastewater pump and metering systems, including advanced electrical metering for facilities & lift stations	In 2025	**33**
	Through 2045	**337**
MEASURE 4: Significantly reduce energy use intensity (to near zero) during renovation of old casino into new community center by introducing solar PV, battery storage, energy efficiency and electrification	In 2025	**1,478**
	Through 2045	**14,783**

1 INTRODUCTION

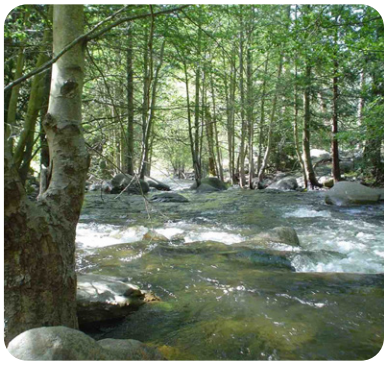
1 INTRODUCTION

The TRITC stands as one of the largest land holding Tribes within the state, nestled amidst the Sierra Nevada Mountains in Tulare County. Over the years, the Tribe has expanded its landholdings to approximately 2,000 acres beyond the original boundaries, which encompass roughly 56,000 acres. The terrain is predominantly rugged, characterized by various conifers in the higher elevations that span from approximately 900 feet near the western boundary to 7,500 feet along the eastern border. Settlements are primarily concentrated along the lower reaches of the South Fork Tule River on the western side of the reservation.

With a total tribal membership of 1,930 individuals, 1,244 reside within the confines of the Tule River Reservation. Residential areas extend from the entrance to the end of the blacktop road, covering approximately 7 miles. The main road, known as North Reservation, encompasses these seven miles, while the South side spans roughly 4 miles. The nearest shopping area, Porterville, is approximately 23 miles away.

Essential infrastructure sectors under the Tribe's stewardship include water, wastewater management, public safety, internet services, and transportation. TRITC is vulnerable to logistical challenges during pandemic, wildfires and floods; for example, during a recent flood event, our community faced disrupted power supply, which jeopardized critical community needs like potable water delivery and transportation. Transportation services include school buses picking up students as early as 6:30 AM and dropping them off in the afternoon, with around four buses in operation. Historically, TRITC has partnered with the Tulare Council for a Transport Station, facilitating transportation from marked locations on the Reservation to the Porterville area, with a route running twice a day. Emergency services include a Structure Fire and Wildland Fire Department that operates 24/7, along with a 24/7 ambulance service.

At the time of this preparation, TRITC recognizes the impacts of climate change are already visible within our community. Environmental vulnerabilities already experienced include but are not limited to: increased wildfire potential, temperature and precipitation changes, drought marked by water shortages for one or more week(s) annually in summer months, frequent energy outages related in part to increased wind and wildfire protection mechanisms from local utilities, and impacts to the reservation’s healthcare facility, governmental operations facilities, residential homes and businesses. Measures selected within this PCAP will provide critical data and improved infrastructure to mitigate against these vulnerabilities, while reducing emissions and strengthening tribal sovereignty and community resilience.



TRITC's 2024 PCAP is meant to serve as a guiding document towards GHG reductions, designed as a prioritized strategy to reduce emissions in a manner consistent with state guidelines and regulations, and to identify cost-effective opportunities to existing and future residents, businesses, and development projects for a more sustainable community. Measures within this PCAP are set as immediate priorities and focus primarily on the Energy and Built Environment sector, as the largest emissions generation area, based on initial greenhouse gas inventory presented herein. Under the second phase of this project, and building on this PCAP, the Tribe intends to consider additional GHG reduction measures also appropriate for implementation within the reservation, as well as on other tribally managed, owned and/or operated land or facilities, through the completion of a more inclusive CCAP. The CCAP will conduct an inclusive community and stakeholder engagement process to present, consider, and co-create additional strategies locally attuned to the tribal community in the potential sectors of Energy & Built Environment, Transportation, Resource Conservation (Water, Wastewater, Waste Management), Green Community, Land Preservation, Community Resilience. Such strategies will consider existing policy, climate solution best management practices, refined emissions data, and critical insights and feedback from the community. Once developed and adopted by TRITC, the CCAP will become a living document that can be revised as needed with clear and transparent key performance metrics to progress toward comprehensive GHG reductions. While this approach emphasizes flexibility in order to ensure that the Plan remains adaptive to TRITC's needs, it will remain steadfast to the emissions reduction objectives of the CPRG program.

1.1 CLIMATE POLLUTION REDUCTION GRANT OVERVIEW

CPRG BACKGROUND AND PROCESS

The Climate Pollution Reduction Grant (CPRG) program, administered by the U.S. Environmental Protection Agency (EPA), is an initiative funded by the Inflation Reduction Act of 2022 (IRA) to provide grants to states, local governments, Tribes, and territories for the development and implementation of ambitious plans for reducing greenhouse gas emissions and other harmful air pollutants. CPRG is structured to diminish greenhouse gas (GHG) emissions, thereby mitigating climate change. It provides financial support to states, municipalities, Tribes, and territories for devising and executing measures to reduce emissions.

Alongside GHG reduction, CPRG endeavors to revive ecosystems, enhance infrastructure, stimulate economic growth, and enhance public health by alleviating the pollution burden disproportionately borne by disadvantaged communities. Through this program, the EPA aims to achieve three overarching objectives:

- Address damaging climate pollution while promoting the creation of employment opportunities and reducing energy expenses for households.
- Expedite efforts to rectify environmental injustices and empower community-led solutions in areas burdened by environmental issues.
- Improve air quality by curbing harmful air pollutants in residential, occupational, recreational, and educational environments.

TO REALIZE THESE OBJECTIVES, THE CPRG PROGRAM COMPRISES TWO PRIMARY PHASES:

1. **Planning (PCAP & CCAP):** This phase focuses on the development of Priority Climate Action Plans (PCAP) and Comprehensive Climate Action Plans (CCAP), both of which are funded through CPRG Planning Grants. The PCAP focuses on short-term, high-priority emission reduction measures, while the CCAP provides a more comprehensive roadmap for long-term strategies.

2. **Implementation:** This phase entails the execution of PCAP and CCAP objectives by CPRG Planning grant recipients; to accomplish these objectives, eligible participants may apply for competitive CPRG Implementation Grants. Overarching CRPG program goals for this phase include:
   - Implementation of ambitious measures to achieve significant cumulative GHG reductions by 2030 and beyond.
   - Pursuit of measures yielding substantial community benefits, particularly in low-income and disadvantaged communities, such as the reduction of criteria air pollutants (CAPs) and hazardous air pollutants (HAPs).
   - Complementary utilization of other funding sources to maximize GHG reductions and community benefits.
   - Pursuit of innovative policies and programs that are replicable and scalable across multiple jurisdictions.

The TRITC PCAP serves to satisfy the first deliverable set forth in the CPRG Planning Grant. It will become the framework for the Tribe's CCAP due at the close of the grant period.

In 2022, TRITC completed a comprehensive energy feasibility study funded by the California Strategic Growth Council. This study aimed to assess the Tribe's energy usage, estimate greenhouse gas (GHG) emissions, and propose measures to reduce emissions from various sources on the reservation; results were compiled into a document that became the 2022 Tule River Indian Tribe Energy Feasibility Report (herein referred to as the Energy Feasibility Report). To build on the work completed in this study and address urgent environmental challenges facing the TRITC community (i.e. sustainable energy management, air pollution, and public health outcomes), the Tribe chose to participate in the Climate Pollution Reduction Grant (CPRG) program. Participation in the CPRG program offers an opportunity to address these challenges proactively, as it provides resources such as funding, planning frameworks, and technical support for implementing climate action measures within TRITC's jurisdictions.

This support includes the ability to leverage expertise from contractors to complete GHG emissions inventories, coordinate stakeholder engagement activities, and develop emissions reduction measures, alleviating the burden of solely completing these tasks from the Tribe itself. By providing the Tribe with resources to engage industry experts in the climate action planning process, the CPRG program enhances the Tribes ability to advance climate mitigation efforts that 1) reflect tribal needs and 2) align with federal, state, and local environmental regulations and commitments.

1.2 PCAP OVERVIEW

The Tule River Indian Tribe of California's Priority Climate Action Plan (PCAP) focuses on prioritizing infrastructure improvements at the Reservation, guided by the Tribe's core values of preserving environmental resources while fostering economic development and enhancing the quality of life for Tribal members. Providing an initial overview of greenhouse gas (GHG) emissions, the PCAP identifies priority GHG reduction needs of TRITC and marks the initial phase in long-term climate planning aimed at refining resource management practices and fostering sustainable development. Key components of the PCAP include:

1. A streamlined GHG emissions inventory,
2. Quantified GHG reduction measures,
3. Analysis of co-pollutant benefits,
4. Delineation of the Tribe's authority in implementing GHG reduction measures, and
5. A summary of additional funding sources for measure implementation.

In order to develop the PCAP, the Tribe expanded its internal capacity and expertise by collaborating with Blue Strike Environmental for GHG emissions analyses, focused tribal engagement, and documentation development, all completed in accordance with US EPA guidance documents and GHG protocols. While the PCAP represents the introductory stage of climate planning, its scope is limited due to challenges such as data availability and the timeframe for integrated tribal engagement. A more detailed assessment of GHG emissions and comprehensive engagement processes are earmarked for the Comprehensive Climate Action Plan (CCAP) development phase. Nevertheless, the PCAP remains aligned with the TRITC top priorities, as outlined in previous planning processes such as the 2015 Master Plan and 2022 Energy Feasibility Report. For definitions of terms and abbreviations included in this document, see Appendix A: Definitions.

1.3 APPROACH TO DEVELOPING THE PCAP

This PCAP identifies near-term GHG reduction priorities for the Tribe. Climate actions require collaboration and cross-cutting strategies across multiple-jurisdictions, public agencies, nonprofits, commercial businesses and residential communities. The Priority Climate Action Plan (PCAP) for the Tule River Indian Tribe of California emerged as a result of a review of environmental state mandates, the commitments of local and regional jurisdictions, existing public-private partnership structures, an updated GHG emissions inventory, and a review of synergistic Tribal priorities. Through this process, new and tailored reduction measures leverage and complement existing TRITC climate action strategies and development priorities.

GHG INVENTORY

The GHG inventory encompasses the physical boundaries of the Tule River Reservation and covers major GHG emissions sectors and sources, providing an assessment of present environmental impacts and establishing a baseline for the forecasting of future emissions. The methodology was built using the Environmental Protection Agency (EPA) Tribal Greenhouse Gas Inventory Tool[1] coupled with United States EPA GHG emission factors which serve as the benchmark for GHG emission inventory analysis nationwide. Emissions were estimated based on best practices drawn from these resources. The year 2019 was selected for the GHG Emission Inventory for two reasons:

1. It offers the most complete data record within the last 5 years (2023 data were not complete);
2. It provides a more typical representation of GHG emissions than 2022, given that the COVID-19 pandemic significantly reduced travel emissions and markedly impacted emissions from other sectors as well. Notably, the years 2020, 2021, and 2022 recorded significantly lower emissions compared to current levels.

A full understanding of the inventory can be found in Appendix A: 2019 GHG Emissions Inventory.

[1] www.epa.gov/statelocalenergy/tribal-greenhouse-gas-inventory-tool

REDUCTION MEASURES AND BENEFITS ANALYSIS

Priority GHG reduction measures outlined in the PCAP focus on projects that can be readily implemented by TRITC, aligning with the commitment to enhancing the quality of life. Some of the strategies were derived from existing programs and policies within local and regional planning documents, while others emerged as new strategies drawn from an initial stakeholder engagement process with the Tribal Council and project tribal working group. Measures included herein are not intended to be a comprehensive list of strategies and actions for implementation within the community. Rather, measures presented within this PCAP are intended to provide an initial outline of potential priority climate actions for further consideration, build out and refinement, to be conducted in the Comprehensive Climate Plan (CCAP) process.

The projects listed below not only benefit the Tule River Indian Tribe community by conserving essential natural resources such as groundwater but also offer additional employment opportunities on the Reservation, in alignment with TRITC's goal of enhancing economic development on the Reservation.

AUTHORITY TO IMPLEMENT

Following the PCAP's adoption on April 1st, 2024, plan implementation will commence at the discretion of TRITC. All measures were designed to be readily implementable by TRITC, requiring no authority but its own to execute the PCAP. The plan itself was adopted via Tribal Council Resolution.

LEADERSHIP

The core team responsible for the development of the PCAP included TRITC's:

- Chief Operating Officer
- Special Programs Director
- Environmental Director
- Director of Grants and Contracts
- Tribal Council (Governing Board of the Tule River Tribe)

1.4 SCOPE OF THE PCAP

GEOGRAPHIC BOUNDARY

The scope of the PCAP pertains to the original reservation boundaries; however, due to the fact that the CCAP will address TRITC's full geographic area, reduction measures and implementation actions are designed to be readily scalable to meet these additional needs.

Figure A: Tule River Reservation Geographic Boundary

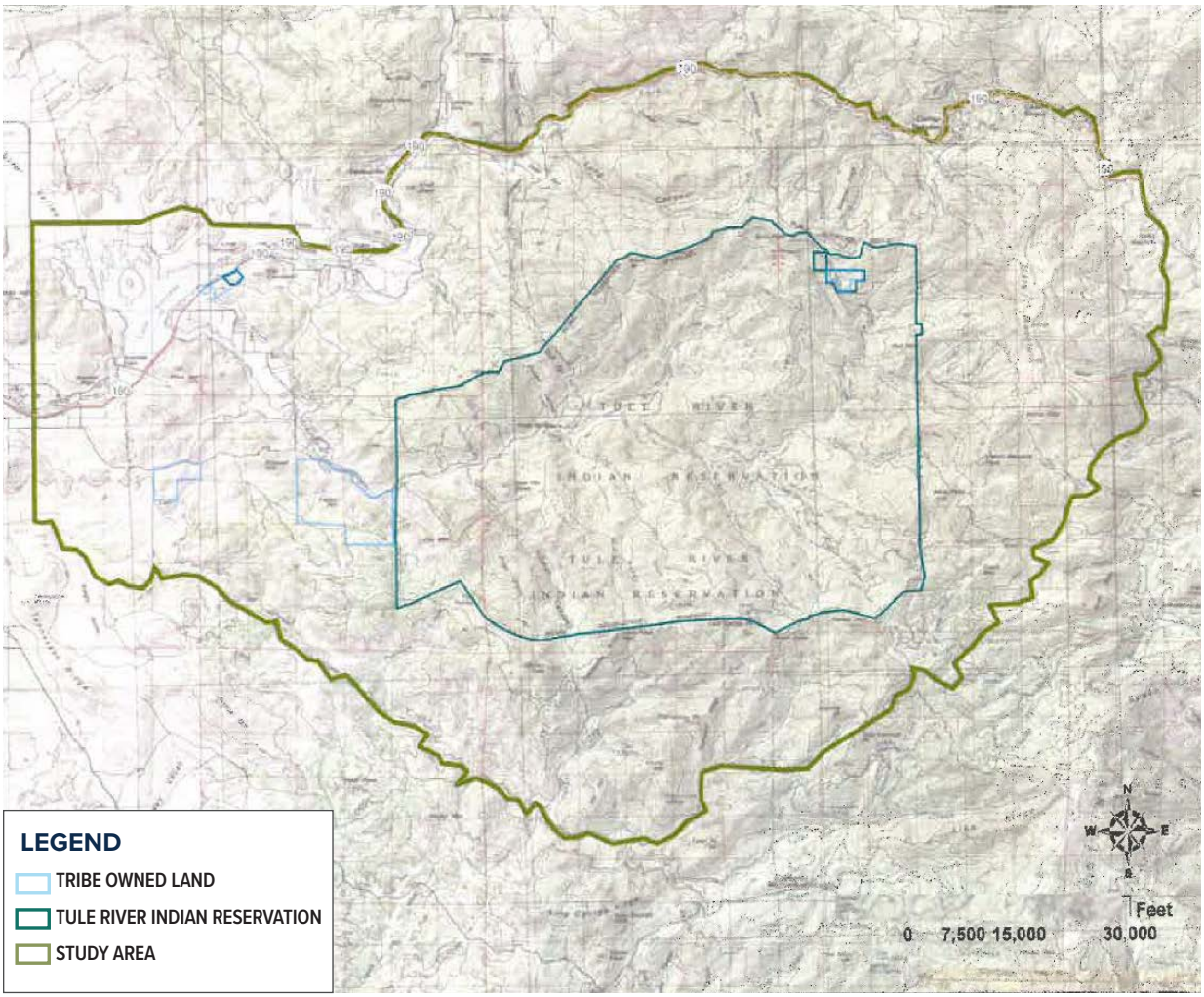


Image sourced from Tule River Indian Tribe Master Plan (2015)

UNIQUE TRITC CONSIDERATIONS

The TRITC community faces various geographic, climate change, and economic vulnerabilities that threaten its wellbeing. Situated on a dead-end road with no alternative access, TRITC is vulnerable to logistical challenges during pandemics and wildfires. Potential catastrophic wildfire events could disrupt power supply, jeopardizing critical community needs. TRITC provides essential services such as fire response, drinking water, wastewater treatment, education, security, and medical care, which must be maintained during emergencies. Moreover, plans for economic redevelopment, including new industry and housing, add pressure to the already strained electrical power system.

Climate events have further exposed vulnerabilities in food, energy, and water infrastructure. Recommendations from this project aim to mitigate these threats by investing in community resilience, essential economic services, and reliable energy sources. Food insecurity is exacerbated by the lack of grocery stores on the Reservation, forcing residents to travel long distances for supplies. The temporary closure of the Eagle Mountain Casino during the pandemic highlighted the need for transit solutions to ensure access to essential resources.

TRITC 's capacity to treat community members during a climate event is limited, and concerns persist about drought conditions necessitating water shipments. Additionally, the impact of wildfires and power quality further compounds these challenges. Energy assurance, public health and safety, emergency preparedness, food and water security, and economic development are essential for the sustainability of the tribal community. Priority measures were designed to advance these objectives and enhance the resilience and self-sufficiency of the Reservation.

TIMELINE FOR PLANNING AND EXECUTION OF MEASURES

Priority measures identified in this document have been planned to varying degrees throughout the PCAP development process. Notably, initiatives related to water metering have been ongoing since before the Tribe applied to participate in the CPRG program, with additional design work progressing alongside PCAP development via funding assistance from Indian Health Services. Further design work, permitting, and additional funding are necessary before this project can commence reservation-wide. Planning and implementation for energy efficiency upgrades are also underway in tandem with the design of a feasibility study to establish a Tribal Energy Authority. Finally, preliminary plans for transitioning a retired casino building to Tribal offices and a health center (Measure 4) are being developed at the time of PCAP submittal, with construction readiness targeted within the next two years. This project primarily benefits TRITC by promoting reduced fossil fuel consumption in government operations–including water treatment–and showcasing resilient backup power capabilities. For a detailed timeline of measure implementation, please refer to Section 2.2: GHG Reduction Measures.

1 PCAP ELEMENTS

2.1 GREENHOUSE GAS (GHG) INVENTORY

The GHG emissions inventory plays a critical role in identifying various sources of greenhouse gas emissions and aids in the formulation of measures to mitigate future emissions. Specifically tailored for the Tule River Indian Tribe of California, the GHG emissions inventory developed for the PCAP encompasses all available emissions sources within the Tribe's jurisdiction, including tribal government operations. This inventory adheres to the GHG Protocol for Cities guidelines and primarily utilizes the the Environmental Protection Agency (EPA) Tribal Government Inventory Tools for emissions calculations. Drawing upon data obtained from the Tule River Environmental Department, the Energy Feasibility Report, and publicly accessible sources, the inventory was meticulously compiled. Due to the constrained time frame for PCAP development, limited activity data for emissions sources was included.

The majority of the data was extracted from the Energy Feasibility Report and includes annual consumption of propane, wood, fleet fuel, and electricity. Annual waste data was obtained from invoices for 2023 provided by the Tule River Indian Tribe. In spite of the relevant available emissions data, comprehensive community-wide data for sectors such as wastewater, employee commute, agriculture & land management, and other categories were not readily available. While these estimates may not directly correlate with present GHG emissions, they offer a valuable foundation for assessing the relative scale of different community-wide GHG emissions sources.

The emissions data derived from the Energy Feasibility Report represents energy consumption for 2019. Therefore, the baseline for conducting the greenhouse gas (GHG) emissions inventory was set as the activity year of 2019. In the absence of waste data for 2019, the data from 2023 was utilized for the PCAP GHG inventory planning to make iterations in the CCAP GHG inventory.

The GHG inventory was conducted following the guidelines of the Local Government Operations Protocol (LGOP) described in the Tribal Greenhouse Gas Inventory Tool. Provided in the tool default emission factors and system assumptions were also utilized to perform calculations. GHG emissions are divided into 3 scopes and defined as following according to the Tribal Greenhouse Gas Inventory Tool:

- **SCOPE 1:** All direct emissions (with the exception of direct CO2 emissions from biogenic sources)
- **SCOPE 2:** Indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling of tribal operations.
- **SCOPE 3:** All other indirect emissions not covered in Scope 2, such as emissions from vehicles not owned by the Tribe (e.g., employee commutes), waste disposal, or emissions from agriculture land management, and urban forestry.

Municipalities are required to report Scope 2 emissions utilizing the location-based method.

Consequently, this method was adopted for calculating Scope 2 emissions. The following section provides a detailed overview of all scopes, sectors, and sources of emissions as well as associated values. For additional information, please refer to Appendix A: 2019 GHG Emissions Inventory Documentation.

GHG INVENTORY RESULTS:

Table 2 provides a comprehensive overview of the PCAP GHG inventory findings divided by scopes and departments. Meanwhile, Figures B and C visually compile the sources of GHG emissions and their respective shares categorized by scope. The GHG emission data is reported following the guidelines outlined by EPA Tribal Greenhouse Gas Inventory Tool. The tool was also used to convert all results to carbon dioxide equivalent (CO2e) to ensure uniformity and comparability.

Within the PCAP GHG inventory, Scope 1 emissions account for a significant 58.78%, or 3,513 MTCO2e, of the total calculated emissions followed by Scope 2 representing 41.11%, or 2,457 MTCO2e, of the cumulative GHG emissions. Conversely, Scope 3 emissions amount to 0.12%, or 7 MTCO2e, of the total GHG emissions. These ratios are likely to change in the forthcoming analyses when more detailed calculations are performed for the CCAP.

Table 2. PCAP GHG Inventory Summary by Scopes and Categories

CATEGORIES			EMISSIONS BY GHG TYPE (MT CO2E)			
DEPARTMENT	SECTOR	CATEGORY	CO2	CH4	N2O	TOTAL
SCOPE 1						
Stationary Combustion	Public	Propane	840.7	1.12	2.13	843.95
	Private	Propane	137.37	0.18	0.35	137.9
	Private	Wood	1,241	2.38	14.38	1,257.5
Transportation	Public	Fleet	202	2	6	210
	Private	Personal vehicles	1,032	11	37	1,080
TOTAL SCOPE 1 EMISSIONS						**3,512.96**
SCOPE 2						
Stationary Energy	Public	Electricity	2,035.16	4.15	4.76	2,044.07
	Private	Electricity	411.14	0.84	0.96	412.94
TOTAL SCOPE 2 EMISSIONS						**2,457.02**
SCOPE 3						
Waste	Public & Private	Landfill Waste	0	7	0	7
TOTAL SCOPE 3 EMISSIONS						**7**
TOTAL EMISSIONS						**5,976.98**

Figure B: GHG Inventory Summary

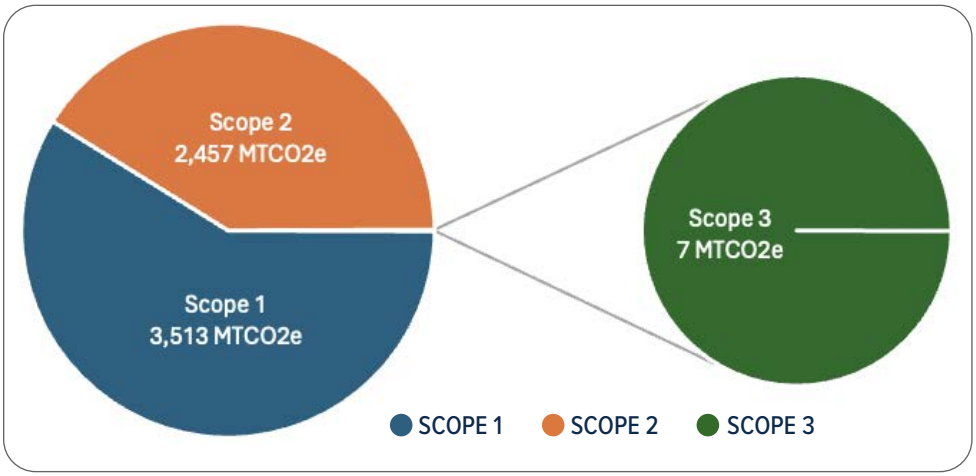
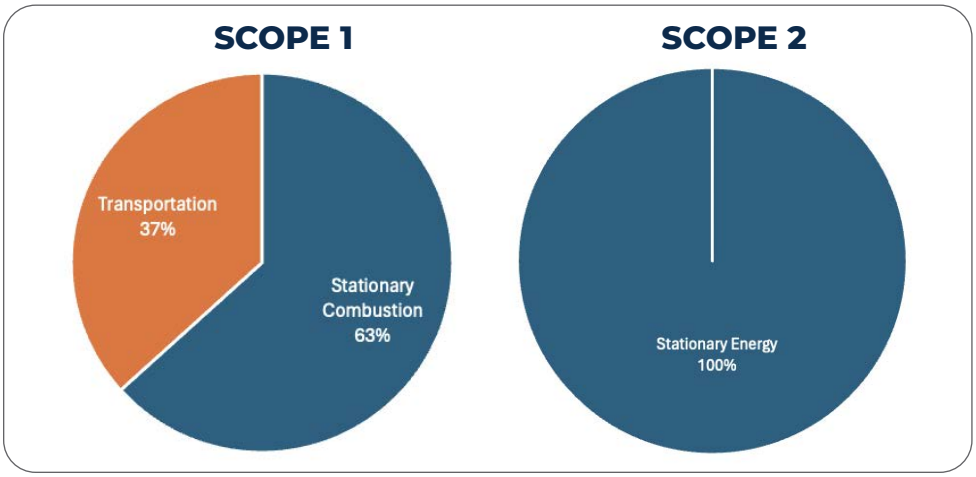


Figure C: Scope 1 & 2 Emissions by Department



2.2 GHG REDUCTION MEASURES

Based on the current and forecasted GHG emissions, TRITC has identified 4 priority actions to effectively reduce these emissions over time. Actionable measures focus on the priorities of the TRITC Reservation and bring a lens on resiliency to ensure that the Tribe can maintain health and safety during regular climate events. The measures emerged from the Tribal Council's ongoing communication and outreach to community stakeholders. If TRITC follows the initial implementation schedule, additional strategies, tactics and performance metrics will be assigned as part of the CCAP planning process. Pursuant to the TRITC's authority, all measures fall within the Tribe's right.

The following information is provided for each reduction measure: estimate of the quantifiable GHG emissions reductions, implementing agency, implementation schedule and milestones, milestones for obtaining implementing authority as appropriate, geographic location, metrics for tracking progress, and the applicable sector.

MEASURE 1:
COMPLETE A FEASIBILITY STUDY AND IMPLEMENTATION PLAN TO DEVELOP A TRIBAL ENERGY AUTHORITY

The reservation receives electricity from Southern California Edison (SCE) via two circuits: the 12 KV Soda Spring (Boxwood Substation) serving 824 customers, and the 12KV Success (Porterville Substation) serving 2,356 customers. These circuits are subject to rolling blackouts, which significantly impact TRITC's capacity to operate Tribe facilities, including their health center, which jeopardizes the well-being of reservation residents.

Establishing a local Energy Authority offers numerous benefits that cater specifically to the unique needs, environmental goals, and economic development strategies of Tule River. Energy authorities enable the development and implementation of tailored energy solutions that consider local climate, geography, and resources, increasing energy independence by reducing reliance on external sources. The approach can offer more stability in energy prices and supply, and stimulate the tribal economy through job creation in construction, maintenance, and operation of energy facilities. By focusing on local energy expenditures, there's an economic multiplier effect that may significantly benefit businesses and residents on the Reservation.

Another advantage is that local Energy Authorities can swiftly adopt innovative technologies and practices, placing a greater emphasis on renewable energy sources and energy efficiency measures, which align with environmental sustainability goals. The diversification of energy sources and the increase in local generation capacities enhance the community's resilience to supply disruptions caused by natural disasters, geopolitical conflicts, or market fluctuations. Being directly accountable to the communities they serve, these authorities provide a higher level of transparency and responsiveness compared to larger utilities, fostering a culture of sustainability through community engagement and education on energy conservation and the benefits of renewable energy.

Moreover, local authorities are positioned to offer innovative financing options, incentives, and rebates to encourage the adoption of renewable energy technologies and energy efficiency improvements. They can effectively tailor and deliver programs designed to address energy affordability and access, ensuring support for vulnerable populations. The enhanced flexibility and adaptability of local Energy Authorities allow them to quickly respond to changing technologies, market conditions, and community needs, making them more effective in managing their energy strategies over time.

Taking a proactive and customized approach, establishing a local Energy Authority significantly enhances a community's environmental, economic, and social well-being. The following provides five primary steps for establishing a local energy authority for Tule River.

1. **CONDUCT A COMPREHENSIVE FEASIBILITY STUDY:** The study should assess the local energy landscape, including available resources, existing infrastructure, energy demand, and potential for renewable energy generation. It should also analyze economic factors, environmental impacts, and community needs to ensure the viability and sustainability of the authority. The feasibility study should include the following:
    - Project Description
    - Resource Assessment
    - Technical Feasibility
    - Market Analysis
    - Financial Analysis
    - Risk Assessment
    - Social Impact Assessment
    - Regulatory and Permitting Requirements
    - Stakeholder Engagement
    - Project Management Plan
    - Conclusion and Recommendations
2. **ENGAGE STAKEHOLDERS AND COMMUNITY INVOLVEMENT:** Building strong relationships with stakeholders—including local government officials, businesses, residents, and energy experts—will be a key component in making the Authority successful. Engaging the community through public meetings, workshops, and forums will inform, build consensus, and foster support for the initiative.
3. **DEVELOP A STRATEGIC PLAN:** Based on the findings of the feasibility study and stakeholder input, develop a comprehensive strategic plan. This plan should outline the mission, vision, and objectives of the Energy Authority, including detailed plans for energy production, distribution, sustainability initiatives, funding mechanisms, and governance structure.

4. **SECURE FUNDING AND PARTNERSHIPS:** This may involve a combination of government grants, private investments, partnerships with energy companies, and community funding initiatives. Establishing strong partnerships can also provide technical expertise, operational support, and additional resources.

5. **IMPLEMENT, MONITOR, AND ADJUST:** Follow the strategic plan to implement the Authority. This includes the establishment of a governance structure, launching initial projects, and beginning operations. Continuous monitoring and evaluation of performance against objectives are crucial, as is the flexibility to adjust strategies and operations based on feedback, technological advancements, and changing community needs.

Table 3: Measure 1 Summary

MEASURE 1: Complete a feasibility study and implementation plan to develop a Tribal Energy Authority	**Quantifiable GHG emissions reductions**	• The creation of a Tribal Energy Authority may allow for all electricity to be purchased from renewable sources. This would result in GHG reductions of approximately 2,457 MT CO2 during the first year, based on current grid-level emission factors (EPA EGrid). • Cumulative reductions to 2045 are 24,567 MTCO2e, assuming a linear reduction for SCE grid emission to zero by 2045.
	Implementing agency or agencies	Tule River Indian Tribe of California
	Milestones for obtaining implementing authority	Tribal Council Approval
	Implementation schedule and milestones	• Scope of study completed: Sept. 1, 2024 • Funding secured: Nov. 1, 2024 • Study start date: Dec. 1, 2024 • Study end date: June 1, 2025
	Geographic location	Tule River Reservation
	Funding sources	US EPA CPRG program
	Metrics for tracking progress	**1.** Project approval as part of implementation grant **2.** Scope of study approved by EPA and other grantors **3.** Contract with service provider executed **4.** All deliverables received, including metrics of: • Energy saved • Money saved through reduced energy bills • GHG emissions reduced **5.** Implementation plan with dates, costs, and responsible departments
	Applicable sector	Electricity generation and consumption

MEASURE 2:
TRANSITION ALL GOVERNMENT BUILDINGS TO SMART METERS

Changing government building electricity meters to smart meters can yield significant benefits, including improved energy efficiency, cost savings, environmental sustainability, enhanced operational reliability, and better data-driven decision-making. Smart meters provide detailed insights into energy usage in real time, enabling precise energy management and optimization.

Smart meter use is anticipated to facilitate a reduction in energy wastage, leading to both cost reductions and lower GHG emissions. The transition will also improve the reliability of building operations through timely alerts on inefficiencies, support informed decisions on energy policy and infrastructure upgrades, and enhance safety by detecting potential electrical faults.

Additionally, smart meters streamline regulatory compliance and facilitate the integration of renewable energy sources by managing variable energy supplies efficiently.

THE PROCESS OF TRANSITIONING TO SMART METERS WILL INVOLVE THE FOLLOWING STEPS:

1. **INITIAL ASSESSMENT AND PLANNING:** This stage involves evaluating the existing energy consumption patterns, infrastructure, and needs of each government building. The right smart meter technologies should align with specific requirements of different facilities.
2. **PROCUREMENT:** Select and procure smart meters that meet government standards for security, reliability, and energy efficiency.
3. **INSTALLATION AND INTEGRATION:** Professional installation of smart meters is carried out to replace or augment existing meters. These meters are then integrated with an energy management system (EMS) to enable real-time monitoring and control of electricity usage.
4. **TRAINING AND CAPACITY BUILDING:** Facility managers and maintenance staff undergo training to effectively utilize the new technology. Establishing protocols for using insights from smart meter data for decision-making is also part of this phase.
5. **DATA MANAGEMENT AND SECURITY:** Implementing robust data management systems to handle and analyze the vast amounts of data generated by smart meters is essential, as is ensuring the security of the data.

Table 4: Measure 2 Summary

MEASURE 2: Transition all government buildings to SMART meters	**Estimate of the quantifiable GHG emissions reductions (e.g., through 2030 and 2050)**	The transition to Smart meters could equate to efficiency gains of 25% or more, meaning savings of 614 MTCO2e in the first year, and 6,142 through 2045. This measure would likely be part of the creation of a Tribal Energy Authority. (These results are for the stand alone project; if RE is pursued under an energy authority these savings would not be additional to those realized under Measure 1)
	Implementing agency or agencies	Tule River Indian Tribe of California
	Milestones for obtaining implementing authority	Tribal Council Approval
	Implementation schedule and milestones	• 2024-2025 : System design and specification • 2024-2025: Tribal Council approval of plans • 2025-2026: Obtain appropriate permitting • 2026: Develop and release Request for Proposals and select contractor (2026) • 2026: Tribal administrator contract approval • 2026: Installation of smart meters • 2026: Staff training
	Geographic location	Tule River Reservation
	Funding sources	US EPA CPRG program
	Metrics for tracking progress	Annual energy reduction of 25% for updated buildings after project implementation
	Applicable sector	Electricity sector: consumption and building efficiency

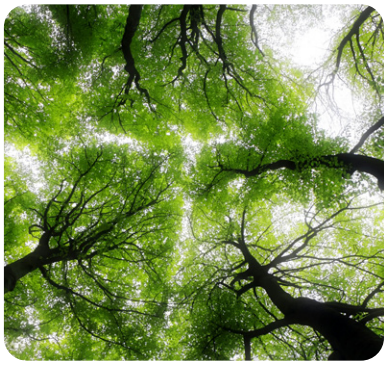
MEASURE 3:
UPGRADE ENTIRE WATER, GRAY-WATER AND WASTEWATER PUMP AND METERING SYSTEMS, INCLUDING ADVANCED ELECTRICAL METERING FOR FACILITIES AND LIFT STATIONS.

High efficiency pumps and improved monitoring and metering will reduce GHG emissions by reducing electricity use across the water and wastewater systems. Moreover, the upgrade is necessary to reduce leakage, improve efficiency, monitor consumption, and reduce energy use of water infrastructure. This measure would fully integrate with infrastructure upgrades (pipe and tank replacements, and residential metering) being planned by Indian Health Services (IHS). Since there are several components directly related to emissions that IHS cannot provide, a partnership with EPA will create a robust and efficient system.

The overall water system is not adequate to meet current Tribal needs. Water cannot be delivered to all homes on a you-round basis. Some homes do not have water in the early summer months because of inadequate supply and distribution system capacity issues. Water shortages are becoming increasingly common as more and more tribal members move back to the Reservation into new homes. Outages vary from one day to one week.

There is a water storage system that consists of a series of tanks ranging in size from 3,000 gallons to 200,000 gallons. However, the tanks do not function as a coordinated storage system and have design challenges. Further, storage capacity is not sufficient to meet peak demand. Finally, the system has no monitoring system, and must be visually inspected, which amounts to an ineffective way to ensure adequate water for Tribal use.

The Tribe has several plans for system improvement. Currently, residential water meters are being installed and a water rate is being assessed. Additionally, the Tribe has plans to install two wastewater distribution lines spanning a total of 10 miles, incorporating 20 electric pumps covering over half a mile. Further, storage needs are being assessed, and a new 400,000 gallon storage tank has been proposed. Finally, a gray-water system expansion for agricultural use is also a possibility. However, without new pumps along the existing system, plus smart-meter monitoring for both new and old components, the solutions will not perform optimally.



Some studies have been conducted to assess needs and benefits of these elements, which are out of scope for IHS. For water delivery, a 2022 Southern California Edison study found that efficiencies for pumping stations could be significantly improved by installing new pumps. New electrical metering at the pumps, and at the water and wastewater processing centers respectively, will help the Tribe effectively manage energy needs across the system.

The wastewater system also requires upgrades, which include metering. Currently, the Tribe intends to install two wastewater distribution lines spanning a total of 10 miles, incorporating 20 electric pumps covering over half a mile. The Tribe would also like to receive better information about greywater use. Currently, there is no means of monitoring when agriculture users are using gray or potable water for dedicated greywater applications. Though a study for lift station efficiencies has not been completed for wastewater as it has for potable water, this is a recommendation for the Tribe under this measure.

A SCADA (Supervisory Control and Data Acquisition) system for both water and wastewater is recommended since it can be configured to monitor water flows and serve as an electricity metering system for pumps, lift stations, and other electrical equipment across the systems. Integrating electricity metering into a SCADA system provides several benefits and capabilities:

1. **ENERGY USAGE MONITORING:** SCADA systems can monitor the energy consumption of pumps, lift stations, and other critical components in real-time, allowing for detailed tracking of electricity usage patterns and identification of areas where energy efficiency can be improved.
2. **COST MANAGEMENT:** By understanding the energy consumption details, operators can make informed decisions about operating schedules and load management to take advantage of lower energy rates during off-peak hours, reducing overall energy costs.
3. **OPERATIONAL EFFICIENCY:** The system can analyze energy usage in relation to water flow rates, pump performance, and other operational parameters. This analysis helps identify inefficiencies and optimize the operation of equipment to minimize energy consumption while maintaining system performance.

4. **PREVENTIVE MAINTENANCE:** Monitoring electrical parameters can also help in predictive maintenance strategies. By observing trends such as increased energy consumption over time, it might indicate that a pump or motor is working harder than usual due to wear or fouling, signaling the need for maintenance before a failure occurs.
5. **AUTOMATED CONTROL FOR ENERGY SAVINGS:** SCADA systems automatically control the operation of pumps and lift stations based on energy consumption data, adjusting operations to reduce energy use during peak demand times or to balance load across the system.
6. **REPORTING AND COMPLIANCE:** The utility can use SCADA-generated data for reporting purposes, demonstrating compliance with energy consumption and efficiency standards. This data can also support applications for future energy grants or participation in energy-saving programs.
7. **INTEGRATION WITH SMART GRIDS:** For systems in areas with smart grid technology, SCADA systems can integrate with the grid to participate in demand response programs, where the utility agrees to reduce load (by adjusting pump operations, for example) during peak demand times in exchange for reduced energy rates or other incentives.

The system will be equipped with the necessary sensors and meters to accurately capture electricity usage data for the pumps and lift stations, along with the software capability to analyze and act on this data.

Table 5: Measure 3 Summary

MEASURE 3: Upgrade entire water and wastewater pump and metering systems, including advanced electrical metering for facilities and lift stations.	**Estimate of the quantifiable GHG emissions reductions**	New pump replacements alone will result in a GHG savings of: 33 MT CO2e in 2025 and 337 MT CO2e through 2045 These are calculated assuming a linear reduction for SCE grid emission to zero by 2045. (Results are for the stand alone project; if RE is pursued under an energy authority these savings would not be additional to those realized under Measure 1)
	Implementing agency or agencies	Tule River Indian Tribe of California
	Milestones for obtaining implementing authority	Tribal Council Approval
	Implementation schedule and milestones	• July 2024: Funding secured (EPA Imp'n grant) • Nov. 2024: System design and specification • Jan 2025: Tribal Council approval of plans • April 2025: Obtain appropriate permitting • June 2025: Develop and release Request for Proposals and select contractor • Oct 2025: Tribal administrator contract approval • Dec 2025: Construction • Dec 2026: Project completion
	Geographic location	Tule River Indian Reservation and connected regions
	Funding sources	US EPA CPRG Program (other available sources will also be explored)
	Metrics for tracking progress	• Implementation schedule tracking • Funding secured • Water and wastewater efficiencies realized • Pump energy efficiencies realized • GHG emissions reduced
	Applicable sector	Water, Wastewater, Land Management

MEASURE 4:

SIGNIFICANTLY REDUCE ENERGY USE INTENSITY (TO NEAR ZERO) DURING RENOVATION OF OLD CASINO INTO NEW COMMUNITY CENTER BY INTRODUCING SOLAR PV, BATTERY STORAGE, ENERGY EFFICIENCY AND ELECTRIFICATION.

An old casino on the reservation was recently closed and will be repurposed as a central Tribal Community campus. The campus will house various Tribal governance and service departments such as the Tribal Health Center. Currently, the Health Center is subject to regular black outs, which significantly impairs the quality of care residents of the reservation can receive. In addition, the casino was a major consumer of electricity, consuming nearly half of the electricity purchased by the Tribe. The following will be components of the newly designed Campus.

Building a near-net-zero-energy (NZE) building is a multifaceted process that will require careful planning, design, and execution to minimize energy demand and maximize energy efficiency and renewable energy production. The following summarizes the approach at a high level in six steps.

1. **PLANNING AND DESIGN:** A project team that includes architects, engineers, energy consultants, and future occupants will initiate the project by collaborating from the outset. The team will propose a holistic approach to the building's performance, taking into account the site's orientation to leverage natural sunlight and shade, and employing climate-responsive design tailored to local conditions.
2. **ENERGY EFFICIENCY:** A foundational objective of NZE will be to minimize the building's energy needs through state-of-the-art energy efficiency measures. This may include super insulation and air-tight construction to minimize thermal exchange, high-efficiency HVAC systems complemented by heat recovery ventilators for fresh air without energy loss, and the use of LED lighting and Energy Star-rated appliances. The idea is to reduce the building's operational energy demand to a bare minimum, setting the stage for renewable energy sources to meet these reduced needs.

3. **RENEWABLE ENERGY SOURCES:** once energy demand has been minimized, the focus can shift to meeting as much demand as possible with renewable energy. Photovoltaic (PV) panels in combination with battery energy storage (BESS), or other energy storage technology will be explored to balance demand. In addition, solar thermal systems may provide hot water, while geothermal heat pumps may be able to leverage underground temperatures for efficient heating and cooling.
4. **SMART ENERGY MANAGEMENT:** A Building Management System (BMS) will be installed to dynamically optimize energy use, adjusting systems in real-time based on occupancy and other factors. As an additional component, EV charging infrastructure will be considered to incentivize employees to reduce fuel usage in their commutes.
5. **PERFORMANCE MONITORING AND OPTIMIZATION:** Energy meters and monitoring systems will be included to track real-time production and consumption, facilitating continual optimization, and helping identify further energy-saving opportunities. The project will include post-occupancy evaluations to gain insights into actual performance, and to inform adjustments that can fine-tune building operations.
6. **CERTIFICATION AND INCENTIVES:** Finally, the Tribe may decide to pursue a recognized certification such as LEED, Passive House, or Living Building Challenge. These certifications can validate building performance, while also potentially unlocking government or utility incentives to offset initial costs. These recognitions not only affirm the building's environmental stewardship but also encourage wider adoption of NZE practices in the construction industry.

Table 6: Measure 4 Summary

MEASURE 4: Reduce energy use intensity (to near zero) during renovation of old casino into new community center by introducing solar PV, battery storage, energy efficiency and electrification.	**Estimate of the quantifiable GHG emissions reductions (e.g., through 2030 and 2050)**	Near-zero energy use intensity of the new Tribal Campus will save 1,478 MTCO2e each year, relative to the baseline of casino electricity use. Cumulative emission savings through 2050 are 14,783 based on linear reduction of SCE's grid emissions. (These results are for the stand alone project; if RE is pursued under an energy authority these savings would not be additional to those realized under Measure 1)
	Implementing agency or agencies	Tule River Indian Tribe of California
	Milestones for obtaining implementing authority	Tribal Council Approval
	Implementation schedule and milestones	• July 2024: Funding secured (EPA Imp'n grant) • Nov. 2024: Project design and specification • Jan. 2025: Tribal Council approval of plans • April 2025: Obtain appropriate permitting • June 2025: Develop and release Request for Proposals and select contractor • Oct. 2025: Tribal administrator contract approval • Dec. 2025: Construction • Aug. 2026: Project completion
	Geographic location	Tule River Reservation
	Funding sources	US EPA CPRG program
	Metrics for tracking progress	• Energy use intensity (EUI) at building level • Grid energy consumption reduction from baseline • GHG emission reduction
	Applicable sector	Electricity Consumption and Built Environment

2.3 BENEFITS ANALYSIS

The Priority Measures will result in reductions of greenhouse gas (GHG) emissions but will also enhance the health of Tule River Reservation residents by decreasing air pollutants and environmental contaminants. This section describes the community benefits related to GHG emissions and co-pollutant reductions associated with each PCAP measure. The GHG reductions associated with each measure have been reported elsewhere. However, there are additional improvements to overall community well-being that will be realized through the implementation of these measures. This assessment represents a standard benefits analysis, as Tribes are not mandated to conduct Low-Income and Disadvantaged Communities (LIDAC) Analysis as part of the PCPA process. This exemption is due to the designation of Tribal Nations and the land within Reservation boundaries of federally-recognized Tribes as disadvantaged areas in resources such as the Climate and Economic Justice Screening Tool (CEJST) and the Environmental Justice Screening and Mapping Tool (EJScreen). Further, Base-year co-pollutant emissions from electricity related sources are not quantified in this PCAP co-pollutants inventory because electricity at the Reservation is sourced from outside the Reservation and county boundaries. In such a case, US EPA does not require quantifying base year emissions occurring outside of the jurisdiction (US EPA 2023).

Finally, there will be co-pollutants CAP and HAP) that are eliminated from the wastewater treatment facility with the implementation of the SCADA system (Measure 3). Data from the Tribe were not available to estimate these co-pollutant savings by the time the PCAP was submitted. However, these will be quantified for the CCAP and any implementation grant applications that are submitted.

MEASURE 1: COMPLETE A FEASIBILITY STUDY AND IMPLEMENTATION PLAN TO DEVELOP A TRIBAL ENERGY AUTHORITY

Renewable energy initiatives offer a pathway to bolster Tribal sovereignty by fostering advancements in economic, social, environmental, and cultural realms.[2] Beyond the evident health advantages stemming from decreased reliance on fossil fuels, renewable energy ventures on Tribal territories play a pivotal role in fortifying climate resilience. By diminishing dependence on centralized power grids, such initiatives pave the way for enhanced energy autonomy. By establishing a Tribal Energy Authority that can execute projects related to renewable energy generation and storage endeavors, TRITC can better navigate grid disruptions triggered by rolling blackouts and extreme weather events, ensuring uninterrupted power supply to essential facilities like the Tribal Health Center and wastewater treatment plant.

For instance, the Energy Authority could undertake a project to integrate grid-interactive technologies with microgrids to deliver surplus energy during peak demand periods, thus fortifying overall grid resilience. Such pioneering projects not only present immediate benefits but also serve as a conduit for long-term career opportunities in the burgeoning clean energy sector for Tribal members.

2 Tsinnajinnie, L., & Begay-Campbell, S. (2006, August 25). Benefits of Renewable Energy for Native Nations from the Environmental and Native Perspectives. Retrieved February 8, 2024, from https://www.energy.gov/sites/prod/files/2016/01/f28/interns2006tsinnajinnie.pdf

MEASURE 2: TRANSITION ALL TRIBAL BUILDINGS TO SMART METERS

The installation of SMART meters to optimize Tribal building energy efficiency offers direct economic and emissions reductions advantages to TRITC. SMART Metering facilitates swift outage detection and restoration of utility services, minimizing disruptions to tribal facilities and residences. By integrating time-based rates, SMART Metering empowers entities and individuals to exercise greater control over their electricity usage, expanding the array of pricing plans available and enhancing management of energy consumption and bills. These meters will enable TRITC to better track electricity usage in hourly increments, offering the Tribe an opportunity to reduce demand during peak periods, optimizing energy consumption and potentially lowering costs. Coupled with the execution of renewable energy generation projects facilitated through a Tribal Energy Authority, SMART Metering will reduce the Tribe's reliance on power plants–particularly costly "peaker" plants used for occasional high demand SMART Metering–which will further contribute to environmental preservation, as these plants tend to have higher greenhouse gas and air emissions. This approach not only benefits customers by avoiding the need for costly infrastructure but also mitigates environmental impact and helps maintain affordable retail rates for all utility customers.

MEASURE 3: TRANSITION ALL WATER DISTRIBUTION AND WASTEWATER TREATMENT INFRASTRUCTURE TO SCADA METERING

Water system benefits. The installation of a SCADA system throughout the water system, including at the water treatment plant will significantly enhance operational efficiency, decrease energy consumption, optimize resource utilization, and diminish emissions. SCADA systems enhance operational efficiency, optimize resource use, and improve water quality through real-time monitoring and control. They enable predictive maintenance, reducing downtime and ensuring continuous operation. Energy savings are achieved by optimizing treatment processes, while advanced data management supports better decision-making and regulatory compliance. Additionally, SCADA software will diminish the necessity for on-site personnel, consequently reducing travel-related emissions, while remote monitoring capabilities will ensure swifter responses to operational issues, averting prolonged periods of water system outage. Furthermore, SCADA systems may incorporate functionalities for monitoring and reporting data, allowing for the estimation of greenhouse gas emissions and further enhancing environmental stewardship efforts.

Wastewater benefits. A SCADA system can help a wastewater system by making the treatment plant more effective and reducing environmentally harmful system leaks. The SCADA installation will help the wastewater treatment plant (WWTP) remove more pollutants, enhance efficiency, and improve the overall treatment process. The SCADA system will help develop system-wide upgrades that will reduce septic seepage into groundwater and surface water. At the WWTP SCADA systems provide real-time data on various treatment processes, enabling operators to monitor the effectiveness of each stage of treatment. For example, the system can adjust aeration rates in biological treatment processes to ensure maximum microbial activity for pollutant removal. Enhanced treatment and reduced leakage will protect the environment by removal of pollutants and contaminants before discharging the treated water back into the environment. Additionally, the upgrade of the WWTP itself, with the installation of SCADA, will ensure benefits ranging from environmental protection and public health to efficient resource management and regulatory compliance.

MEASURE 4: SIGNIFICANTLY REDUCE ENERGY USE INTENSITY (TO NEAR ZERO) DURING RENOVATION OF OLD CASINO INTO NEW COMMUNITY CENTER BY INTRODUCING SOLAR PV, BATTERY STORAGE, ENERGY EFFICIENCY AND ELECTRIFICATION.

A core imperative of this PCAP is the reduction of GHG emissions and co-pollutants by averting the combustion of fossil fuels. The downstream health consequences of air pollution are profoundly detrimental, encompassing cardiovascular illnesses, exacerbation of asthma symptoms, adverse birth outcomes such as low birthweight and preterm delivery, as well as increased emergency room visits, hospitalizations, and fatalities. Any decrease in fossil fuel extraction or reduction in energy usage directly translates to enhanced air quality and public health. Thus, transitioning TRITC's retired casino building into a near-NZE Tribal office campus and community health center would yield significant environmental health benefits for the Tribe.

This would be achieved through 1) emissions reductions resulting from energy efficiency improvements and 2) the establishment of a health center resilient to energy loss caused by rolling blackouts and extreme weather events. Examples of infrastructure enhancements that could be implemented to deliver community benefits include:

- **MICROGRID:** Installing a renewable-energy microgrid equipped with solar panels and battery storage, along with peak shaving capabilities, offers a significant opportunity for the Tribal government to reduce electricity expenses. The integration of battery storage enhances resilience and safety during power outages and emergencies, ensuring that vulnerable residents have uninterrupted access to essential services.
- **EV CHARGING INFRASTRUCTURE:** Enhancing electric vehicle (EV) charging infrastructure holds the promise of curbing air pollution on the Reservation, and enhancing air quality.
- **SOLAR INSTALLATION (PARKING CANOPY AND ROOFTOP):** The installation of a solar parking canopy presents a multitude of advantages, including the generation of clean, renewable energy, thereby decreasing dependence on fossil fuels and lowering greenhouse gas emissions. Moreover, such projects serve as educational platforms for renewable energy, bolster resilience by offering potential backup power during outages, and stimulate local employment through the creation of new jobs in design, installation, and maintenance.

➜ **CLIMATE-CONTROL INFRASTRUCTURE:** There are many energy-efficient alternatives to conventional heating and cooling methods, promising enhanced indoor air quality and a healthier living environment for Tribal members, especially for children, the elderly, and individuals with pre-existing health conditions.

2.4 REVIEW OF AUTHORITY TO IMPLEMENT

As a federally acknowledged Tribe, the TRITC and its Tribal Council possess the authority to implement the projects advocated for in this PCAP. The TRITC Reservation has its own procedures to develop projects on land within the Reservation's jurisdiction that differ from typical county, city or state permitting regulations. Should the Tribal Council endorse the recommended projects or if said projects are approved via a general assembly vote, they can be implemented within the Reservation.

2.5 IDENTIFICATION OF OTHER FUNDING MECHANISMS

TRITC has access to diverse funding opportunities aimed at enhancing energy and infrastructure projects within Tribal lands. Despite the considerable array of funding sources, meeting the full scope of financial needs required to implement the PCAP remains a challenge. Nonetheless, TRITC has demonstrated adeptness in pooling resources from various avenues to realize substantial projects that yield comprehensive benefits for the community at large. Both federal and state/regional funding avenues are accessible for energy-related initiatives, as detailed in Table 7.

Table 7: Additional Funding Sources for PCAP Implementation

FUNDING SOURCES	DESCRIPTION
DOE Tribal Energy Efficiency Block Grant (EECBG)	Formula awards to Tribes for projects that reduce fossil fuel emissions or improve energy efficiency. Voucher award for Tribes is approximately 10-15k.
DOE 401010d	Funding set-aside for Federally- recognized Tribes to use for projects related to grid resilience, preparing electric systems for renewable integration
DOE OCED - Energy Improvements in Rural and Remote Areas	Funding for projects that lower energy costs, improve energy access/resilience, and reduce environmental harm. Projects must demonstrate new models or technologies
DOE Tribal Home Electrification and Appliance Rebates Program	Rebate program to support Tribal households to reduce energy bills, increase home comfort, improve indoor air quality, and reduce emissions by providing direct funding for energy efficiency and electrification home upgrades. $225 million available. Electrification and Appliance Rebates Program
DOE-OIE - Clean Energy Technology Deployment on Tribal Lands	Funding for renewable energy, energy storage, efficiency for Tribal buildings
Environmental and Climate Justice Block Grants	$3B in Inflation Reduction Act (IRA) funding for financial and technical assistance to carry out environmental and climate justice activities to benefit underserved and overburdened communities.
FEMA BRIC	$50M Tribal set aside for projects that respond to FEMA Hazard Mitigation Plan and reduce risks they face from disasters and natural hazards.
Community Change Grants	Partnership grant. $2B in IRA funding to benefit disadvantaged communities through projects that reduce pollution, increase climate resilience, and build community capacity to respond to environmental and climate justice challenges. $300 million reserved for Tribes.
Tribal Energy Development Capacity (TEDC) Grant	Offers Tribes financial support to enhance a Tribe's internal capacity to manage energy resources through things like Tribal utility feasibility and formation
Environmental Protection Agency Clean Water Act 319 Funding	Climate funding to expand riparian restoration and planting on reservation, allowing for enhanced carbon sequestration
U.S. Clean Energy Tax Credits	Tax credits for implementing renewable energy infrastructure. Examples include the Energy Efficient Home Improvement Credit, a 30% credit on total improvement expenses in the year of installation, up to a maximum of $1,200 (heat pumps, biomass stoves and boilers have a separate annual credit limit of $2,000), no lifetime limit (for 2023-2032)
BIA Tribal Electrification Program	Funding for clean energy household electrification that will benefit Tribal communities in the United States
USDA High Energy Cost Grant	Funds energy efficiency & renewable energy for Tribes, municipalities, utilities, States, non-profits, ANCs
Indian Community Development Block Grant (ICD	Provides eligible grantees with direct grants for use in developing viable Indian and Alaska Native communities, including decent housing, a suitable living environment, and economic opportunities, primarily for low and moderate income persons. Eligible applicants for assistance include any Indian Tribe, band, group, or nation which has established a relationship to the Federal government as defined in the program regulations.

2.6 WORKFORCE PLANNING ANALYSIS

The measures outlined in this PCAP will require significant labor, creating new work opportunities in areas such as meter installation, construction, renewable energy, and engineering. As such it provides opportunities for Tribe members to develop new skills to participate in upgrading resource management and service delivery on the reservation.

The Tribe currently maintains a Tribal Department called the Workforce Innovation & Opportunity Act (WIOA) Program. The Department provides Job Readiness Training and Entrepreneurial Workshops; short-term employment opportunities under Work Experience; Support Services, such as assistance with first time driver's license fees, birth certificates, job-related tools, uniforms, clothing, interview clothing; assistance with fees associated with on-line classes through Ed2Go and other vocational courses; application and resume assistance, transportation to career/job fairs, transportation to job interviews, and more. Notary services are available through the Training Coordinator and are free of charge. Additionally, WIOA currently partners with the Tulare County Workforce Investment Board and the Office of Employment and Training in Visalia, as well as the Tulare County One-Stop Career Centers.

However, as part of this program, the WIOA will seek new partnerships to expand workforce skill on the reservation toward the needs of the plan. The aim will be to enhance skills related to water and electricity infrastructure projects, along with construction. Not only will this equip workers for work on the reservation, but it will also provide members with expanded skills to help address the growing state-wide need to upgrade existing infrastructure for a carbon-free future. New partnerships in Fresno and Bakersfield will be explored, beginning with educational institutions and technical schools, such as Fresno State University and Bakersfield College. These schools offer programs in engineering, environmental science, and technical trades. From there, new networks will be explored to expand opportunities further.

For example, in Bakersfield, there is the Kern, Inyo, and Mono Counties Consortium Workforce Development Board (KIM LWDB), administered by the Employers' Training Resource (ETR). ETR oversees the delivery of workforce services relevant to local residents and businesses through the One-Stop Career Centers. These centers are hubs for workforce, education, and business services vital to the community's social and economic well-being. The mission of KIM LWDB is to develop job opportunities, a qualified workforce, training, and education that lead to employment, aiming to provide all people with access and opportunities through workforce development.

In Fresno, Workforce Connection, administered by the Fresno Regional Workforce Development Board, prepares community members for careers in various industries. This initiative is particularly focused on building the knowledge, skills, and attitudes necessary to meet employer needs and remain competitive in today’s workforce.

These organizations and others offer a suite of services to augment existing efforts by WIOA to develop a skilled workforce capable of contributing to infrastructure projects. By leveraging these resources, the Tribe can enhance its members' employability in critical sectors, supporting community-led development and sustainability initiatives.

4
NEXT STEPS

4. NEXT STEPS

The proposed CAP measures present lofty emission reduction goals, but the cost of inaction is high. Investments now will substantially reduce long-term operation costs, reduce recovery costs from climate-related disasters, and promote growth in local jobs and the economy. Moreover, measures included within this PCAP will support a more resilient, engaged and sustainable community in line with tribal sovereignty and improved quality of life for our community. The goals are ambitious, but ones that we believe we can achieve. These goals are designed to ensure that our community becomes more connected and continues to be healthy and vibrant. Following the submission of this PCAP, the Tribe will embark in a more fulsome process to further refine and build-out measures within a broader CCAP. We encourage our broad tribal community to embrace and fully participate in the engagement process as the Tribe works to develop an actionable CCAP to guide climate solutions for the TRITC.

APPENDIX A

2019 GHG EMISSIONS INVENTORY DOCUMENTATION

Within the PCAP GHG inventory, Scope 1 emissions account for a significant 58.78%, or 3,513 MTCO2e, of the total calculated emissions followed by Scope 2 representing 41.11%, or 2,457 MTCO2e, of the cumulative GHG emissions. Conversely, Scope 3 emissions amount to 0.12%, or 7 MTCO2e, of the total GHG emissions. These ratios are likely to change in the forthcoming analyses when more detailed calculations are performed for the CCAP. The summary of total GHG emissions can be found in Table 1.

Table 1. PCAP GHG Inventory Summary by Scopes and Categories

CATEGORIES			EMISSIONS BY GHG TYPE (MT CO2E)			
DEPARTMENT	**SECTOR**	**CATEGORY**	**CO2**	**CH4**	**N2O**	**TOTAL**
SCOPE 1						
Stationary Combustion	Public	Propane	840.7	1.12	2.13	843.95
	Private	Propane	137.37	0.18	0.35	137.9
	Private	Wood	1,241	2.38	14.38	1,257.5
Transportation	Public	Fleet	202	2	6	210
	Private	Personal vehicles	1,032	11	37	1,080
TOTAL SCOPE 1 EMISSIONS						**3,512.96**
SCOPE 2						
Stationary Energy	Public	Electricity	2,035.16	4.15	4.76	2,044.07
	Private	Electricity	411.14	0.84	0.96	412.94
TOTAL SCOPE 2 EMISSIONS						**2,457.02**
SCOPE 3						
Waste	Public & Private	Landfill Waste	0	7	0	7
TOTAL SCOPE 3 EMISSIONS						**7**
TOTAL EMISSIONS						**5,976.98**

Scope 1 comprises transportation and stationary combustion sectors. Transportation encompasses the fuel consumed by both public and private vehicles. The Energy Feasibility Report did not differentiate between types of consumed fuel; therefore, it was presumed that the vehicles were fueled by gasoline. Stationary combustion includes the use of propane for public and residential purposes, as well as the use of wood for heating homes. Since the Tribal Greenhouse Gas Inventory Tool did not incorporate wood emission factors, supplementary calculations were performed to include this source of emissions.

Wood emission factors were sourced from the EPA Emission Factors for Greenhouse Gas Inventories.[3] To facilitate the calculation, 630 cords of wood were converted to mmBtu using the average value of 21 mmBtu per 1 cord of wood,[4] resulting in 13,230 mmBtu. The final emissions calculations were based on the total mmBtu generated from burning wood, resulting in an annual emission estimate of 1,257 MTCO2e, as depicted in Table 2.

Table 2. GHG Emission Calculations from Burning Wood

WOOD EMISSION FACTORS			
Kg per mmBtu			
CO2	CH4	N2O	TOTAL
93.8	0.0072	0.0036	93.8108

EMISSIONS FROM BURNING 630 CORDS OF WOOD			
MT CO2e			
CO2	CH4	N2O	TOTAL
1,241	2.3814	14.1931	1,257.5485

[3] www.epa.gov/system/files/documents/2023-03/ghg_emission_factors_hub.pdf

[4] www3.uwsp.edu/cnr-ap/KEEP/nres633/Pages/Unit1/Supplementary%20Pages/Energy-Conversion-and-Resource-Tables.aspx

To convert all GHG emissions to CO2e, global warming potential (GWP) values provided by the Intergovernmental Panel on Climate Change (IPCC), Fourth Assessment Report (AR4) were used as stated in the EPA Emission Factors for Greenhouse Gas Inventories.[5] The EPA's guidelines on greenhouse gas (GHG) reporting advocate for incorporating emission estimates of primary GHGs: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6), and nitrogen trifluoride (NF3). However, the PCAP GHG inventory only accounted for three main GHGs: CO2, CH4, and N2O. Due to unavailability of activity data and emission factors for other GHGs, they were excluded from the PCAP GHG inventory.

Table 3. GHG Emission Calculations from Burning Wood

GAS	CH4
100 YEAR GWP	28
CO2	N2O
1	298

[5] www.epa.gov/system/files/documents/2023-03/ghg_emission_factors_hub.pdf

[6] ww2.arb.ca.gov/local-government-operations-protocol-greenhouse-gas-assessments

Scope 2 includes emissions from consumed electricity by private and public sectors. Finally, Scope 3 consist of solid waste emissions that were calculated using the Landfill Emissions Tool.[6] While Scope 3 emissions represent a small percentage of total emissions in the PCAP GHG inventory, data collection and analysis from other sectors needs to be performed to provide a comprehensive representation of emissions across all three scopes.

Due to limited timelines, the majority of the data was extracted from the Energy Feasibility Report and includes annual consumption of propane, wood, fleet fuel, and electricity, as demonstrated in Table 4. Annual waste data was obtained from invoices for 2023 provided by the Tule River Indian Tribe.

Table 4. TRITC Energy Consumption in 2019

SECTOR	SOURCE	WOOD (CORD)	FOSSIL FUEL (KGALLONS)	FUEL (KGALLONS)	ELECTRICITY (GWh)
PUBLIC	Buildings	-	-	-	2
	Transportation (fleet)	-	-	23	-
	Transportation (street lighting)	-	-	-	0.1
	Water Sector	-	-	-	0.5
	Communications	-	-	-	0.2
	Finance/Economy	-	-	-	6.6
PRIVATE	Other	-	-	-	0.5
	Homes	630	147	-	2

[6] ww2.arb.ca.gov/local-government-operations-protocol-greenhouse-gas-assessments

DEFINITIONS

Business-as-usual (BAU): a projection or forecast of future greenhouse gas (GHG) emissions that assumes said emissions will continue to increase at their current trajectory without any additional efforts to mitigate climate change.

Priority Climate Action Plan (PCAP): a strategic framework that outlines high-priority actions and implementation-ready measures aimed at reducing greenhouse gas (GHG) emissions and enhancing climate resilience within the TRITC Reservation, including a benefits analysis of estimated GHG emissions reductions associated with each high-priority action.

Comprehensive Climate Action Plan (CCAP): a narrative report that builds upon a previously-development PCAP to provide a comprehensive roadmap for mitigating and adapting to climate change, encompassing various sectors and involving stakeholders to achieve sustainability and resilience goals. The CCAP expands upon the work completed in the PCAP by developing sector-specific business-as-usual (BAU) and future emissions scenarios for all tribal GHG sources/sinks, setting greenhouse gas (GHG) reduction targets with additional stakeholder input, and establishing a workforce plan to support the achievement of CCAP activities and goals.

Greenhouse gas (GHG) Inventory: a list of emission sources and sinks and the associated emissions quantified using standard methods. The PCAP must include a “simplified" inventory. The CCAP must include a comprehensive inventory of emissions and sinks for the following sectors: industry, electricity generation/use, transportation, commercial and residential buildings, agriculture, natural and working lands, and waste and materials management.

ACRONYMS

BIA: Bureau of Indian Affairs

CCAP: Comprehensive Climate Action Plan

DOE: Department of Energy

EPA: Environmental Protection Agency

EECBG: Energy Efficiency and Conservation Block Grant

EV: Electric Vehicle

FEMA: Federal Emergency Management Agency

GHG: Greenhouse Gas

IRA: Inflation Reduction Act

MTCO2e: Metric Tons of Carbon Dioxide Equivalent

NF3: Nitrogen Trifluoride

OCED: Office of Community Services Energy Division

PV: Photovoltaic

RE: Renewable Energy

SCE: Southern California Edison

SCADA: Supervisory Control and Data Acquisition

SMART: Specific, Measurable, Achievable, Relevant, Time-bound

TRITC: Tule River Indian Tribe of California

USDA: United States Department of Agriculture

WWTP: Wastewater Treatment Plant