Tejon Indian Tribe

Priority Climate Action Plan (PCAP)

Prepared for:

US EPA Region 9
75 Hawthorne Street
San Francisco, CA 94105

April 2024

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Prepared by:

WampWorx Ascent

Tejon Tribe of Indians
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EXECUTIVE SUMMARY

A climate action plan is a planning effort undertaken by a government to understand how climate pollutants are generated within their jurisdiction and identify projects and policies to reduce these climate pollutants. While a climate action plan typically focuses on reducing greenhouse gas (GHG) emissions that contribute to climate change, numerous co-benefits can be associated with projects and policies that reduce GHG emissions.

- For example, burning fossil fuels (such as gasoline and diesel fuel) creates GHG emissions but can also produce air pollutants that are hazardous to human health. Reducing the burning of fossil fuels can improve air quality and public health.
- Energy efficiency improvements are another example of an action to reduce GHG emissions, which can also help reduce long-term energy costs.

This climate action plan undertaken by the Tejon Indian Tribe (Tejon Tribe or Tribe) is part of a longer-term effort to develop comprehensive strategies for reducing its contribution to climate change while also providing maximal public health benefits, cost savings, and environmental protection for Tribal members.

The United States Government federally recognized the Tejon Indian Tribe as a sovereign government in January 2012. It is governed by a democratically elected Tribal Council and a Tribal Executive Committee. The Tribe was underserved for decades and has been striving for economic sustainability. Until 2022, the Tribe only occupied an approximately 10-acre site near the City of Arvin, California, known as the Tribe's Community Center Property, where the Tribe's headquarters are located. In June 2022, the Tribe acquired the undeveloped 306-acre Mettler site, located approximately five miles from the Tribe's Community Center Property. Tejon Tribe plans to develop a casino project on 80 acres of the Mettler site, for which construction started in early 2024, and a gas station project is proposed to be built at the Community Center Property. The 1,250 Tejon Tribe members live primarily throughout Kern County.

Based on EPA and DOE vulnerability indices, the Tejon community in Bakersfield, CA, qualifies as a distressed community and is recognized as disadvantaged with high vulnerability to environmental health burdens.

This Priority Climate Action (PCAP) highlights the most urgent near-term priorities for the Tejon Tribe that provide maximal community and environmental benefits while reducing greenhouse gas (GHG) emissions. The development of the PCAP is the initial step in a longer-term climate action planning effort as part of the Climate Pollution Reduction Grants (CPRG) program administered by the United States Environmental Protection Agency (EPA). The PCAP is based on priority measures focused on energy efficiency, infrastructure improvement, and reduced dependence on fossil fuels. These infrastructure projects are guided by key principles of the Tribe's vision of advancing economic development and protecting the health and prosperity of Tribal Members.

The boundary of the PCAP includes the physical boundary of the Community Center Property and the Mettler site, as well as the residences of Tribal members throughout the region. The Tejon PCAP GHG emissions inventory addresses the following primary GHG emissions sectors in accordance with the Global Protocol for Community-Scale Greenhouse Gas Inventories (also known as GHG Protocol for Cities), version 1.1 (World Resources Institute 2021):

- stationary energy,
- transportation, and
- waste.

PRIMARY ELEMENTS OF THE PCAP

The PCAP includes six primary elements intended to characterize the scale of GHG emissions generated by the Tejon Tribe and identify and analyze priority projects to reduce these GHG emissions while providing maximal benefits to Tribal members. The core goal is to highlight how the Tejon Tribe can implement these priority projects and how they would provide GHG reductions, workforce growth, and additional community benefits. The results of these PCAP elements are summarized in the following sections.

GHG Emissions Inventory

The Tejon GHG emissions inventory was developed following the GHG Protocol for Cities and utilized the EPA Tribal Government Inventory Tools (EPA 2024) for most GHG emissions calculations with a baseline year of 2022. The PCAP GHG community-wide inventory is based on current operations of the Tribal government, which are being conducted at the Community Center Property, as well as energy consumption at the residences of Tribal Members, all of whom live off-reservation, primarily in Kern County. The Mettler site and planned gas station project on the Community Center Property are not included in the inventory as these projects had yet to be initiated as of 2022. However, the GHG emissions forecast includes the Mettler site and the gas station project.

Error! Reference source not found. below summarizes the PCAP GHG inventory results by scope[1] and primary GHG emissions sector. Residential emissions are included in Scope 3 since they are not under tribal government control. Detailed documentation for the GHG emissions inventory is provided in Appendix A.

Table 1 Summary of PCAP GHG Emissions Inventory by Sector and Greenhouse Gas for 2022

GHG Protocol for Cities Category[1]			GHG Emissions by Sector ($MTCO_2e$)			
Sector	Sub-sector	Sub-category	CO_2	CH_4	N_2O	Total
Scope 1						
Stationary Energy	Governmental	Propane	20	0.03	0.05	20
Waste	Wastewater treatment and discharge	Governmental	-	5.25	-	5
Total scope 1 GHG Emissions			**20**	**5.27**	**0.05**	**25**
Scope 2						
Stationary Energy	Governmental	Electricity	34	0.06	0.07	34
Total scope 2 GHG Emissions			**34**	**0.06**	**0.07**	**34**
Scope 3						
Transportation	On-road	Governmental (Fleet Vehicles)	8	0.02	0.13	8
		Governmental (Employee Commute)	34	0.04	0.32	35
		Governmental (Visitors)	23	0.03	0.21	23
Waste	Solid Waste Disposal	Governmental	—	2.54	—	3
Stationary Energy	Residential	Electricity	860	1.40	1.72	864
		Natural gas	1,072	2.67	0.54	1,075
Total scope 3 GHG Emissions			**1,997**	**6.71**	**2.91**	**2,007**

Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent

[1] The GHG Protocol for Cities is used to develop community-wide GHG emissions inventories for jurisdictions with distinct geographical boundaries and is recommended for use by EPA for Tribal GHG emissions inventories.

GHG Emissions Forecast

The GHG emissions forecast provides an understanding of how new development projects would increase future GHG emissions from the levels in 2022. The community-wide GHG emissions forecast for the Tejon Tribe is based on the current Tribal government operations, tribal member residential energy use, the proposed gas station project, and the proposed casino project at the Mettler site, with GHG emissions forecasted for 2030. Note that construction of the casino project at the Mettler site started in 2024, and construction of the gas station has yet to start. However,

[1] The scope of emissions sources indicate the physical location of GHG emissions sources and the level of control a government may have over the sources. The GHG Protocol for Cities defines three emissions scopes which are described in detail in Section 2.1.

these projects are expected to be completed and operational before 2030. Therefore, the casino and gas station projects are not included in the GHG inventory but are included in the GHG forecast. **Error! Reference source not found.** below presents a summary of PCAP GHG emissions forecast results, and **Error! Reference source not found.** presents a graph showing Tejon Tribe's 2022 GHG emissions inventory and future forecasted emissions for 2030. The casino adds significantly to scope 1 and 3 emissions, primarily natural gas and vehicle miles to and from the casino. Vehicle travel to and from the casino is the largest source of emissions, but is also the source that Tejon can exhibit the least amount of control.

Table 2 Summary of PCAP GHG Emissions Forecast by Sector and Greenhouse Gas for 2030

GHG Protocol for Cities Category[1]			GHG Emissions by Sector ($MTCO_2e$)			
Sector	Sub-sector	Sub-category	CO_2	CH_4	N_2O	Total
Scope 1						
Stationary Energy	Governmental	Propane	20	0.03	0.05	20
	Commercial (Gas Station project)	Natural Gas	18	0.04	0.01	18
	Commercial (Casino project)	Gasoline	0.09	0.01	—	0.10
	Commercial (Casino project)	Natural Gas	32,849	18	160	33,026
	Commercial (Casino project)	Diesel	4,508	7	—	4,515
Waste	Wastewater treatment and discharge	Governmental	—	5.25	—	5
		Commercial (Casino project)	98	41	9.41	149
Total scope 1 GHG Emissions			**37,492**	**72**	**169**	**37,733**
Scope 2						
Stationary Energy	Governmental	Electricity	34	0.06	0.07	34
	Commercial (Gas Station project)		55	0.09	0.11	55
	Commercial (Casino project)		2,121	2	5	2,129
Total scope 2 GHG Emissions			**2,210**	**3**	**5**	**2,218**
Scope 3						
Transportation	On-road	Governmental (Fleet Vehicles)	8	0.02	0.13	8
		Governmental (Employee Commute)	34	0.04	0.32	35
		Governmental (Visitors)	23	0.03	0.21	23
		Commercial (Gas Station project)	2,500	1.87	58.28	2,560
		Commercial (Casino project)	74,068	60	—	74,127
Waste	Solid Waste Disposal	Governmental	—	2.54	—	3
		Commercial (Casino project)	126	208	—	334
Stationary Energy	Residential	Electricity	860	1.40	1.72	864
		Natural gas	1,072	2.67	0.54	1,075
Total scope 3 GHG Emissions			**78,690**	**277**	**61**	**79,028**

Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent

[1] The GHG Protocol for Cities is used to develop community-wide GHG emissions inventories for jurisdictions with distinct geographical boundaries and is recommended for use by EPA for Tribal GHG emissions inventories.

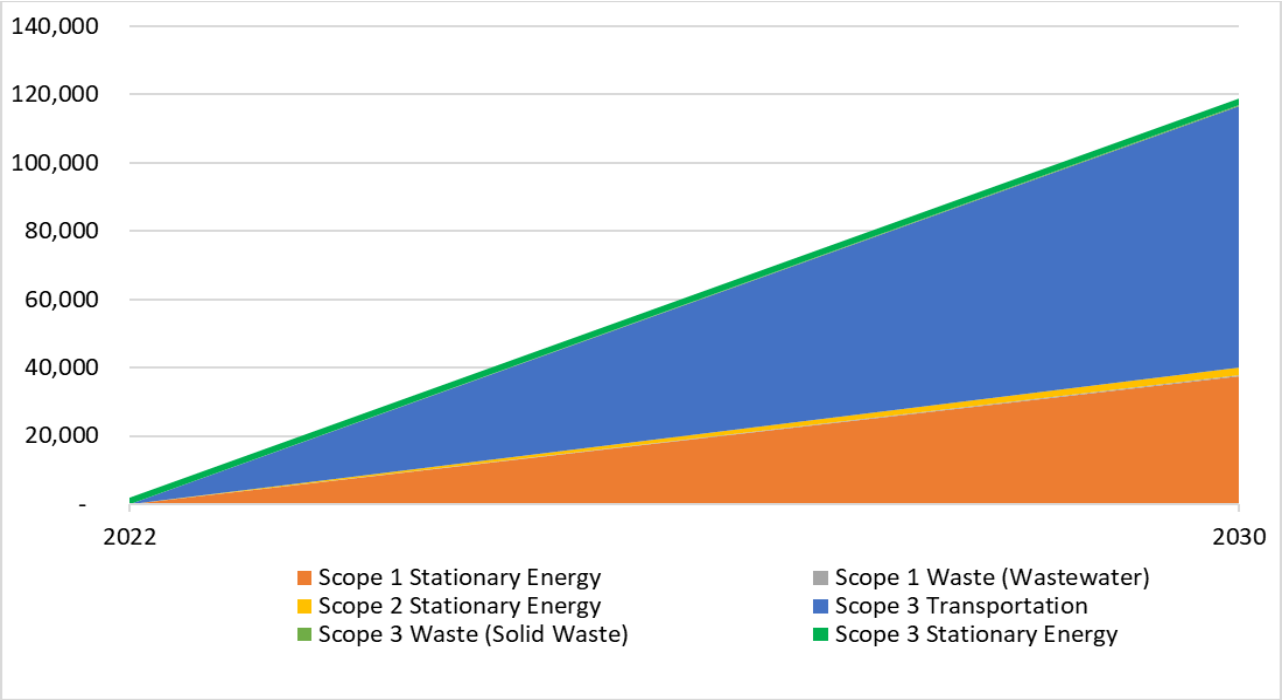

Figure 1 Tejon Tribe's GHG Inventory and Forecast Summary

GHG Emissions Reduction Measures

The GHG reduction measures selected for the PCAP are near-term priority projects and programs that reduce GHG emissions and provide significant community and environmental benefits. Tejon's overarching goal of the PCAP measures is to achieve energy independence and to limit future energy costs from rate increases to protect the economic prosperity of Tejon members and the Tribe as a whole. The measures can be categorized and summarized under the GHG inventory scopes and sectors as follows:

- **Scope 1 and 2 Stationary energy:** A total of 2.25 megawatts (MW) of solar photovoltaic (PV) and 2.5 megawatts per hour of Battery Energy Storage System (BESS) as well as an anaerobic digester can be installed on the Tribe's Community Center Property as well as the Mettler site. The proposed PV plus BESS will eliminate the need for diesel backup generator installation at both locations while reducing utility bills. Additionally, an anaerobic digestor installed at the Mettler site wastewater treatment plant would lower utility bills while supporting this critical infrastructure with energy resilience benefits.
- **Scope 3 Transportation:** By replacing 19 administrative staff vehicles and one tribal vehicle on the Community Center Property and installing 7 Level 2 charging stations, 121,000 vehicle miles of governmental travel can be electrified. Additionally, the installation of 25 Level 2 chargers and 16 direct current fast chargers (DCFCs) will not only provide the necessary charging infrastructure for the future tribal fleet but also attract visitors with electric vehicles.
- **Scope 3 Stationary Energy – Residential Energy Efficiency and Electrification Program (REEEP):** Development of REEEP to facilitate the implementation of energy efficiency and electrification measures leveraging the Inflation Reduction Act and State incentives administrated by the California Energy Commission and other types of utility and Area Having Jurisdictions (AHJs) rebates such as San Joaquin Valley Air Quality Management District building electrification rebates. The proposed measures include efficient light retrofits and building controls, cooling and heating appliance replacement, building envelope upgrades, and installation of electric heat pumps, heat pump water heaters, heat pump dryers, and electric stoves. This measure includes three years of staff and consulting time to help the members access the incentives and implement the measures, as well as a subsidy to cover costs above the incentives.
- **Scope 1 Waste**: The development on the Mettler site includes a 170,000 gallon per day wastewater treatment facility. This measure proposes an anaerobic digester to minimize the emissions from sludge disposal. Anaerobic digesters

reduce the volume of sludge produced during the wastewater treatment process, stabilize the sludge, and reduce pathogens. The process involves the biological degradation of organic matter in the presence of oxygen.

Table 3 provides a high-level summary of each PCAP GHG reduction measure and the anticipated GHG reductions. Each measure is expected to achieve net GHG reductions after implementation. Although some measures increase electricity consumption as a secondary effect, the primary reductions in scope 1 emissions are larger than the increase in scope 2 emissions.

Table 1 Summary of PCAP GHG Reduction Measures

GHG Reduction Measures	Annual Estimated GHG Emission Reductions ($MTCO_2e$)
Measure 1: Implement Energy Efficiency (Lighting Control and Retrofit) and Building Management System Installation	5.36
Measure 2: Supplements to the Installation of 450 KW Solar PV and 500 kWh Battery Energy Storage at the Community Center Property	183
Measure 3: Installation of 1.8MW Solar PV and 2 MWh Battery Energy Storage at the casino project at the Mettler site	1,142
Measure 4: Replacement of 19 Passenger fossil fuel cars and Tribal vehicles, and 7 Level 2 Charging Installation	35.7
Measure 5: Construction of anaerobic digesters at the casino project at Mettler site	5.6
Measure 6: Residential Energy Efficiency And Electrification Program (REEEP)	864

Notes: GHG = greenhouse gas; $MTCO_2e$ = metric tons carbon dioxide equivalent; KW = kilowatt; PV = photovoltaic; kWh = kilowatt-hour; MW = megawatt; MWh = megawatt-hour.

Benefits Analysis

The benefits analysis includes a co-pollutants baseline inventory of sources affected by this PCAP using the 2020 National Emissions Inventory (EPA 2020) and a description of additional co-benefits expected to occur due to the implementation of GHG reduction measures. The change in co-pollutants due to the PCAP GHG reduction measures was not quantified because this PCAP does not identify any industrial GHG reduction measures.[2] While the GHG reduction measures do not include a quantified reduction of co-pollutants, their implementation provides numerous community benefits to Tribal Members. Table 4 briefly summarizes the community benefits of implementing the GHG reduction measures. We identify sustaining jobs but not temporary employment opportunities.

Table 4 Summary of Potential Community Benefits from PCAP GHG Reduction Measure

GHG Reduction Measures	Community Benefits
Measure 1: Implement Energy Efficiency (Lighting Control and Retrofit) and Building Management System Installation	▶ Energy affordability
Measure 2: Supplements to the Installation of 450 KW Solar PV and 500 kWh Battery Energy Storage at the Community Center Property	▶ Energy security and reliability ▶ Energy affordability
Measure 3: Installation of 1.8MW Solar PV and 2 MWh Battery Energy Storage at the casino project at the Mettler site	▶ Energy security and reliability ▶ Energy affordability
Measure 4: Replacement of 19 Passenger fossil fuel cars and Tribal vehicles, and 7 Level 2 Charging Installation	▶ Improved public health due to transition away from fossil fuel ▶ Access to safe, reliable, and affordable energy
Measure 5: Construction of anaerobic digesters at the casino project at Mettler site	▶ Improved infrastructure ▶ Improved ecosystem and public health ▶ Permanent clean energy job opportunities
Measure 6: Residential Energy Efficiency and Electrification Program (REEEP)	▶ Energy affordability ▶ Support for investment in energy-efficient technologies

[2] Per EPA guidelines, Tribes are not expected to quantify co-pollutant impacts associated with nonindustrial GHG reduction measures (EPA 2023)

Tejon Tribe's Authority to Implement GHG Reduction Measures

Tejon has developed the requisite authorities to issue permits for construction, electrical, mechanical, and plumbing installations on its trust land. It implements the regulatory authority using third-party experts to develop the various permits and approvals, primarily based on Kern County building and construction standards. Utility interconnection agreements are outside the Tribe's authority.

Identification of Other Funding Mechanisms

Tejon can access funding from the State of California and Federal Agencies, partly from the Inflation Reduction Act, to help fund its GHG emissions ambitions. This report summarizes grants from the California Energy Commission, the Bureau of Indian Affairs, the United States Department of Agriculture, and the Department of Energy. However, most are competitive, and funding for Tejon projects is not certain. Residential tribal members can access renewable energy and energy efficiency rebates and subsidies.

The Tejon team will work diligently in the CCAP to qualify funding sources for priority measures and assess their competitiveness. Included are projects on Trust Land (microgrids, digester, electrical infrastructure upgrade at the government site, electric vehicles, and charging) and the options available to tribal members.

Workforce Planning Analysis

The imperative of transitioning to a green economy offers a profound opportunity for the Tejon Tribe and Kern County to address climate change while fostering economic growth and job creation. As the local oil industry faces declines or transformations, workers who have historically been employed in oil extraction and related services are employable but may find their skills mismatched with the emerging job market focused on renewable energy and sustainability and the County's efforts to leverage its existing geological infrastructure and expertise in drilling to become a leader in the carbon removal and storage industry. Other workers may need more basic workforce readiness training and in green skills.

The transition towards a clean economy and the County's emerging role in carbon management and storage present opportunities and challenges for the workforce in Kern County. The December 2023 unemployment rate of 8.7% increased to 9.5% in January 2024 in Kern County, notably higher than the national average of 3.7% and lagging the Nation's job growth. This signals a potential pool of workers available for retraining, especially for jobs in the green economy sector, as California seeks to significantly invest in reducing carbon emissions by 80% by 2050 and remove 100 million metric tons of carbon from the air.

While the grant focuses on Tejon Tribal employment, unemployment and workforce training are regional issues that can't be adequately addressed by focusing on the Tribe alone. Moreover, the energy measures that will reduce Tejon's GHG footprint will generate only a handful of jobs, most of which will be temporary. Accordingly, this workforce task focuses on developing a workforce training program for Tejon members to qualify for more sustainable green jobs in the broader Kern County green economy by leveraging the regional workforce programs of the Kern County Community College District (KCCD) and its reach into other training resources. KCCD is Tejon's Partner in the grant. KCCD has an 11-year history of bringing energy education to the region, working with over 40 training partners.

KCCD has broken out the jobs and skills needed to support the green transition and identified workforce training programs, as provided below in Table 5.

The next step in the workforce program is to survey the capabilities and interests of the Tejon members and match them with the job categories and training opportunities. A draft survey is included in Appendix D.

Table 5 Green Energy Jobs Pathways

Energy Paths	Description	Typical Jobs in this Sector
Research & Development	Those who work in Research and Development (R&D), undertake a wide array of crucial tasks to push the boundaries of scientific and technological innovation. This includes delving into materials research to enhance battery performance, pioneering the development of new fuels to drive cleaner energy solutions, and optimizing technologies and processes for maximum efficiency and effectiveness across diverse applications and industries.	Chemist, Staff Scientist, Process Engineer, Material Science Engineer, Chemical/Geochemical/Electrochemical Engineer, Electrical Engineer, Lab Technician B.S at BC
Energy Management	The Energy Management sector of energy efficiency comprises individuals who are closely involved in planning and monitoring energy use at an organizational or facility level. Often, technical leads are the drivers of energy efficiency projects, the authority on reporting and regulations, planners of retrofit projects, and managers of renewable energy projects.	Energy Efficiency Program Manager, Energy Management Control Systems Engineer, Supervisor of Planning and Building services, Energy Advisor, Energy Auditor, Energy Manager, Project Analyst, Energy Policy Analyst, Automation Technician, Energy Management Control Systems Technician
Energy Consulting & Modeling	Individuals involved in Energy Consulting and Modeling are generally responsible for helping clients conserve energy and reduce operating costs using various tools. Consultants are often involved in forecasting and predicting energy use and recommending energy efficiency and retrofit projects that can bring about savings. Additional benefits to clients include setting and meeting energy management GHG reduction targets.	Energy Consultant, Energy Simulation Specialist, Energy Data Engineer, Building Asset Manager, Electrical/Mechanical Engineer, Energy Data Analyst, Energy Systems Analyst/Designer, MEP Engineer, Program Consultant, Building Systems consultant, Energy Specialist
Industrial Processing	The Industrial Processing sector of energy involves manufacturing key components and equipment vital for generating, distributing, and utilizing electrical energy. Specifically, it includes the following subsectors: the manufacture of electric motors, generators, transformers, switchgear, and control equipment; batteries and accumulators; wiring and wiring devices; electrical lighting equipment; fuel cells; and other electronic equipment.	Manufacturing Engineer, Manufacturing technician, Electrical Engineer, Cell Manufacturing Engineer, Process Engineer
Building Operations & Maintenance	Those working in this sector are responsible for the daily operations and maintenance of buildings and their services, often including tenant needs and comforts. They often have a direct link to energy controls and settings to buildings and a mission to run the building as efficiently and cost-effectively as possible, both within a building's walls and throughout the entire building envelope.	Building Operator, Facility Operations Staff, Building/Asset Manager, Building Operations Engineer, Energy Consultant to the commercial building industry, Commercial Project Manager, Automation/Controls Technician, Building Operations Manager, Building Services Manager, Residential Property Manager, Building Maintenance Worker
Trade Allies & Contractors	Individuals in this sector interact with customers to provide solutions and proposals, including costs and payback options that will reduce energy consumption and operating costs. They play a key role in acting as a resource in educating customers on energy solutions and providing them with information on energy conservation incentive programs from utilities and public agencies.	Contractor, Insulation Installer, Heating Systems Installer, Electrician, Renewable Technologies Installer, Operating Engineer, Supervisor, Energy Auditor, Renovation Contractor, Energy Efficiency Consultant, Electrician, Electricity Meter Installer, Heating, Air Condition & Refrigeration Mechanic, Construction Worker, Technician Program Coordinator/Manager, Systems/Data Analyst, Customer Operations Manager, Distribution Engineer, Technical Advisor, Project Supervisor (Grid, DSM), Energy Engineer, Energy Solutions Advisor, Energy Portfolio Manager, Account Manager (Industrial, Commercial)
Technical Services: Utilities & Public Sector	Those working for utilities, public agencies, and institutions are often involved in managing and executing energy efficiency projects and reduction incentive programs, often at a regional or municipal level. Professionals in these sectors often work with a network of stakeholders and customers on energy and GHG reduction policies.	

Source; http://cielcanada.com/news/highlighting-energy

1 INTRODUCTION

The Tejon Indian Tribe (hereafter referred to as Tejon Tribe or Tribe) was federally recognized by the United States Government as a sovereign government in January 2012. The Tribe is governed by a Tribal General Council (all voting adult members) and a Tribal Executive Committee, which includes a board of elders who advises the Tribal leadership in decision-making and adjudication. As of January 2022, there were 1,250 members enrolled in the Tejon Tribe, the majority of whom live in Kern County and are lifelong residents of the Bakersfield area. The Tribe has been underserved for decades and has been striving for economic sustainability through energy independence, health care, education, and housing.

The Tejon Tribe in Kern County is at risk due to several factors:

- Distressed Rural Community: The Tejon Tribe qualifies as a distressed community based on the Economic Innovation Group's Distressed Communities Index. This indicates that the community faces economic challenges and may have higher unemployment rates and lower income levels.
- High Energy Burdens: The Tejon Tribe is located in a region with a 3% energy burden for low-income residences. This means that a significant portion of the community's income is spent on energy expenses, which can be a financial burden.
- Social Vulnerability: The Tejon Tribe's overall Social Vulnerability Index (SVI) score of .9417 indicates a high level of vulnerability. This vulnerability can be attributed to factors such as limited resource access, health disparities, and environmental risks.
- Disadvantaged Community: The Tejon Tribe qualifies as a disadvantaged community in terms of pollution and sources. The community scores above 90% in particulate matter 2.5, ozone, Superfund proximity, and RMP facility proximity. This indicates that the community is exposed to higher pollution levels and may face associated health risks.

Until 2022, the Tribe only occupied an approximately 10-acre site near the City of Arvin, California, known as the Tribe's Community Center Property, where the Tribe's headquarters are located. To help Tribal members gain economic independence and sustainability, the Tribe requested the acquisition of approximately 306 acres of land in unincorporated Kern County, California (referred to as the Mettler Site) to generate its own governmental revenues. In June 2022, the Tribe received approval from the Department of the Interior (DOI) and acquired the Mettler site, located approximately 5 miles from the Tribe's Community Center Property.

Currently, the Tejon Tribe's governmental boundary (also known as the Tribe's geographical boundary) includes the Community Center Property and the Mettler site. The Tribe also received approvals to govern a class three gaming industry at the Mettler site, where construction of a casino project started in 2024. A gas station project is also proposed to be built at the Community Center Property, which is expected to provide monetary benefits to the Tribe and improve the community's socio-economic conditions. With these projects, the Tribe aims to improve its short-term and long-term socioeconomic conditions, promote self-sufficiency, and strengthen its ability to serve its citizens. The proposed projects address urgent near-term priorities for the Tejon Tribe that improve community benefits like health care, education, and quality housing.

To advance the Tribe's priority projects and Tribe's commitment to climate-efficient development while improving the quality of life for all members, the Tejon Tribe has partnered with WampWorx and Ascent Environmental, Inc. (Ascent) to produce this Priority Climate Action Plan (PCAP). This initiative aims to strengthen the Tribe's climate-efficient investments and align them with the Tribe's long-term development vision. The development of the PCAP is the initial step in a longer-term climate action planning effort as part of the Climate Pollution Reduction Grants (CPRG) program administered by the United States Environmental Protection Agency (EPA). The PCAP is required to qualify to compete for a CPRG Implementation Grant. The PCAP also helps to inform the development of a Comprehensive Climate Action Plan (CCAP), which will look beyond near-term priority projects and build a framework for future sustainable growth.

1.1 CPRG OVERVIEW

Authorized under Section 60114 of the Inflation Reduction Act, the CPRG program provides flexible resources in grants to states, local governments, Tribes, and territories to develop and implement ambitious plans for reducing GHG emissions and air pollution. It is a two-phased program that provides flexible support to Tribes and other entities to design climate action plans and provides funding to implement measures and projects included in an applicable PCAP.

The CPRG program includes two phases, the first phase being the Planning Phase and the second being the Implementation Phase. The Planning Phase is where eligible Tribes and entities are provided non-competitive grants for developing climate action plans. There are three key components of the Planning Phase, including:

- Development of a PCAP to identify near-term priority projects and GHG reduction measures that could be pursued for grants in the Implementation Phase,
- Development of a CCAP to develop a comprehensive roadmap for reducing local GHG emissions and
- Monitoring implementation of projects and programs in the CCAP over time.

In the Implementation Phase, competitive grants are available to participants in the Planning Phase to obtain funding for priority projects included in the PCAP. Both phases of the CPRG program will occur between 2023 and 2027.

1.1.1 CPRG Overview for Tribes

The EPA has allocated funding solely for the use of Tribes and territories for the planning and Implementation phases of the CPRG program. The Tejon Tribe has accepted a $154,000 grant from EPA to conduct the Planning Phase and intends to submit priority projects for the Implementation Phase competition. EPA has allocated $300 million for competitive implementation grants for Tribes and territories, with awards available for specific projects between $1 million and $25 million. The core requirements for the CPRG implementation grants are that projects are priority near-term projects that provide GHG reductions and additional community benefits. The development of this PCAP is aligned with these core requirements, identifying the highest priority projects for the Tejon Tribe to provide community benefits and reduce local GHG emissions.

The Tejon Tribe's long-range vision is committed to enhancing the quality of life for Tribal members through economic development to achieve self-sufficiency in its operations and to expand member services inside and outside the Tribe's geographical boundaries. For this purpose, the Tribe is constructing two development projects: the casino project at the Tribe's Community Center Property and the gas station project at the Mettler site. To ensure that the Tribal community and the region are climate resilient, the Tribe wants to mitigate the greenhouse gas emissions impact of the existing and new developments. For this purpose, the Tribe has identified near-term priority measures, including programs and actions focused on reduced dependence on fossil fuels, infrastructure improvements, residential consultation, electric vehicle acquisition, and energy efficiency. The Tribe will seek CPRG funding to implement these near-term high-priority GHG reduction measures inside the Tribe's geographical boundaries and outside the boundaries at Tribal members' residences. The PCAP builds upon Tribe's long-term development vision to deploy GHG emission mitigation measures that provide a quantified reduction of GHG emissions and numerous community benefits.

1.1.2 PCAP Overview

The PCAP focuses on reduced dependence on fossil fuels, infrastructure improvements, and energy efficiency measures that are planned as priority measures. These are guided by the key principles of the Tribe's vision of advancing economic development and improving the quality of life of Tribal members. The PCAP provides the GHG emissions context of the Tribe and serves as an integral first step in longer-term comprehensive climate planning to enhance energy efficiency and guide sustainable future development. The primary elements of this PCAP include:

- a GHG emissions inventory;
- GHG emissions forecast;
- quantified GHG reduction measures;
- benefits analysis, including a co-pollutants inventory and a qualitative co-benefits analysis;
- the Tejon Tribe's authority to implement GHG reduction measures;
- identification of other funding mechanisms; and
- workforce planning analysis.

The development of the PCAP was directed by EPA guidance documents where applicable, including the use of the Tribal Government GHG Inventory Tools (TGIT) to calculate the GHG emissions inventory and forecast. The Tejon Tribe's internal capacity and expertise were expanded through contracting with WampWorx and Ascent to complete GHG emissions and measures analyses, focus Tribal engagement efforts, an initial workforce development framework, and develop appropriate documentation.

The PCAP is intended to serve as an initial step in the climate planning process and, as such, is limited in scope. Data availability and time available for an integrated Tribal engagement process were key challenges to the PCAP development. A more detailed and comprehensive assessment of GHG emissions and thorough engagement processes are planned for the CCAP development process. However, the PCAP still aligns with Tejon Tribe's highest priorities.

1.2 APPROACH TO DEVELOPING THE PCAP

A GHG emissions inventory forecast informed the PCAP and the near-term priorities developed for the Tejon Tribe. Both the GHG emissions inventory and forecast include the major GHG emissions sectors and sources, following the Global Protocol for Community-Scale Greenhouse Gas[3] Inventories (also known as GHG Protocol for Cities), version 1.1 (World Resources Institute 2021). The PCAP inventory and forecast have been informed by data from Tribal government operations and estimates of emissions sources that are not under the direct control of the Tribal government. The differentiation of emissions sources that can be directly influenced through near-term infrastructure projects that provide tangible and certain reductions and those that would instead be implemented through program or policy was an important distinction in the PCAP development. The PCAP priority GHG reduction measures presented in the PCAP result in GHG emissions reductions from programs and actions focused on energy efficiency, infrastructure improvements, and transitioning away from fossil fuels.

These priority measures are the near-term infrastructure projects that can be implemented directly by the Tribal government or programs, based on available funding, that Tribal members can use to fund energy efficiency upgrades at their residences. These measures were selected based on the capability of mitigating GHG emissions and reducing pollution, improving system efficiency, improving the use of resources, and reducing the energy burden of Tribal Members. GHG mitigation projects such as those proposed in this PCAP provide significant benefits for the Tejon Tribe community by improving environmental health, ensuring cost efficiency and energy security and affordability, and providing additional opportunities for employment and revenue generation.

1.2.1 Stakeholder Engagement

Stakeholder engagement with the Tejon Tribal Council helped inform the PCAP development process, while information about Tejon's participation in the CPRG program was generally shared with Tribal members. The goal was to increase awareness, promote collaboration, and offer opportunities for the members to engage and become familiar with the planning process.

[3] The GHG Protocol for Cities is used to develop community wide GHG emissions inventories for jurisdictions with distinct geographical boundaries and is recommended for use by EPA for Tribal GHG emissions inventories.

The information regarding the PCAP development process was shared with Tribal members, the Tribal Council, and the Executive Council through emails and meetings. Due to the accelerated timeline for completing the PCAP, initial engagement in identifying priority GHG reduction measures occurred with the Tribal Council. The Tribal Council approved the final priority measures for inclusion in the PCAP.

Engagement with Tejon Tribe members involved sharing information about the CPRG program and the planning process through the Tribe's newsletter in January 2024 and at a Tribal Council meeting on March 16, 2024. For the Tribal Council meeting, a fact sheet was provided to all attendees to guide them through a presentation, which included information on the CPRG program, Tejon's participation, and future opportunities for engagement during the next phases of the process.

A more comprehensive stakeholder engagement process will be conducted during the development of the CCAP, as the longer planning timeline will allow for opportunities to engage with the community and incorporate Tribal member goals and feedback into the Climate Action Plan vision.

1.3 SCOPE OF THE PCAP

The scope of the PCAP includes the geographic boundary of the Tejon Tribe and Tribal member residences located outside the Tejon Tribe's geographical boundary in Kern County. The priority GHG reduction measures are focused on energy efficiency, reduced dependence on fossil fuels, and infrastructure improvements that the Tribal government can directly implement to realize benefits on the Tribe's geographical boundary and energy efficiency programs that Tribal members can use to realize benefits at their residences. The scope of the PCAP is further detailed in the following sections.

1.3.1 Geographic Boundary

The geographic boundary of the PCAP includes the governmental boundary of the Tejon Tribe and the Tribal member residences located in Kern County. The governmental boundary of the Tejon Tribe consists of the Community Center Property (Figure 2) and the Mettler site (also referred to herein as the geographical boundary of the Tribe).

Figure 2 Map of Tejon Tribe's Community Center Property

DEVELOPMENT PROJECTS PROPOSED AT THE TRIBE'S GEOGRAPHICAL BOUNDARY

Currently, the Tribal Government conducts operations at the Community Center Property. Construction of the proposed casino project started at the Mettler site in 2024, consisting of the proposed casino resort and associated facilities, including a fire and sheriff's station, water infrastructure, and wastewater treatment and disposal facilities. These are proposed to be built on 80 acres of land (DOI 2020) at the Mettler site. The proposed gas station project at Tribe's Community Center Property will consist of a convenience store and a gas station, including two diesel lanes, six two-sided gasoline dispensers, and three underground storage tanks. It is proposed that it be built at the x

GEOGRAPHIC BOUNDARY FOR THE PCAP GHG INVENTORY AND FORECAST

The PCAP communitywide GHG inventory is based on current operations of the Tribal government, which are being conducted at the Community Center Property, and energy consumption at Tribal member residences located in Kern County. A communitywide GHG emissions forecast is based on the future Tribal government operations, future energy consumption at Tribal member residences, and buildout of the proposed gas station project and the proposed casino project (see Appendix A - PCAP Greenhouse Gas Emissions Inventory and Forecast Documentation for details). The Mettler site was not included in the inventory because the Tribe acquired the site in June 2022 and was entirely undeveloped in 2022, which is the inventory baseline year (see Section 1.3.4 for details).

The construction of the proposed casino project at the Mettler site started in 2024. Construction of the proposed gas station project has yet to start, but both are expected to be completed and fully operational before 2030. As such, the casino project and the gas station project are not included in the GHG inventory but are included in the GHG forecast.

1.3.2 GHG Emissions Sectors

Primary infrastructure sectors for reporting GHG emissions for this PCAP include wastewater, solid waste, government buildings, residences, and on-road transportation. Pacific Gas and Electric Company (PG&E) provides electricity service, and Suburban Propane Company provides propane services to the Tejon Tribe. The PCAP GHG emissions inventory and forecast addresses the following primary GHG emissions sectors in accordance with the GHG Protocol for Cities:

- stationary energy,
- transportation,
- waste.

The GHG Protocol for Cities includes three additional sectors that are not addressed in the PCAP due to either a lack of data available to quantify emissions sources for the sector or activities that do not exist within the PCAP's geographical boundaries. These excluded sectors include:

- Agriculture, forestry, and other land uses (does not exist in inventory boundary).
- Industrial processes and product use (does not exist in inventory boundary).
- Other Scope 3 emissions sources (lack of data or does not exist).

1.3.3 GHG Emissions Scope

Following the GHG Protocol for Cities guidance, the GHG inventory and forecast are presented by emissions scope and sector. The scope of emissions sources indicates the physical location of GHG emissions sources and the level of control a government may have over the sources. The three emissions scopes are described in the following list.

- Scope 1: Emissions that occur within the geographical inventory boundary or are under direct control of the reporting government.

- Scope 2: Emissions generated by purchased energy, where the actual energy generation source is outside the inventory boundary but the use of that energy is within the inventory boundary (e.g., grid-purchased electricity).
- Scope 3: All other emissions sources not included in either Scope 1 or Scope 2.

1.3.4 Time Period for GHG Emissions Inventory and Forecast

The calendar year 2022 is used as the baseline year for this GHG inventory as this is the most recent year for which activity data for estimating GHG emissions were available. Tejon Tribe's community-wide emissions are forecasted for 2030. The year 2030 is chosen as the forecast year for this PCAP to align with the emission reduction target year of the United States for the goal of reducing U.S. greenhouse gas emissions 50-52% below 2005 levels in 2030 (The White House 2021).

1.3.5 Timeline for Planning and Execution of Measures

If Tejon receives state funding, the planning and implementation of the proposed measures would necessitate engagement with local utilities, Air Quality Management Districts (AQMD), and other Areas Having Jurisdiction (AHJs), such as the California Energy Commission.

Energy Efficiency and Building Electrification:

- Collaboration with Pacific Gas and Electric (PG&E) and San Joaquin AQMD to develop a detailed list of energy efficiency and building electrification measures in 2024.
- Submission of rebate applications and receipt of council approval in 2025.
- Construction and commissioning to be completed in 2025.

Solar PV and Battery Energy Storage System:

- Development phase, including permit acquisitions, to be completed in late 2024.
- Finalization of engineering design and Operation and Maintenance plan in 2025.
- Procurement and installation of technologies to take place in 2025 and 2026.

Transportation Electrification:

- Development of a replacement package leveraging federal and state incentives in 2024.
- Presentation of the package to vehicle owners in late 2024.
- Submission of purchase orders for Electric vehicles in early 2025.
- Design of charging stations in 2024, with installation to follow in early 2026.

Residential Measures

- Establish a plan for assisting residents with energy incentives.
- Develop an administrative program to support residential subsidies above the incentives.
- Have the program in place in the Fall 2024 and run through 2028.

2 PCAP ELEMENTS

The GHG emissions reporting exercise conducted for the PCAP includes a GHG emissions inventory and forecast and identifies the scale of different GHG emissions sources. This exercise assisted in the development of reduction measures to reduce future GHG emissions. The GHG emissions inventory and forecast were developed at the community scale, including Tribal government operations and residential emissions. These were developed following the GHG Protocol for Cities and utilized Tribal Government GHG Inventory Tools (TGIT) for most GHG emissions calculations.

The GHG emission reduction measures identified in this PCAP are the result of analysis following a 3-stage process including:

- Goal Setting: Identifying the economic and environmental sustainability goals to be achieved with the PCAP.
- Data Acquisition: Collecting data from utility meters data, fuel purchase orders, and facilities' operational schedules, and in the case of the casino project- the Environmental Impact Statement (EIS) information
- Analysis: Application of various simulation tools, such as Xendee, to optimally size the PV and battery energy storage systems and define the proper numbers of charging stations installed to accommodate the charging needs of future electric vehicles. The local utility Pacific Gas and Electric (PG&E) electric vehicle decision-making tool[4] was applied to present the economics of these measures to the tribe. Emission reduction from reduced energy use (natural gas and grid-supplied electricity) was estimated using emissions factors from TGIT. The benefits analysis includes a co-pollutants baseline inventory of sources affected by this PCAP and a description of additional co-benefits expected to occur due to the implementation of GHG reduction measures. Change in co-pollutants is not quantified for Tejon Tribe's PCAP because this PCAP does not identify any industrial GHG reduction measures. As per EPA guidelines, Tribes are not expected to quantify co-pollutant impacts associated with nonindustrial GHG reduction measures (EPA 2023).

2.1 GREENHOUSE GAS INVENTORY

The GHG inventory was informed by data obtained from the Tejon Tribe and published data sets from various years, such as the 2020 United States Energy Information Administration (EIA) Residential Energy Consumption Survey (EIA 2023). Although these estimates are not tied directly to the year 2022, they provide a reasonable basis for understanding the comparative scale of different communitywide GHG emissions sources in the 2022 inventory year. The GHG emissions sectors included in the GHG inventory are discussed in Section 1.3.2. The individual GHG emissions sources considered under these sectors are expected to reasonably cover the majority of GHG emissions sources considered under the GHG Protocol for Cities framework. These sources have been selected for inclusion due to their representative scale compared to other emissions sources and/or their ability to be affected through GHG reduction measures identified by the Tejon Tribe government for this PCAP. The following section summarizes the GHG inventory results with additional details on methodology and data sources, which are available in Appendix A.

2.1.1 GHG Inventory Results

Table 6 below presents a summary of PCAP GHG inventory results and **Error! Reference source not found.** and **Error! Reference source not found.** show sectors and share of GHG emissions by scope, respectively. Results have been converted to carbon dioxide equivalent (CO_2e) using the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Global Warming Potential (GWP) factors. The largest source of GHG emissions within the boundary of the PCAP is stationary energy use, including electricity and natural gas, at Tribal Member residences (scope 3).

[4] https://ev.pge.com

Table 6 PCAP GHG Emissions Inventory by Sector and Greenhouse Gas for 2022

GHG Protocol for Cities Category[1]			GHG Emissions by Sector ($MTCO_2e$)			
Sector	Sub-sector	Sub-category	CO_2	CH_4	N_2O	Total
Scope 1						
Stationary Energy	Governmental	Propane	20	0.03	0.05	20
Waste	Wastewater treatment and discharge	Governmental	-	5.25	-	5.25
Total scope 1 GHG Emissions			**20**	**5.27**	**0.05**	**25**
Scope 2						
Stationary Energy	Governmental	Electricity	34	0.06	0.07	34
Total scope 2 GHG Emissions			**34**	**0.06**	**0.07**	**34**
Scope 3						
Transportation	On-road	Governmental (Fleet Vehicles)	8.05	0.02	0.13	8.20
		Governmental (Employee Commute)	34	0.04	0.32	35
		Governmental (Visitors)	23	0.03	0.21	23
Waste	Solid Waste Disposal	Governmental	-	2.54	-	2.54
Stationary Energy	Residential	Electricity	860	1.40	1.72	864
		Natural gas	1,072	2.67	0.54	1,075
Total scope 3 GHG Emissions			**1,997**	**6.71**	**2.91**	**2,007**

Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent.

Totals may not sum up due to rounding.

[1] The GHG Protocol for Cities is used to develop community-wide GHG emissions inventories for jurisdictions with distinct geographical boundaries and is recommended for use by EPA for Tribal GHG emissions inventories.

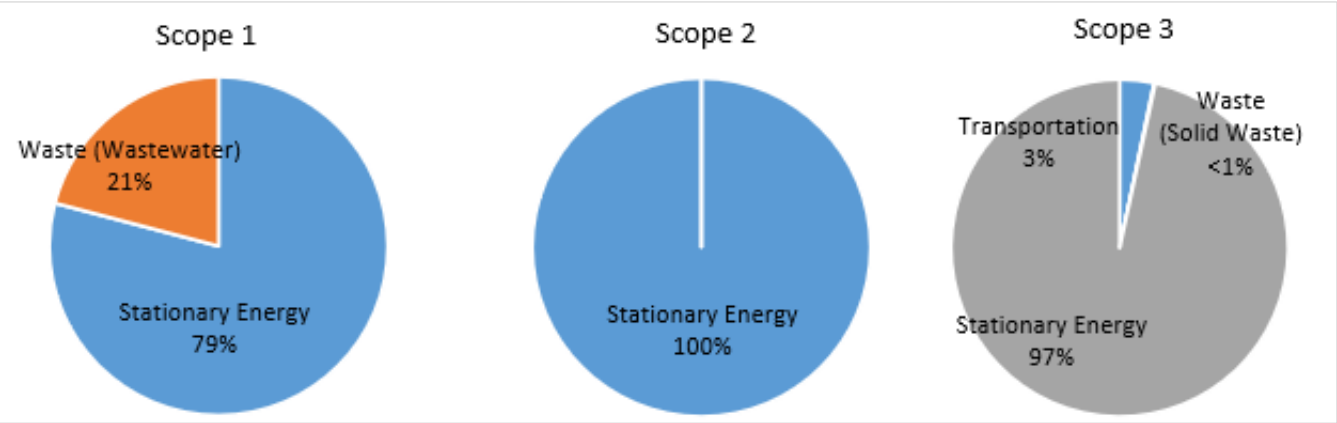

Figure 3 Source of GHG Emissions in Scope 1, Scope 2, and Scope 3

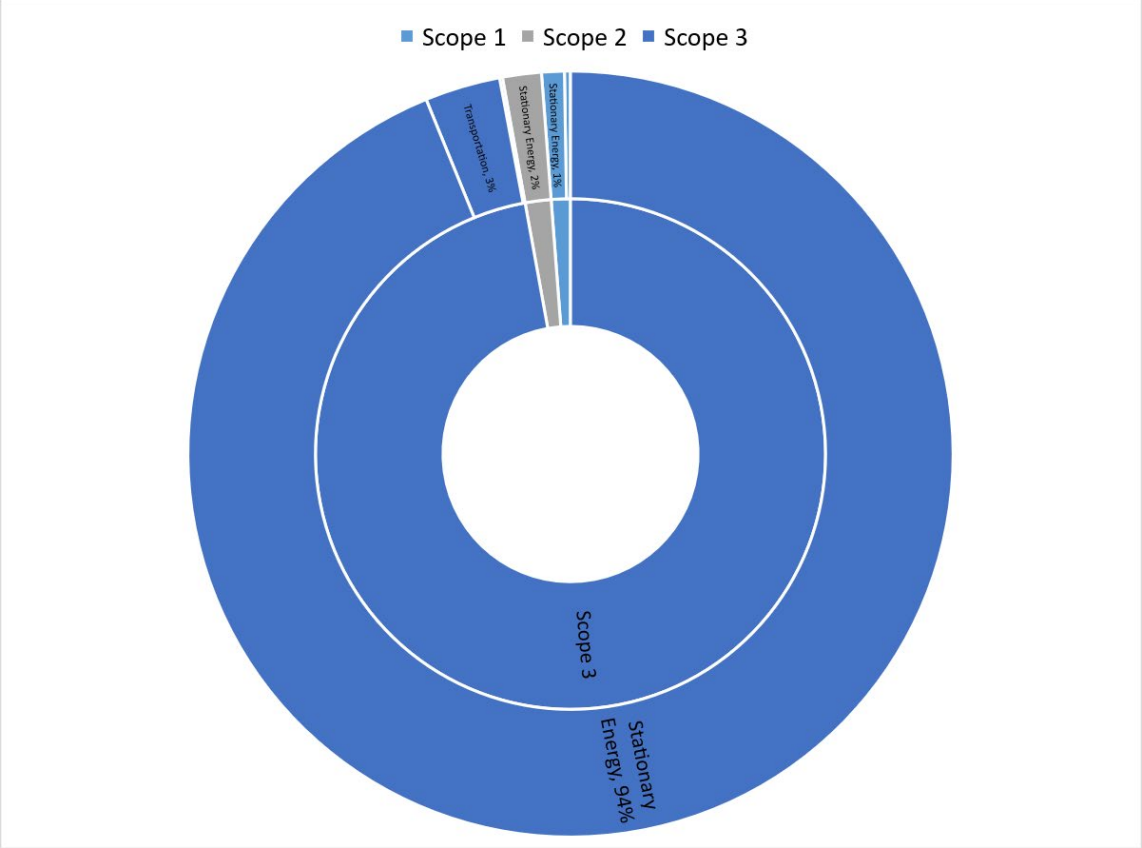

Figure 4 Share of GHG Emissions by Scope

2.2 GHG EMISSIONS FORECAST

Tejon Tribe's communitywide emissions are forecasted for 2030, which captures GHG emissions from future Tribal government operations, future energy consumption at Tribal member residences, the proposed gas station project, and the proposed casino project. For estimating future emissions from Tribal government operations, it was assumed that government operations and energy consumption at Tribal member residences will continue to be similar in scale in 2030 as in 2022. As such, it was assumed that future emissions from Tribal operations and energy consumption at member residences would be the same as calculated for the year 2022 in the GHG emissions inventory.

Future emissions from the proposed casino project were available from the Environmental Impact Statement (EIS) developed for the casino project (DOI 2020) and were directly used for developing the PCAP GHG emissions forecast. Additional calculations were only performed to forecast emissions from the proposed gas station project using the TGIT community module and external calculations. Estimates of emissions-generating activities at the gas station were developed from published data sets from various years, such as the 2018 EIA Commercial Building Energy Consumption Survey (EIA 2022). Although these estimates are not tied directly to the year 2030, they provide a reasonable basis for understanding the comparative scale of different communitywide GHG emissions sources in that year.

2.2.1 GHG Emissions Forecast Results

Table 7 below presents a summary of PCAP GHG forecast results and **Error! Reference source not found.** presents a graph showing Tejon Tribe's GHG emissions inventory and forecast for the year 2030. The casino adds significantly to scope 1 and 3 emissions, primarily natural gas and vehicle miles to and from the casino. Vehicle travel to and from the casino is the largest source of emissions, but is also the source that Tejon can exhibit the least amount of control.

Table 7 PCAP GHG Emissions Forecast by Sector and Greenhouse Gas for 2030

GHG Protocol for Cities Category[1]			GHG Emissions by Sector ($MTCO_2e$)			
Sector	Sub-sector	Sub-category	CO_2	CH_4	N_2O	Total
Scope 1						
Stationary Energy	Governmental	Propane	20	0.03	0.05	20
	Commercial (Gas Station project)	Natural Gas	18	0.04	0.01	18
	Commercial (Casino project)	Gasoline	0.09	0.01	—	0.10
	Commercial (Casino project)	Natural Gas	32,849	18	160	33,026
	Commercial (Casino project)	Diesel	4,508	7	—	4,515
Waste	Wastewater treatment and discharge	Governmental	—	5.25	—	5.25
		Commercial (Casino project)	98	41	9.41	149
Total scope 1 GHG Emissions			**37,492**	**72**	**169**	**37,733**
Scope 2						
Stationary Energy	Governmental	Electricity	34	0.06	0.07	34
	Commercial (Gas Station project)		55	0.09	0.11	55
	Commercial (Casino project)		2,121	2.45	4.80	2,129
Total scope 2 GHG Emissions			**2,210**	**2.60**	**4.97**	**2,218**
Scope 3						
Transportation	On-road	Governmental (Fleet Vehicles)	80.5	0.02	0.13	8.20
		Governmental (Employee Commute)	34	0.04	0.32	35
		Governmental (Visitors)	23	0.03	0.21	23
		Commercial (Gas Station project)	2,500	1.87	58.28	2,560
		Commercial (Casino project)	74,068	60	—	74,127
Waste	Solid Waste Disposal	Governmental	—	2.54	—	2.54
		Commercial (Casino project)	126	208	—	334
Stationary Energy	Residential	Electricity	860	1.40	1.72	864
		Natural gas	1,072	2.67	0.54	1,075
Total scope 3 GHG Emissions			**78,690**	**277**	**61**	**79,028**

Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent.

Totals may not sum up due to rounding.

[1] The GHG Protocol for Cities is used to develop community-wide GHG emissions inventories for jurisdictions with distinct geographical boundaries and is recommended for use by EPA for Tribal GHG emissions inventories.

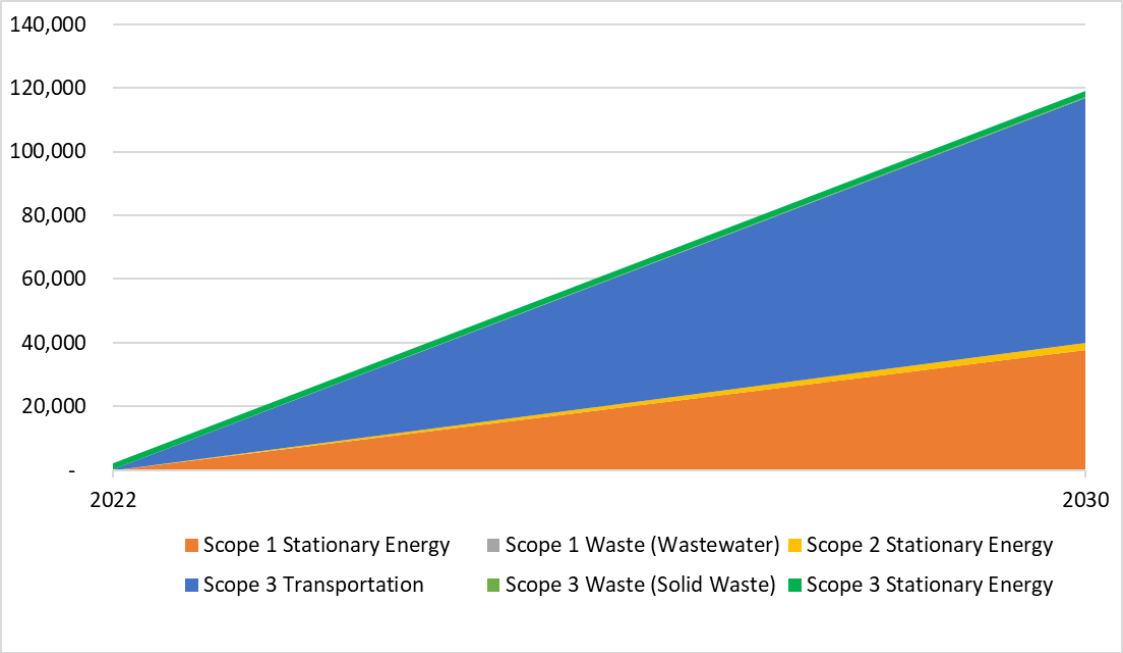

Figure 5 Tejon Tribe's GHG Inventory and Forecast

2.3 GHG REDUCTION MEASURES (PRIORITY MEASURES ONLY)

The priority GHG reduction measures included in this PCAP are actions the Tejon Indian Tribe can take to reduce its contribution to GHG emissions and maximize the community's energy independence and resilience. The GHG reduction measures include infrastructure projects, building retrofits, and administrative programs focused on reducing reliance on fossil fuels and grid-supplied electricity. The measures are planned for implementation before 2030 at the existing Community Center Property and the Mettler site as its construction continues.

The GHG reduction measures presented here do not represent the full suite of actions the Tejon Tribe can take to mitigate GHG emissions, but provide near-term quick-win actions. The two largest GHG emissions sources for Tejon are future natural gas use at the Mettler Site and travel to and from the casino by visitors. Both of these GHG emissions sources will require more detailed programs and policies to address than was possible during the PCAP development timelines, and as such, will be addressed in the CCAP.

This section of the PCAP details each of the priority GHG reduction measures that can be implemented in the near term to reduce GHG emissions and provide maximal community benefits within the authority of the Tejon Tribe. This menu of priority measures can be implemented based on the Tribes acquisition program as it seeks grants to help fund the measures. Each GHG reduction measure has an accompanying table that includes the following information:

- estimate of the quantifiable GHG emissions reductions,
- applicable GHG emissions sector,
- implementing agency,
- implementation schedule and milestones,
- geographic location,
- funding sources (if relevant),
- metrics for tracking progress, and
- quantitative cost estimates (if available).

MEASURE 1: ENERGY EFFICIENCY (LIGHTING CONTROL AND RETROFIT) AND BUILDING MANAGEMENT SYSTEM INSTALLATION

The deployment of energy efficiency measures at the Tribe's Community Center Property is estimated to cost approximately $135K (Table 8). These measures can potentially reduce electric and thermal demand in government-owned buildings by 20%. However, a more precise analysis, in collaboration with tribal administration, is necessary to finalize energy conservation opportunities (ECOs) for the Tribe. It is anticipated that efficient lighting retrofit and lighting and temperature control will lead to a reduction in electricity consumption by 22,150 kWh/year, resulting in an emission footprint reduction in Scope 2 emissions of 5.36 metric tons of carbon dioxide per year ($MTCO_2e$/year) on the Community Center Property. Additional ECOs may present additional GHG reductions in Scope 1 propane combustion emissions. These measures not only promise utility bill reductions but also contribute to improving environmental quality and resilience by requiring less energy provision during power outages.

Table 8 Measure 1 Detail

Measure 1 Impacted Sectors: Scope 1 and 2 Stationary Energy System (Community Center Property)			
Measure 1: Implement Energy Efficiency (Lighting Control and Retrofit) and Building Management System Installation	Implementing agency		Tejon Indian Tribe
	Implementation milestones		▶ Detailed project planning (2024) ▶ Tribal Council plan approval of plans (2024) ▶ Project development (2024) ▶ Construction starts (2024) ▶ Construction ends (2025)
	Geographic location		4941 David Rd, Bakersfield, CA 93307
	Funding sources		US Department of Energy, Pacific Gas and Electric Utility Program, and California Energy Commission
	Metrics tracking		Utility bill reduction, Energy and Demand reduction (kWh and kW), Building operation quality (Lumens)
	Cost		$135,000 Based on utility bill analysis.
	Annual estimated GHG emission reductions ($MTCO_2e$)	GHG	$MTCO_2e$
		Scope 2	5.36
		Net Reduction	**5.36**
	Benefits Analysis		▶ 22,150 kWh annual reduction in energy consumption.

MEASURE 2: 10-ACRE ELECTRIC INFRASTRUCTURE REHABILITATION ACCOMMODATING NEW ENERGY TECHNOLOGIES AND DEMANDS

Tejon Tribe received a United States Department of Agriculture grant to procure 450KW Solar PV and 500 KWh BESS to be constructed on the 10-acre Community Center Property. However, the land electricity infrastructure should be upgraded to interconnect this project while accommodating the upcoming electric loads introduced by electrification measures. The additional $1.5M required budget (Table 9) will cover the cost of technologies from transformers, switchgear, protections, and control systems to the broadband communication network to in-front-of-the-meter (Utility-side) technologies.

The installation on the Tribal Community Center Property of 450 KW PV and 500 kWh BESS will provide Tejon with more than $200K in savings on its annual energy bill with PG&E, which the Tribe plans to re-invest in the community and its sociocultural programming. The proposed system will reduce GHG emissions by 183 $MTCO_2e$/year. Additionally, the PV system excess generation sales to the grid can financially support up to 70 Tribal Citizen homes to adopt energy efficiency and building electrification measures. The tribe will invest in an advanced data analytic platform, the iRECP, to benchmark and track projects as part of Measure 2. The public (e.g., federal/state agencies, private organizations, etc.) will use the information captured by the iRECP to develop innovative supplemental solutions (e.g., financial, technical, etc.) to further this project's economic, environmental, and social benefits.

Table 9 Measure 2 Detail

Measure 2 Impacted Sectors: Scope 2 Stationary Energy System (Tribal Community Center Property)			
Measure 2: Electric Infrastructure Rehabilitation Accommodating New Energy Technologies And Demands	Implementing agency		Tejon Indian Tribe
	Implementation milestones		▶ Detailed project planning (2025) ▶ Tribal Council plan approval of plans (2025) ▶ Project development (2025) ▶ Construction starts (2026) ▶ Construction ends (2025)
	Geographic location		4941 David Rd, Bakersfield, CA 93307
	Funding sources		US Department of Energy, Pacific Gas and Electric Utility Program, and California Energy Commission
	Metrics tracking		Utility bill reduction, Energy and Demand reduction (kWh and kW), # and duration of power outage avoidances
	Cost		$1,500,000 based on vendor information
	Annual estimated GHG emission reductions ($MTCO_2e$)	GHG	$MTCO_2e$
		Scope 2	183
		Net Reduction	**183**
	Benefits Analysis		▶ 755,877 kWh annual reduction in energy consumption. And 125KW Peak Demand Reduction for the entire installation. ▶ $200K annual electric utility bill reduction ▶ 100% Energy resilience to the Tribal Community Center Property critical operation.

MEASURE 3: 1.8 MW SOLAR PV AND 2 MWH BATTERY ENERGY STORAGE

The installation of 1.8 MW PV, and 2 MWh BESS at the 300-acre Mettler site will provide Tejon with more than $800K (Table 10) in annual energy bill savings with PG&E, which the Tribe plans to re-invest in the community and its sociocultural programming. The proposed system will reduce Scope 2 GHG emissions from grid-purchased electricity by 732 $MTCO_2e$/year and Scope 1 emissions from diesel combustion in backup generators by up to 410 $MTCO_2e$/year. The proposed Solar PV and BESS will eliminate the need for diesel generator purchases to support the Casino project during power outages. This will eliminate disruptions from power outages at the Casino project and Wastewater Treatment Plant (WWTP) operation.

Table 10 Measure 3 Detail

Measure 3 Impacted Sectors: Scope 1 and 2 Stationary Energy System Mettler site)			
Measure 3: Installation of 1.8MW Solar PV and 2 MWh Battery Energy Storage	Implementing agency		Tejon Indian Tribe
	Implementation milestones		▶ Detailed project planning (2024) ▶ Tribal Council plan approval of plans (2024) ▶ Project development (2025) ▶ Construction starts (2025) ▶ Construction ends (2026)
	Geographic location		Tejon Hard Rock Casino
	Funding sources		US Department of Energy, Pacific Gas and Electric Utility Program, and California Energy Commission, EPA Green House Gas Reduction Fund
	Metrics tracking		Utility bill reduction, Energy and Demand reduction (kWh and kW), # and duration of power outage avoidances
	Cost		$8.4M Based on vendor pricing information.
	Annual estimated GHG emission reductions ($MTCO_2e$)	GHG	$MTCO_2e$
		Scope 1	410 from diesel use curtailment
		Scope 2	732 from grid electricity reduction
		Net Reduction	1,142
	Benefits Analysis		▶ 3,023,508.00 kWh PV generation net energy metered with Mettler site's meters ▶ 7 MW of diesel backup generators curtailment – 5 days of power outage and 100 of testing and maintenance ▶ $800K annual electric utility bill reduction ▶ 100% Energy resilience to the Mettler site Casino and WWTP operation.

MEASURE 4: REPLACEMENT OF 19 PASSENGER FOSSIL FUEL CARS AND TRIBAL VEHICLES WITH ELECTRIC VEHICLE, AND 7 LEVEL 2 CHARGING INSTALLATION

Measure 4 proposes to buy nineteen Tribal Community Center fleet vehicles to be used by the government and assigned to staff for commuting to offset the emissions from personal ICE cars. To minimize the financial burden on the staff and the tribal government, 7 level 2 charging stations will be installed (Table 11). The proposed 450 KW PV and 500 KWh BESS will feed these chargers with clean and cost-effective energy. This component will reduce the Tribal Community Center Property GHG emission footprint associated with the transportation by 43 $MTCO_2e$/year. This will be increased by 7.3 $MTCO_2e$/year if the tribe decides to keep the PV plus BESS generated energy for resilience purposes instead of EV charging since the grid power will be used to charge these cars.

Table 11 Measure 4 Detail

Measure 4 Impacted Sectors: Scope 1 Governmental (Fleet Vehicles) and Employees' On-Road Transportation Electrification (Tribal Community Center Property)			
Measure 4: Replacement of 19 Passenger fossil fuel cars and Tribal vehicles, and 7 Level 2 Charging Installation	Implementing agency		Tejon Indian Tribe
	Implementation milestones		▶ Detailed project planning (2025) ▶ Tribal Council plan approval of plans (2025) ▶ Project development (2025) ▶ Construction and Procurement starts (2025) ▶ Construction and Procurement ends (2026)
	Geographic location		4941 David Rd, Bakersfield, CA 93307
	Funding sources		US Department of Energy, Pacific Gas and Electric Utility Program, and California Energy Commission
	Metrics tracking		Fuel cost reduction and Electricity consumption increase (kWh and kW)
	Cost		$750,500: $55k per car and seven level 2 charging stations (($10K each), not including incentives but including management and administration .
	Annual estimated GHG emission reductions ($MTCO_2e$)	GHG	$MTCO_2e$
		Scope 1	43
		Scope 2	(7.3)
		Net Reduction	**35.7**
	Benefits Analysis		▶ 70% Cost of Ownership Reduction ▶ 10 miles per vehicle Round-Trip travel to and from Gas Station

MEASURE 5: CONSTRUCTION OF ANAEROBIC DIGESTERS

A 170K gallon per day wastewater treatment plant will support the casino resort at the Mettler site. The proposed anaerobic digester will generate more than 21 MWh of electricity annually. Reducing reliance on grid-purchased electricity through on-site energy supplies will reduce scope 2 GHG emissions by 5.6 $MTCO_2e$/year (Table 12).

Table 12 Measure 5 Detail

Measure 5 Impacted Sectors: Scope 2 Stationary Energy System (Mettler site)			
Measure 5: Construction of Anaerobic Digesters	Implementing agency		Tejon Indian Tribe
	Implementation milestones		▶ Detailed project planning (2025) ▶ Tribal Council plan approval of plans (2025) ▶ Project development (2025) ▶ Construction starts (2025) ▶ Construction ends (2026)
	Geographic location		Tejon Hard Rock Casino
	Funding sources		Department of Commerce and California Energy Commission
	Metrics tracking		Fuel cost reduction and Electricity consumption increase (kWh and kW)
	Cost		TDB
	Annual estimated GHG emission reductions ($MTCO_2e$)	GHG	$MTCO_2e$
		Scope 2	5.6
		Net Reduction	**5.6**
	Benefits Analysis		▶ $10K Utility Bill Reduction ▶ Provide Energy Resilience (350kWh/Yr)

MEASURE 6: RESIDENTIAL ENERGY EFFICIENCY AND ELECTRIFICATION PROGRAM

This project will provide administrative staffing and energy expertise to reach out to the individual tribal homeowners who live off the Tribe's geographical boundary and help them define the proper energy efficiency and building electrification measures. The assistance will help residents pursue federal and state incentives and grants to offset the cost of retrofits and streamline the process for individual Tribal members to make energy-efficiency upgrades to their homes. This residential energy efficiency and electrification program (REEEP) will facilitate the implementation of energy efficiency and electrification measures leveraging the Inflation Reduction Act and state incentives administrated by the California Energy Commission and other types of utility and Area Having Jurisdictions (AHJs) rebates such as San Joaquin Valley Air Quality Management District building electrification rebates and the various federal incentives and formula grants.

The proposed measures include $0.24/kWh energy provided by Solar PV and BESS, efficient light retrofit and control, cooling and heating appliances replacement, building envelope upgrade, and installation of electric heat pumps, heat pump water heaters, heat pump dryers, and electric stoves. In addition, the measure will include a $10,000 per home subsidy (Table 13) to offset the residential cost of the measures above the incentives. The program will result in more than 864 $MTCO_2e$/year. The program cost will cover a half-time tribal government staff to administer the program and assist members with incentives and understanding the measures and a half-time residential energy consultant to help members make purchasing and installation decisions. The program will run for 3 years.

Table 13 Measure 6 Detail

Measure 6 Impacted Sectors: Scope 3 Residential Measures outside the Tribe's Geographical Boundary			
Measure 5: RESIDENTIAL ENERGY EFFICIENCY AND ELECTRIFICATION PROGRAM (REEEP)	Implementing agency		Tejon Indian Tribe
	Implementation milestones		▶ Recruit a half-time program administrator with grants experience – member assistance and subsidy administration (2024) ▶ Hire a half-time residential energy consultant to advise on measures and installation ▶ Socialize opportunities with tribal members (2024) ▶ Develop a pipeline of incentives (2024) ▶ Execute a plan to assist members with incentive acquisition (2024 -2028) ▶ Assist members to acquire and install measures (2024 – 2028) ▶ Set up tribal subsidiary administration and tracking systems (2024-2028)
	Geographic location		Kern County
	Funding sources		Department of Commerce, Department of Transportation, Department of Energy and California Energy Commission, HUD
	Metrics tracking		Number of residents applying for at least one incentive. Number of total applications
	Cost		Three Year Program ▶ Half-time Tejon program administrator $250,000 ▶ Half-time energy consultant $375,000 ▶ Travel and ODC: $50,000 ▶ Residential offset subsidies ($10,000 per home, assuming 60% adoption over three years. – $2,120,000 ▶ Total - $2,975,000
	Annual estimated GHG emission reductions ($MTCO_2e$)	GHG	$MTCO_2e$
		Scope 3	864
		Net Reduction	**864**
	Benefits Analysis		▶ Energy affordability ▶ Support for investment in energy-efficient technologies

2.4 BENEFITS ANALYSIS

While the measures included in this PCAP reduce GHGs, they also improve public health by reducing air pollutants and environmental contaminants, and they provide the Tejon Tribe with energy resilience and independence.

This section outlines the methods for developing a co-pollutant inventory, including determining the baseline. It describes additional community benefits that would be achieved by implementing GHG reduction measures. The benefits analysis includes a co-pollutants baseline inventory of sources addressed by this PCAP and a description of additional co-benefits expected to occur due to the implementation of GHG reduction measures. Change in co-pollutants is not quantified for Tejon Tribe's PCAP because this PCAP does not identify any industrial GHG reduction measures. As per EPA guidelines, Tribes are not expected to quantify co-pollutant impacts associated with nonindustrial GHG reduction measures (EPA 2023).

2.4.1 Co-Pollutant Inventory

This section presents the co-pollutants inventory of sources affected by this PCAP in relation to the 2020 National Emissions Inventory (2020 NEI) (EPA 2020) and reports Kern County's total co-pollutant emissions data from these sources. Table 14 presents co-pollutant sources impacted by GHG emissions sources identified in the GHG inventory and forecast. Base-year co-pollutant emissions from electricity-related sources are not quantified in this PCAP co-pollutants inventory because electricity at the Tribe's geographical boundary is sourced from outside the Tribe's geographical boundary and Kern County boundaries. EPA does not require quantifying base year emissions outside the jurisdiction (EPA 2023). Table 15 presents base year co-pollutant emissions inventory at the Kern County scale from sources that align with those included in the GHG emissions inventory.

Table 14 Co-Pollutant Sources Aligned with PCAP GHG Emissions Inventory

GHG Emissions Source identified in Tejon Tribe's PCAP	2020 NEI Co-Pollutant Inventory Categories		
	Level	Level Type	Source
Wastewater treatment and discharge for governmental use; Wastewater treatment and discharge for commercial use (casino project); Solid Waste disposal in the Governmental sub-sector; Solid Waste disposal in the commercial sub-sector (casino project)	Facility Level	Point source	Wastewater Treatment Facility Solid Waste Landfill
All On-road Transportation (governmental, casino project, and gas station project)	County Level	Onroad	On-Road
Gasoline for commercial use (casino project-landscaping equipment)		Nonroad	Gasoline in Lawn and Garden Equipment
Propane for governmental use; Natural gas for residential use (member residences); Natural gas for commercial use (gas station project); Natural gas for commercial use (casino project); Diesel for commercial use (casino project); Gas station (fuel storage and refueling)		Non-Point	Stationary Source Fuel Combustion for the following fuel types: LPG, Natural Gas, and Distillate Oil; Gas Stations (Non-Point)

Note: 2020 NEI = 2020 National Emissions Inventory (EPA 2020).

Table 15 Co-pollutant Baseline Inventory from Sources Impacted by GHG Emissions Sources in Tons

GHG Emissions Source	CAP	HAP	CAP/HAP[1]
Wastewater treatment and discharge	17	0.019	-
Solid waste disposed	8.221	-	-
On-road transportation	65,913	1,522	-
Gasoline for commercial use (landscaping equipment)	30,916	728	-
Propane, natural gas, and diesel	1,262	1.318	0.119
Gas Station (fuel storage and refueling)	592	29	-
Total	**98,708**	**2,280**	**0.119**

Notes: CAP = Criteria air pollutant; HAP = Hazardous air pollutant

[1] Pollutants that could be both a CAP and a HAP are categorized as CAP/HAP.

2.4.2 Community Benefits from the GHG Reduction Measures

The GHG reduction measures identified in Tejon Tribe's PCAP are primarily focused on developing actions and programs for energy efficiency, transitioning away from fossil fuels, and infrastructure improvements both inside the Tribe's geographical boundaries and outside the boundaries at Tribal member residences. These measures can

contribute to making the Tribe economically sustainable, stronger, and healthier and can bring about a wide range of community benefits, including:

- **Energy Security and Reliability**: Installation of solar photovoltaic and battery systems will reduce the Tribe's dependency on grid-supplied electricity. This will empower the Tribal government to take control of its energy sources and reduce dependency on external energy providers inside the Tribe's geographical boundary. Consequently, this will improve the reliability and resilience of energy sources while fostering the Tribe's self-reliance.
- **Energy Affordability**: Installing solar photovoltaic and battery systems will help lower the tribe's energy bills by reducing overall energy consumption inside its geographical boundary. Energy efficiency financing options for member residences will support Tribal members' investment in energy-efficient technologies and upgrades and reduce their energy demand and costs.
- **Improved Infrastructure**: Upgrading wastewater treatment infrastructure at the casino project can enhance wastewater treatment, reducing harmful pollutants and nutrients released into the environment. This will help protect aquatic ecosystems, preserve biodiversity, and maintain the environment's health.
- **Public Health**: Transitioning from fossil fuels will reduce air and water pollution, leading to cleaner and healthier environments for Tribal community members and the region.
- **Economic Growth**: Investments in infrastructure improvements and clean energy projects can stimulate economic growth within the Tribe through increased business activity by attracting new businesses drawn to the Tribe's geographical boundary. Tejon prioritizes the creation of diverse revenue streams that can support essential services to Tribal members, and the measures of the PCAP provide opportunities to reduce energy costs to maximize profits while creating new revenue opportunities.
- **Job Creation**: Workforce requirements for infrastructure and clean energy projects will create job opportunities. These include temporary construction and installation jobs and more permanent maintenance and operation roles. Tejon's workforce plan is built on a collaboration with Kern Community College District to animate a regional workforce training approach for broader green employment in the greater Kern County areas. (see Section **Error! Reference source not found.** for details).

Table 16 summarizes the potential community benefits expected from implementing the GHG reduction measure identified in the PCAP.

Table 16 Summary of Community Benefits from PCAP GHG Reduction Measure

GHG Reduction Measures	Community Benefits
Measure 1: Implement Energy Efficiency (Lighting Control and Retrofit) and Building Management System Installation	▶ Energy affordability
Measure 2: Supplements to the Installation of 450 KW Solar PV and 500 kWh Battery Energy Storage at the Community Center Property	▶ Energy Security and Reliability ▶ Energy Affordability
Measure 3: Installation of 1.8MW Solar PV and 2 MWh Battery Energy Storage at the casino project at the Mettler site	▶ Energy Security and Reliability ▶ Energy Affordability
Measure 4: Replacement of 19 Passenger fossil fuel cars and Tribal vehicles, and 7 Level 2 Charging Installation	▶ Improved Public Health due to transition away from fossil fuel ▶ Access to safe, reliable, and affordable energy
Measure 5: Construction of Anaerobic Digesters at the casino project at the Mettler site	▶ Improved infrastructure ▶ Improved ecosystem and public health ▶ Clean energy job opportunities
Measure 6: Residential Energy Efficiency and Electrification Program (REEEP)	▶ Energy affordability ▶ Improved health ▶ Support for investment in energy-efficient technologies

2.5 REVIEW OF AUTHORITY TO IMPLEMENT

This section reviews the categories of energy project standards, trust land authorities, and coordination needed for grid-connected projects. It documents Tejon's authority to implement GHG reduction measures on its trust land. Energy measures at Tejon member residences would meet Kern County regulations.

2.5.1 General Review of Authorities for GHG Reduction Measures

Implementing GHG reduction measures, such as solar arrays on tribal reservation lands held in trust by the federal government, involves multiple layers of authority and regulatory oversight. The process is governed by Tribal, federal, and sometimes state laws, with the primary goal of respecting Tribal sovereignty while ensuring environmental protection and regulatory compliance. Here's an overview of the authorities involved and their roles:

- Tribal nations have sovereignty over their lands, including the authority to make land use decisions and regulate economic activities within their reservations. This includes the ability to enter into contracts or agreements for energy projects. However, for lands held in trust, tribes must also obtain approval from the Bureau of Indian Affairs (BIA) for leases, rights-of-way, and other agreements.
- While Tribal sovereignty generally means that state laws do not apply on tribal lands, there may be instances where state regulations have implications for access to state-managed resources or infrastructure. Agreements between Tribes and state governments can be necessary for projects that cross jurisdictional boundaries or require state-regulated resources.

Successful GHG mitigation projects on tribal lands require careful coordination among these authorities and adherence to diverse regulations and standards. Consultation with the tribal government and relevant federal and tribal agencies early in the planning process is essential. This approach ensures that projects respect tribal sovereignty, meet environmental and safety standards, and contribute positively to the tribal community and its environment.

1. Environmental Permitting
   - Environmental Protection Agency (EPA): Oversees environmental assessments and impact statements under the National Environmental Policy Act (NEPA) for projects that could significantly affect the environment.
   - Tribal Environmental Agencies: Many tribes have environmental protection agencies that enforce Tribal environmental laws, which may be as stringent as or more stringent than federal standards.
   - Bureau of Indian Affairs (BIA): Reviews and approves projects on trust lands to ensure compliance with federal environmental laws in coordination with the EPA and tribal regulations.
2. Construction Permits and Land Use
   - Tribal Governments: Tribes hold the primary authority for land use decisions on reservation lands, including issuing construction permits for projects within their jurisdiction. Many tribes have codified their nation's rules with a combination of the International Building Codes (IBC) and their own regulations.
   - Bureau of Indian Affairs (BIA): The BIA must approve any leases, rights-of-way, or land use agreements for trust lands. The BIA ensures that these agreements comply with federal laws and policies and serve the best interests of the Tribe.
3. Safety Regulations and Standards
   - Occupational Safety and Health Administration (OSHA): OSHA enforces safety and health legislation on construction sites, including solar farm projects, to ensure worker safety. While OSHA has no explicit authority on tribal Trust land, workers on trust land are entitled to the same safety protections as other workers.
   - Tribal Safety Agencies: Tribes may have their own safety regulations and oversight bodies to enforce workplace safety on projects within their territories.

4. Energy Regulation and Policy Compliance
   - Federal Energy Regulatory Commission (FERC): FERC regulates the interstate transmission of electricity, natural gas, and oil. FERC regulations and permits are required for solar farms connected to the national grid or selling power across state lines.
   - Department of Energy (DOE - Office of Indian Energy Policy and Programs: This agency provides guidance and support for aligning tribal energy projects with federal energy policies and goals. While not a regulatory authority, it offers crucial resources and assistance.

5. Cultural Resource Management
   - Tribal Historic Preservation Office (THPO): Works to protect cultural resources and sites of significance to the Tribe. Any project on tribal lands must consult with the THPO to avoid negatively impacting cultural sites. This department follows the cultural guidance of traditional tribal citizens and ceremonial leaders. It is backed up under the Advisory Council of Historic Preservation (ACHP) rules and the Section 106 consulting regulations.
   - ACHP, In coordination with the BIA and Tribal authorities, ensures that projects comply with the National Historic Preservation Act (NHPA), mainly when federal actions, licenses, or permits are involved.

6. Utility and Interconnection Agreements
   - Local Utility Company: The primary entities for negotiating interconnection agreements. These companies, PG&E in the case of Tejon, operate the electrical grid and set the terms for connecting new power generation sources. The agreement covers aspects like the technical specifications for interconnection, the allocation of costs for any necessary grid upgrades, and metering arrangements for electricity fed into the grid.
   - Federal Energy Regulatory Commission (FERC): Plays a role in setting the standards for interconnection for projects that engage in interstate commerce. For example, FERC's Order No. 2003 establishes standard procedures and a standard agreement for the interconnection of large generators, which can apply to large solar farms. For smaller projects, FERC's Order No. 792 and subsequent amendments provide similar guidance for small generator interconnection procedures and agreements.
   - Successful energy projects on Tribal lands require careful coordination among these authorities and adherence to a complex set of regulations and standards. Consultation with the tribal government and relevant federal and Tribal agencies early in the planning process is essential. This approach ensures that projects respect Tribal sovereignty, meet environmental and safety standards, and contribute positively to the Tribal community and its environment.
   - Local Tribal Agencies and Authorities: Within Tribal governments, specific agencies or authorities may be designated to oversee energy projects. These entities work closely with developers, federal agencies, and other stakeholders to ensure projects meet community needs, respect cultural values, and align with Tribal laws and policies.

2.5.2 Status of Tejon Authorities

Tejon has three government agencies – Environment, Government Relations, and Indian Health (Table 17). It also has the authority to permit construction, environmental, and building safety. However, it uses third parties to execute its permit authorities.

Table 17 Tejon Tribe Authority to Implement GHG Reduction Measures

GHG Measure	Intent	Implementing Authority	Tejon Has Existing Authority?	Key Milestones to Obtain Authority
Microgrid project/distributed solar and battery/anaerobic digester at the casino.	Eliminate the need for backup generators	1. Environmental Permitting 2. Construction Permits 3. Utility Interconnection	1. Yes 2. Yes 3. No	Dates (April to December 2024) Fully define the interconnected project Socialize with PG&E Develop the interconnection request
Electric heating and cooling system combined with solar and battery anaerobic digestor at the WW treatment plant.	Avoid emissions through heating and cooling system electrification (reduce energy costs through DERs),	1. Environmental Permitting 2. Construction Permits	1. Yes 2. Yes	None
Energy, water SCADA system (metering, sensing, and control systems)	Optimize building management optimization for casino and planned economic development (hotel.	None	NA	None
Electric passenger vans, trucks, and buses. -to and from parking and the required charging stations.	Electric passenger vans, trucks, and buses. -to and from parking and the required charging stations.	1. Environmental Permitting for charging stations 2. Construction Permits for charging stations	1. Yes 2. Yes	None

2.6 IDENTIFICATION OF OTHER FUNDING MECHANISMS

The Tejon team is qualifying funding sources for the priority measures in the PCAP. The opportunities Tejon pursues depend on competitiveness and the cost of bidding. Possible funding for projects on Trust Land (microgrids, digester, electrical infrastructure upgrades at the government site, homeowner assistance, electric vehicles, and charging) includes the following.

1. **Bureau of Indian Affairs:** The Department of Energy and Minerals Development has grants for tribal energy development, including solar energy (Energy and Minerals Development Program EMDP)) and for capacity building, including Tribal Utility Authorities (Tribal Energy Development Capacity (TEDC)).
2. **Environmental Protection Agency:** The EPA's Climate Pollution Reduction Grant Implementation grant.
3. **EPA Greenhouse Gas Reduction Fund:** Awards to financial institutions to issue grants and loans, including for tribes, through two funding mechanisms will be awarded shortly to reduce GHG emissions. Tejon can work with the fund administrators to potentially access up to $10 million per project.
4. **California Energy Commission (CEC) Tribal Program:** CEC offers several funding opportunities through different divisions and programs, such as the Electric Program Investment Charge (EPIC) program, Clean Transportation Program, and Energy Conservation Assistance Act (ECAA) loan program. These programs support renewable energy research, clean transportation, energy efficiency, and renewable energy projects. CEC continually issues competitive opportunities and may be helpful for Tejon.
5. **Utility Microgrid Communities:** PG&E has funding for microgrids that address resiliency issues for extreme weather, Public Safety Power Shutoff events, or other outages. Through financial and technical support, the Community Microgrid Enablement Program (CMEP) and Microgrid Incentive Program (MIP) can help a tribe's energy resilience ambitions from concept to implementation.

6. **Treasury US Treasury Section 6417 Direct Pay:** Authorized by the Inflation Reduction Act (IRA), Tejon is eligible for a direct payment in lieu of a tax credit for energy projects that reduce greenhouse gas emissions, including solar projects. The payments start at 40% of project costs and go up based on other criteria.
7. **DOE Clean Energy Technology Deployment on Tribal Lands, 2024:** This new program provides funding for shovel-ready tribal energy projects, including solar projects.
8. **DOE Grid Resilience Incentive Program:** DOE's grid resilience formula grant allocates funds to tribes for infrastructure upgrades. Tejon has received its first two years of funding in the five-year allocation program and will be applying for the third-year allocation.

Tejon tribal members live off the reservation. Several rebates and subsidies are available for those interested in residential solar, weatherization, and other energy-efficient upgrades, primarily influenced by the Inflation Reduction Act. These incentives are designed to reduce energy costs, increase home energy efficiency, and support the use of renewable energy. Below is a summary of available programs that would be included in the services program proposed in the priority measure dealing with residential emissions reduction for Tejon members.

1. **Home Energy Rebates:** The Inflation Reduction Act introduced rebate programs for home energy efficiency and electrification projects. The Home Efficiency Rebates (HER) offer $2,000 to $4,000 for individual households (and up to $400,000 for multifamily buildings) based on the energy saved through retrofits. The Home Electrification and Appliance Rebates (HEAR) provide point-of-sale rebates for low- to medium-income households on energy-efficient appliances and systems like heat pumps, electric stoves, insulation, and ventilation.
2. **Weatherization Assistance Program (WAP):** This program, administered by the U.S. Department of Energy, aims to increase the energy efficiency of homes owned by low-income families. Improvements can lead to significant energy bill reductions. The program supports a range of upgrades, from insulation to more efficient heating and cooling systems, aiming to enhance household comfort and reduce energy bills.
3. **Solar for All Grant Competition:** The U.S. Environmental Protection Agency launched a $7 billion grant to support residential solar programs, explicitly targeting low-income households. The initiative focuses on expanding access to solar power, ensuring households benefit from reduced energy bills and increased energy resilience, with a minimum savings of 20% of the total electricity bill for households participating in the program.
4. **Tax Credits for Energy Efficiency:** The Inflation Reduction Act has enhanced the value of tax credits available for energy-efficient home improvements. Homeowners can now receive a tax credit of up to 30% of the project costs, with a $2,000 cap for heat pumps, water heaters, and certain biomass stoves and up to $1,200 for weatherization improvements such as air sealing and insulation. These credits are available annually and can offset tax liability.
5. **High-Efficiency Electric Home Rebate Program (HEEHRA):** This program, part of the Inflation Reduction Act, offers substantial rebates for energy-efficient home upgrades. Rebates can cover a variety of improvements, including up to $8,000 for an electric heat pump HVAC system, $4,000 for an electric panel upgrade, and more, with a total rebate cap of $14,000 per household. Eligibility for these rebates is based on household income.

This is not an exhaustive list.

2.7 WORKFORCE PLANNING ANALYSIS

Kern County's economic landscape, historically anchored in oil production and agriculture, is navigating a transition period with fluctuating unemployment rates and a shift towards renewable energy. Over the last five years, unemployment rates have mirrored these economic transitions, peaking significantly at 18% in 2020 due to global events, including the pandemic, before gradually decreasing, though not returning to pre-2020 levels. The December 2023 unemployment rate of 8.7% increased to 9.5% in January 2024 in Kern County, notably higher than the national average of 3.7% and lagging the Nation's job growth. This signals a potential pool of workers available for retraining, especially for jobs in the green economy sector, as California and the Nation seek to significantly invest in reducing carbon emissions by 80% by 2050 and remove 100 million metric tons of carbon from the air.

The imperative of transitioning to a green economy offers a profound opportunity for the Tejon Tribe and Kern County to address climate change while fostering economic growth and job creation. As the local oil industry faces declines or transformations, workers who have historically been employed in oil extraction and related services may find their skills mismatched with the emerging job market focused on renewable energy and sustainability and the County's efforts to leverage its existing geological infrastructure and expertise in drilling to become a leader in the carbon removal industry. Other workers may need more basic training in green skills. The transition towards a clean economy and the County's emerging role in carbon management and storage present opportunities and challenges for the workforce in Kern County.

On the one hand, the renewable energy and carbon removal industries could create thousands of jobs, generate substantial tax revenues, and revitalize the local economy. On the other hand, the shift requires significant workforce retraining and education, as the skills needed differ from those traditionally used in oil extraction.

This gap underscores the need for significant investment in workforce development to equip this potential workforce with the necessary skills for emerging industries. While offering new employment opportunities, transitioning to green energy and clean practices requires a strategic regional approach to workforce development, aiming to reduce unemployment by aligning training programs with the skills demanded by these new sectors. Kern County's economic resilience and future growth in this market will depend on its ability to adapt to these changes, necessitating a concerted effort from all stakeholders to foster a skilled workforce ready to meet the challenges of the green transition.

This chapter assesses the local workforce profile and outlines a strategy for developing a capable, inclusive workforce aligned with the Department of Labor's Good Jobs Principles. The strategy focuses on creating sustainable, high-quality jobs within the emerging green economy.

While the grant focuses on Tejon tribal employment, unemployment, and workforce training are regional issues that can't be adequately addressed by focusing on the Tribe alone. Moreover, the energy measures that will reduce Tejon's GHG footprint will generate only a handful of jobs, most of which will be temporary. Accordingly, this workforce task focuses on developing a workforce training program for Tejon members to qualify for green jobs in the broader Kern County green economy by leveraging the regional workforce programs of the Kern County Community College District (KCCD), Tejon's partner on the CPRG grant.

KCCD has an 11-year history of bringing energy education to the region, working with a wide array of over 40 partners, including national laboratories like

- The National Renewable Energy Laboratory (NREL), educational partners, government organizations, community-based organizations, employers, and workers.
- The Livermore Lab Foundation (LLF), a partnership with KKCD focused on technical assistance, community education, and workforce development to support carbon dioxide management solutions, including carbon neutrality, mitigation, removal, storage, and climate change in Kern County and throughout California
- In addition, the district has partnered with environmental justice groups to transition to diverse energy sources and meet net-zero carbon emission goals in the San Joaquin Valley. KCCD encompasses Bakersfield College, Porterville College, and Cerro Coso Community College.

KCCD is geographically one of the largest community college districts in the United States, serving more than 30,000 students in parts of Kern, Tulare, Inyo, Mono, and San Bernardino counties. KCCD is implementing a renewable energy hub called the California Renewable Energy Laboratory (CREL), funded by a $50 million state grant in partnership with the National Renewable Energy Laboratory.

The remainder of this chapter consists of two sections.

- The first examines the breakdown of jobs created by the green economy. It reviews available workforce training programs, including the rich curriculum at KCCD, to prepare the County workforce (including Tejon members) for this emerging market in Kern County.

- The second section outlines the plan to characterize the Tejon workforce and prepare a Tejon workforce training program working with KCCD, which will be developed in the Comprehensive Climate Action Plan.

2.7.1 GREEN ENERGY JOB AND WORKFORCE TRAINING FOR KERN COUNTY

Kern County has a diverse workforce. The oil and gas sector and agriculture define the employment profile, but other sectors are equally or more important (Kern County Member Directory). While agriculture accounts for $2.5 Billion in wages, oil and gas, and other extraction industries account for only about $700 million in 2021. After agriculture, the top wage generators are:

- Public administration: $2.3B
- Healthcare and social assistance: $2.3B
- Educational services: $1.8B
- Transportation and warehousing: $1.2B
- Construction: $1B
- Retail trade: $.859B
- Finance and Insurance: $.375B

Kern County employment increased by 9600 jobs, or 2%, in 2023, mainly in the government and educational sectors. The local workforce has many skills needed to serve the green economy. For the emerging energy markets, the green skills compiled by KCCD fall into the following categories on the table.

GREEN JOBS AND JOB SKILLS

Table 18 Green Energy Jobs Pathways

Energy Paths	Description	Typical Jobs in this Sector
Research & Development	Those who work in Research and Development (R&D), undertake a wide array of crucial tasks to push the boundaries of scientific and technological innovation. This includes delving into materials research to enhance battery performance, pioneering the development of new fuels to drive cleaner energy solutions, and optimizing technologies and processes for maximum efficiency and effectiveness across diverse applications and industries.	Chemist, Staff Scientist, Process Engineer, Material Science Engineer, Chemical/Geochemical/Electrochemical Engineer, Electrical Engineer, Lab Technician B.S at BC
Energy Management	The Energy Management sector of energy efficiency comprises individuals who are closely involved in planning and monitoring energy use at an organizational or facility level. Often, technical leads are the drivers of energy efficiency projects, the authority on reporting and regulations, planners of retrofit projects, and managers of renewable energy projects.	Energy Efficiency Program Manager, Energy Management Control Systems Engineer, Supervisor of Planning and Building services, Energy Advisor, Energy Auditor, Energy Manager, Project Analyst, Energy Policy Analyst, Automation Technician, Energy Management Control Systems Technician

Energy Paths	Description	Typical Jobs in this Sector
Energy Consulting & Modeling	Individuals involved in Energy Consulting and Modeling are generally responsible for helping clients conserve energy and reduce operating costs using various tools. Consultants are often involved in forecasting and predicting energy use and recommending energy efficiency and retrofit projects that can bring about savings. Additional benefits to clients include setting and meeting energy management GHG reduction targets.	Energy Consultant, Energy Simulation Specialist, Energy Data Engineer, Building Asset Manager, Electrical/Mechanical Engineer, Energy Data Analyst, Energy Systems Analyst/Designer, MEP Engineer, Program Consultant, Building Systems consultant, Energy Specialist
Industrial Processing	The Industrial Processing sector of energy involves manufacturing key components and equipment vital for generating, distributing, and utilizing electrical energy. Specifically, it includes the following subsectors: the manufacture of electric motors, generators, transformers, switchgear, and control equipment; batteries and accumulators; wiring and wiring devices; electrical lighting equipment; fuel cells; and other electronic equipment.	Manufacturing Engineer, Manufacturing technician, Electrical Engineer, Cell Manufacturing Engineer, Process Engineer
Building Operations & Maintenance	Those working in this sector are responsible for the daily operations and maintenance of buildings and their services, often including tenant needs and comforts. They often have a direct link to energy controls and settings to buildings and a mission to run the building as efficiently and cost-effectively as possible, both within a building's walls and throughout the entire building envelope.	Building Operator, Facility Operations Staff, Building/Asset Manager, Building Operations Engineer, Energy Consultant to the commercial building industry, Commercial Project Manager, Automation/Controls Technician, Building Operations Manager, Building Services Manager, Residential Property Manager, Building Maintenance Worker
Trade Allies & Contractors	Individuals in this sector interact with customers to provide solutions and proposals, including costs and payback options that will reduce energy consumption and operating costs. They play a key role in acting as a resource in educating customers on energy solutions and providing them with information on energy conservation incentive programs from utilities and public agencies.	Contractor, Insulation Installer, Heating Systems Installer, Electrician, Renewable Technologies Installer, Operating Engineer, Supervisor, Energy Auditor, Renovation Contractor, Energy Efficiency Consultant, Electrician, Electricity Meter Installer, Heating, Air Condition & Refrigeration Mechanic, Construction Worker, Technician Program Coordinator/Manager, Systems/Data Analyst, Customer Operations Manager, Distribution Engineer, Technical Advisor, Project Supervisor (Grid, DSM), Energy Engineer, Energy Solutions Advisor, Energy Portfolio Manager, Account Manager (Industrial, Commercial)
Technical Services: Utilities & Public Sector	Those working for utilities, public agencies, and institutions are often involved in managing and executing energy efficiency projects and reduction incentive programs, often at a regional or municipal level. Professionals in these sectors often work with a network of stakeholders and customers on energy and GHG reduction policies.	

Source; http://cielcanada.com/news/highlighting-energy

There are also general business administrative and program management jobs in the green economy.

This workforce plan aims to prepare interested Tejon members for the local green economy. Getting more granular, the types of measures that will require a skilled workforce include the following.

ENERGY MEASURES

1. Energy Efficiency Improvements

- Insulation: Enhancing insulation in walls, roofs, and floors to reduce heating and cooling demands.
- High-efficiency HVAC Systems: Upgrading to more efficient heating, ventilation, and air conditioning systems to reduce energy consumption.

- LED Lighting: Switching to LED lighting from older, less efficient lighting technologies.
- Energy-efficient Windows: Installing double or triple-glazed windows to improve thermal performance and reduce energy loss.
- Smart Thermostats: Implementing smart thermostats for better control over heating and cooling, optimizing energy use.
- Heat Pumps: Use a refrigeration cycle to extract heat from a source, such as air, geothermal energy, water, or waste heat, and then amplify and transfer it to where it's needed.

2. Renewable Energy Sources
   - Solar Panels: Installing photovoltaic (PV) systems to generate electricity.
   - Solar Thermal Systems: Solar thermal systems are particularly useful in hotels and residences for producing hot water.
   - Wind Turbines: On-site or off-site wind turbines for buildings with access to wind resources.
   - Biomass Boilers: Using sustainable biomass for heating, applicable in certain locations.
   - Geothermal Heating and Cooling: Exploiting geothermal energy for heating and cooling where geologically feasible.
3. Water Efficiency and Conservation
   - Low-flow Fixtures: Installing low-flow toilets, faucets, and showerheads to reduce water usage.
   - Rainwater Harvesting: Collecting rainwater for non-potable uses such as irrigation and flushing toilets.
   - Water-efficient Landscaping: Choosing plants that require less water and implementing efficient irrigation systems.
4. Sustainable Building Materials
   - Recycled and Sustainable Materials: Using recycled or sustainably sourced materials for construction and renovation.
   - Green Roofs: Installing green roofs to improve insulation and reduce runoff.
5. Waste Reduction and Management
   - Comprehensive Recycling Programs: Implementing programs for recycling paper, plastics, metals, and organic waste.
   - Food Waste Reduction: For hotels and casinos with significant food services, adopting strategies to reduce food waste.
6. Transportation
   - Electric Vehicle Charging Stations: Provide charging stations to encourage employees and guests to use electric vehicles.
   - Bicycle Parking and Sharing: Encouraging cycling by providing bicycle parking facilities and bike-sharing services.
7. Energy Management Systems
   - Building Automation Systems: Using automation systems to manage energy throughout the building efficiently.

The Tejon Workforce development plan will be based on filling the types of jobs listed below for each of the measures.

JOBS AND JOB SKILLS

1. Energy Efficiency Improvements
    - Energy Auditors: Specialists who evaluate buildings to identify energy-saving opportunities. Skills: Knowledge of HVAC systems, building science, and energy modeling software.
    - Insulation Workers: Professionals installing and replacing insulation materials. **Skills**: Manual dexterity, understanding of insulation materials and techniques.
    - HVAC Technicians: Technicians who install, maintain, and repair heating, ventilation, and air conditioning systems. **Skills**: Mechanical skills, familiarity with HVAC systems, certification from recognized bodies.
    - Electricians: Install and maintain electrical systems, including LED lighting. **Skills**: Electrical knowledge, problem-solving, safety standards compliance.
    - Window Installers: Specialists in installing energy-efficient windows. **Skills**: Precision, understanding of window technologies, and installation techniques.
2. Renewable Energy Sources
    - Solar PV Installers: Install photovoltaic solar panels on roofs or other structures. **Skills**: Electrical skills, knowledge of solar systems, and safety practices.
    - Wind Turbine Technicians: Install and maintain wind turbines. **Skills**: Mechanical skills, comfort with heights, understanding of turbine technology.
    - Geothermal Technicians: Specialists in installing geothermal heat pump systems. **Skills**: Knowledge of geothermal systems, plumbing, and electrical skills.
3. Water Efficiency and Conservation
    - Plumbers: Install low-flow fixtures and rainwater harvesting systems. **Skills**: Plumbing skills and knowledge of water conservation technologies.
    - Landscape Designers: Design water-efficient landscaping solutions. **Skills**: Knowledge of drought-resistant plants, irrigation systems, and landscape design.
4. Sustainable Building Materials
    - Construction Workers and Managers: Involved in selecting and using sustainable materials. Skills: Knowledge of green building materials, construction management, and sustainability standards.
    - Green Roof Installers: Specialize in installing green roofs. **Skills**: Knowledge of roofing and plant care, waterproofing.
5. Waste Reduction and Management
    - Recycling Coordinators: Develop and implement recycling programs. **Skills**: Knowledge of waste management practices and organizational skills.
    - Compost Facility Managers: Manage the composting of organic waste. Skills: Understanding of composting processes and waste management regulations.
6. Transportation
    - Electric Vehicle (EV) Charging Station Installers: Install and maintain EV charging stations. **Skills**: Electrical engineering, knowledge of EV technology.
    - Transport Planners: Develop sustainable transport solutions for employees and guests. **Skills**: Knowledge of transportation planning and sustainability practices.

7. Energy Management Systems

   - Building Automation Technicians: Install and maintain building automation and energy management systems. Skills: IT and network skills, knowledge of building systems.
   - Energy Managers Oversee energy consumption and identify efficiency improvements. Skills: Energy auditing, financial analysis, and project management.

These job skill lists are not exhaustive and will be expanded as needed in the CCAP. Across these roles, soft skills such as problem-solving, communication, and teamwork are also vital, as is a commitment to ongoing learning to keep pace with technological and regulatory changes in building decarbonization. Additionally, certifications related to green building practices, such as LEED (Leadership in Energy and Environmental Design), can enhance job prospects and demonstrate expertise. KCCD also provides job readiness training.

KCCD has additional information about job skills and wage rates for most job categories.

EXAMPLE EDUCATIONAL PROGRAMS

The 21st Century Energy Center, part of the Kern Community College District, offers programs to equip individuals with the necessary skills for the energy, construction, and logistics sectors. These programs include:

- Basic Construction Skills: This training introduces trainees to basic skills and concepts in construction utilizing the National Center for Construction Education and Research Core curriculum and aligned with pre-apprenticeship standards
- Electric Vehicle Infrastructure Training: Introduces trainees to the emerging work in installing infrastructure for electric vehicles and serves as a pre-apprenticeship for the electrical trade.
- Solar Installation: Utilizes the NCCER curriculum to provide specialized training in installing solar panels and related systems.
- OSHA Training: Focuses on teaching occupational safety and health administration standards and ensuring workplace safety and health compliance.
- NFPA Electrical Safety: Training students on how to stay safe around electrical hazards.
- National Center for Construction Education and Research Industrial Maintenance Technician: Prepares participants for the maintenance and operation of industrial equipment, catering to the needs of green energy facilities.
- Warehouse and Logistics Training: Covers operations in warehousing and distribution centers, crucial for the logistical aspects of the energy sector.
- Workplace Literacy Training: To improve workers' language and literacy skills so that they may be more successful in the workplace.

KCCD also offers certificate programs in the construction trades.

These programs are designed to support workforce readiness for the evolving demands of the energy sector, emphasizing safety, efficiency, and sustainability. The Kern Community College District's website provides more detailed information on each program.

KCCD has also begun compiling information about four-year college programs for those Tribal members interested in more technical and management roles. A few of the entries include the following.

- UC Berkeley offers an 'Energy Engineering major at the bachelor's level and an 'Energy and Resource Group Minor/Certificate. More information can be found at their Energy Engineering program page: https://guide.berkeley.edu/undergraduate/degree-programs/energy-engineering/ and for the Energy and Resource Group at https://erg.berkeley.edu/

- UC Riverside introduced a 'Mobility Engineering' program at the master's level, focused on innovative mobility solutions. Details are available on their Mobility Engineering website: https://mobility.engr.ucr.edu /
- UC Davis offers both 'Energy Systems' at the Master's level and 'Energy Graduate Group' for Master's and PhD students. Information on these programs can be found on the UC Davis Energy Graduate Group page: https://energy.ucdavis.edu/education/energy-graduate-group/

These programs indicate the increasing local focus on energy and sustainability in higher education, preparing students for careers in this vital sector. Other programs on kCCD's list include CSU Humbolts Energy and Environmental degree programs, Mobility Engineering at UC Riverside, and USC's Sustainable Energy Chemical Engineering Major, among others. In addition, there are apprenticeship programs offered by Southern California Edison and others that will be included in the educational offerings.

2.7.2 TEJON WORKFORCE PLAN - KCCD PROGRAM

We are finalizing the next steps in the workforce plan. It will include some or all of the following components.

Objective: Equip Tejon Indian Tribe members with the skills and qualifications needed to participate in and benefit from jobs in Kern County's emerging green economy.

Duration: Up to 2 years

Program Partners:
- Kern County Community College District (KCCD)
- Tejon Tribal Council
- WampWorx Energy Systems
- Ascent Environmental
- Local businesses and renewable energy firms

Program Planning and Approval:
- Conduct initial planning sessions with KCCD and the Tejon Tribal Council to outline program objectives, scope, and outcomes.
- Secure approval and buy-in from all stakeholders, ensuring alignment with Tribal needs and goals.

Skills and Needs Assessment:
- Survey Tribal members to assess current skills, interests, and aspirations related to green economy jobs.
- Identify gaps between existing skills and those required for jobs in renewable energy, energy efficiency, utility roles, and carbon capture and sequestration.
- A draft Tejon members' skills survey is in the appendix.

Identify Training Programs:
- Develop training programs in partnership with KCCD, focusing on:
  - Renewable Energy Installation and Maintenance (Solar, Wind, Geothermal
  - Energy Efficiency Improvements (Insulation, HVAC Systems, Smart Thermostats)
  - Utility Jobs Training (Grid Management, Energy Distribution)
  - Carbon Capture and Sequestration Techniques
  - Incorporate DOL's Good Jobs Principles to ensure the creation of high-quality, sustainable jobs.

Equity and Accessibility Measures:

- Implement strategies to overcome equity barriers, such as mechanisms to fund childcare services, transportation assistance, and flexible training schedules.
- Ensure programs are accessible to all Tribal members, including women, older people, and those with disabilities.

Apprenticeships and Labor Agreements:

- Socialize apprenticeship programs with local businesses and renewable energy firms to provide hands-on training and job placement opportunities.
- Evaluate labor agreements to guarantee fair wages and working conditions for Tejon Tribe members employed in green economy jobs.

Matching Tejon Members with Jobs:

- Create an online job placement program to match trained Tejon members with employment opportunities in Kern County's green economy.
- Collaborate with local businesses and industries to begin the process of recruiting Tribal members.

Measuring Outcomes and Progress:

Focusing on a streamlined set of performance measures is critical for the initial phase and startup of the Tejon Workforce Development Program. These measures capture the early indicators of success and the foundational steps necessary for the program's long-term viability. Considering the program might not yield immediate employment results, these initial measures will focus on engagement, training knowledge, and foundational success, with employment outcomes as longer-term goals.

Performance Measures for the First Two Years

For the initial two-year period of the Tejon Tribal Green Economy Workforce Development Program, focusing on foundational and preparatory activities, the performance measures should reflect early engagement, preparation for future training, and laying the groundwork for eventual employment in the green economy. Here are draft performance measures for this phase.

Interest and Engagement Level:

- Measure: The number of Tejon Tribe members attending orientation sessions and webinars.

  Goal: Achieve participation from at least xx% of surveyed Tribe members expressing initial interest.

Enrollment in Preparatory Programs:

- Measure The number of Tribal members enrolling in preparatory programs such as career coaching and mentoring.

  Goal: Enroll a minimum of tbd% of members who attended orientation sessions into at least one preparatory program.

Participation in Career Planning and Mentoring:

- Measure: The number of Tribal members signing up for and actively participating in mentoring and career planning services.

  Goal: At least tbd % of enrolled members in preparatory programs to engage in mentoring and complete their career plans.

Allocation for Training and Educational Programs:

- Measure: Allocation of resources (e.g., funding, slots in training programs, support services) based on the number of interested and eligible Tribal members.

  Goal: Ensure tbd % of interested members have a clear path to participate in training programs as they become available, with necessary support allocated.

Completion Rates of Preparatory and Initial Training Programs:

- Measure: Number of participants completing preparatory programs and any initial training undertaken in the second year.

  Goal: Achieve a completion rate of at least tbd % for all engaged in these programs.

Feedback and Satisfaction Levels:

- Measure: Satisfaction levels of participants with orientation, preparatory programs, mentoring, and any initial training programs, measured through surveys and feedback forms.

  Goal: Attain an average satisfaction rate of tbd % across all programs, indicating relevance and effectiveness.

Development of Support Services:

- Measure: Establishment and utilization rate of support services designed to remove barriers to participation (e.g., transportation, childcare).

  Goal: At least tbd % of program participants report that support services adequately met their needs, facilitating uninterrupted participation.

Early Employment and Internship Opportunities:

- Measure (if applicable): The number of participants securing internships, apprenticeships, or employment in related fields during or immediately after the initial training.

  Goal: While recognizing early hiring may be limited, aim for any available opportunities to be filled by program participants, setting a benchmark for future employment outcomes.

These measures focus on building a strong foundation, gauging interest, ensuring participation in preparatory activities, and preparing Tejon tribal members for more intensive training and eventual employment in the green economy sectors. Monitoring these early indicators will provide valuable insights into the program's effectiveness and areas for improvement, setting the stage for the successful long-term integration of Tribe members into the green economy workforce.

Longer-term Goals (End of Year 2 and Beyond)

The initial two-year period of the Tejon Tribal Green Economy Workforce Development Program sets a strong foundation for workforce development within the green economy. As we look beyond this period, it is important to note that the current grant does not cover long-term monitoring. However, KCCD is in a position to continue the program with Tejon and evaluate its long-term impact. Establishing a framework for ongoing performance measurement is crucial for ensuring the program's sustained success and alignment with the Tribe and County's economic and environmental goals.

- Job Placement Rate: As a goal for the end of the two years, aim for a specific percentage of program participants to secure employment in green economy jobs within six months of completing the program. These should be measured after the grant period of performance unless there is participant progress through training and recruitment.
- Retention Rate in Employment: Measure the percentage of participants who remain employed in their field for at least one year after job placement. This assesses the long-term impact of the training.
- Average Wage Increase: Track the average wage increase for participants employed before the program and compare their earnings post-program to assess economic impact.
- Employer Feedback on Employee Performance: Collect feedback from employers on the performance of newly hired participants to evaluate the real-world applicability of the skills taught in the training program.
- Continued Education and Advancement: Monitor the number of participants who pursue further education or advanced training opportunities related to the green economy after completing the program.

To measure these outcomes effectively, the program should establish baseline data at the outset and employ regular monitoring and evaluation techniques. This approach will ensure that the program can adapt and evolve based on

initial learnings and successes, setting a solid foundation for achieving and measuring employment outcomes and long-term impacts beyond the grant's end date.

Coordination with Tejon Tribal Council:

- Ensure continuous engagement and communication with the Tejon Tribal Council throughout the program's duration.
- Solicit feedback from Tribal members and incorporate their insights and preferences into program development and execution.

Conclusion:

This Workforce Development Program is designed to be a comprehensive, sustainable, and inclusive initiative that opens doors for Tejon Indian Tribe members to meaningful and rewarding careers in the green economy. The program aims to contribute to environmental sustainability, economic prosperity, and empowerment for the Tejon community by addressing skills gaps and equity barriers and providing robust training and job placement support.

3 NEXT STEPS

The development of this PCAP marks the initiation of climate planning for the Tejon Tribe and a first step towards developing a CCAP. The CCAP is intended to be completed in 2025 with a comprehensive GHG emissions inventory and emissions forecast, adoption of emission reduction targets, additional GHG reduction measures, and co-pollutant inventory and benefits analysis from GHG reduction measures. It will also include more details on implementation actions, cost analysis, and community benefits. The CCAP development process will undergo a more robust community engagement process and execution of the workforce program with KCCD, which was not possible with the PCAP due to the limited PCAP development time period.

LIST OF APPENDICES

Appendix A - GHG Inventory Technical Documentation

Appendix B - GHG Reduction Quantification

Appendix C – Tejon Workforce Readiness Survey

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Appendix A

GHG Inventory Technical Documentation

Tejon Indian Tribe

Priority Climate Action Plan

Greenhouse Gas Emissions Inventory and Forecast Documentation

Prepared for:

US EPA Region 9
75 Hawthorne Street
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Prepared by:

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April 2024

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1 INTRODUCTION

The Tejon Indian Tribe (hereafter referred to as Tejon Tribe or Tribe) is developing a Priority Climate Action Plan (PCAP) under the Climate Pollution Reduction Grant program administered by the United States Environmental Protection Agency (EPA). This strategic initiative aims to facilitate investment in policies, practices, and technologies geared towards mitigating greenhouse gas (GHG) and air pollutant emissions, generating high-quality job opportunities, stimulating economic growth, and improving the overall quality of life for all community members. This technical memorandum (memo) describes the major GHG emission sources and activities for developing a communitywide GHG emissions inventory (hereafter referred to as PCAP GHG inventory or GHG inventory) developed for the year 2022 and GHG emissions forecast (hereafter referred to as PCAP GHG forecast or GHG forecast) developed for the year 2030. The communitywide GHG inventory and forecast include GHG emissions from government operations and are the first step in the PCAP development process.

2 SUMMARY OF RESULTS

2.1 SUMMARY OF GHG EMISSIONS INVENTORY

In 2022, energy consumption in Tribal member residences was the biggest source of GHG emissions in Tejon Tribe's PCAP, generating approximately 94 percent of the total GHG inventory. All the other emission sources together make up approximately 6 percent of total GHG emissions in 2022. Table 1 below presents a summary of the 2022 PCAP GHG inventory results and Figure 1 and Figure 2 show sectors and share of GHG emissions by scope respectively. GHG emissions are reported consistent with the reporting framework recommended by the Global Protocol for Community-Scale Greenhouse Gas Inventories Version 1.1 (see Section 3.1 for details on the protocol as well as a definition of scopes). Results have been converted to carbon dioxide equivalent (CO_2e) using the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) Global Warming Potential (GWP) factors.

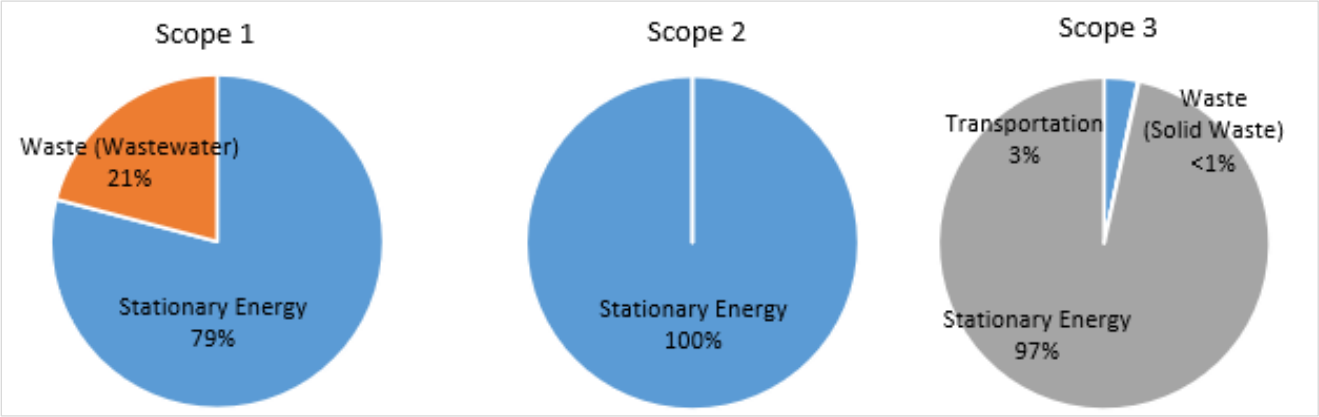

Figure 1 Source of GHG Emissions in Scope 1, Scope 2, and Scope 3 for 2022

Table 1 PCAP GHG Emissions Inventory by Sector and Greenhouse Gas for 2022

GHG Protocol for Cities Category [1]			GHG Emissions by Sector ($MTCO_2e$)			
Sector	Sub-Sector	Sub-Category	CO_2	CH_4	N_2O	Total
Scope 1						
Stationary Energy	Governmental	Propane	20	0.03	0.05	20
Waste	Wastewater treatment and discharge	Governmental	-	5.25	-	5.25
Total Scope 1 GHG Emissions			**20**	**5.27**	**0.05**	**25**
Scope 2						
Stationary Energy	Governmental	Electricity	34	0.06	0.07	34
Total Scope 2 GHG Emissions			**34**	**0.06**	**0.07**	**34**
Scope 3						
Transportation	On-road	Governmental (Fleet Vehicles)	8.05	0.02	0.13	8.20
		Governmental (Employee Commute)	34	0.04	0.32	35
		Governmental (Visitors)	23	0.03	0.21	23
Waste	Solid Waste Disposal	Governmental	-	2.54	-	2.54
Stationary Energy	Residential	Electricity	860	1.40	1.72	864
		Natural gas	1,072	2.67	0.54	1,075
Total Scope 3 GHG Emissions			**1,997**	**6.71**	**2.91**	**2,007**

Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent

Totals may not sum up due to rounding.

[1] The GHG Protocol for Cities is used to develop communitywide GHG emissions inventories for jurisdictions with distinct geographical boundaries and is recommended for use by EPA for tribal GHG emissions inventories.

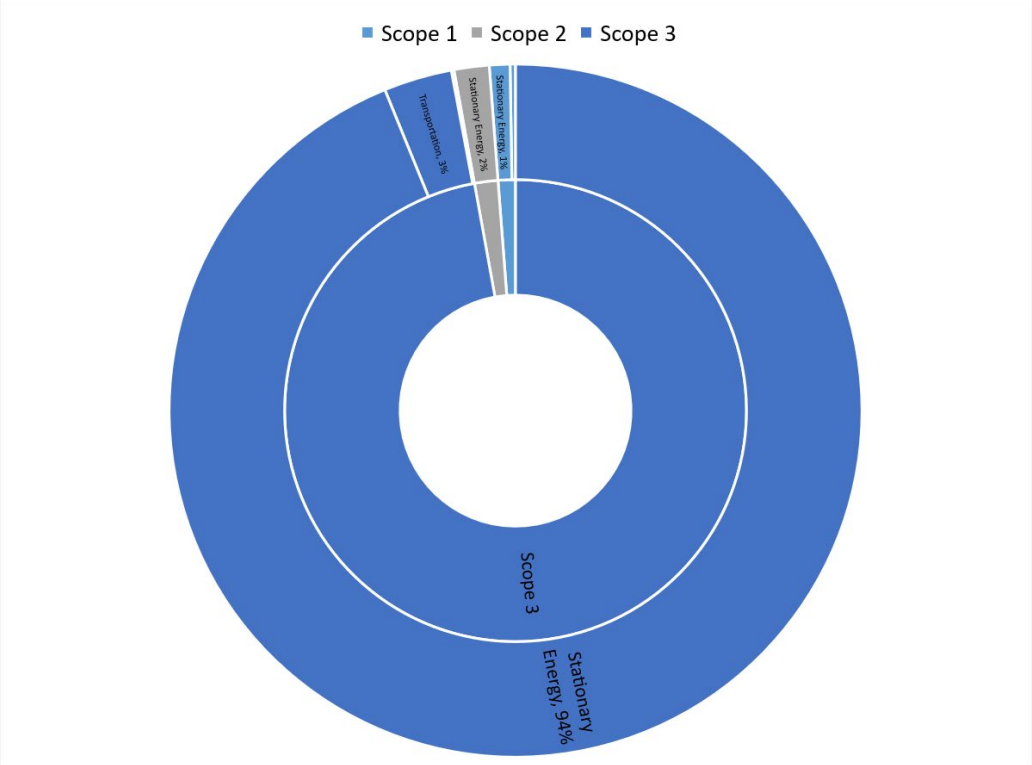

Figure 2 Share of GHG Emissions by Scope for 2022

2.2 SUMMARY OF GHG EMISSIONS FORECAST

In 2030, the GHG emissions are expected to be 60 times higher than the GHG emissions in 2022 because of the new development projects. Of all the sources, vehicle trips generated by the proposed casino project are expected to be the biggest source of GHG emissions, contributing to approximately 62 percent of total GHG forecast. Table 2 below presents a summary of PCAP GHG forecast results for 2030 and Figure 3 presents a graph showing Tejon Tribe's GHG emissions inventory and forecast.

Table 2 PCAP GHG Emissions Forecast by Sector and Greenhouse Gas for 2030

GHG Protocol for Cities Category [1]			GHG Emissions by Sector ($MTCO_2e$)			
Sector	Sub-Sector	Sub-Category	CO_2	CH_4	N_2O	Total
Scope 1						
Stationary Energy	Governmental	Propane	20	0.03	0.05	20
	Commercial (Gas Station project)	Natural Gas	18	0.04	0.01	18
	Commercial (Casino project)	Gasoline	0.09	0.01	-	0.10
	Commercial (Casino project)	Natural Gas	32,849	18	160	33,026
	Commercial (Casino project)	Diesel	4,508	7.24	-	4,515
Waste	Wastewater treatment and discharge	Governmental	-	5.25	-	5.25
		Commercial (Casino project)	98	41	9.41	149
Total Scope 1 GHG Emissions			**37,492**	**72**	**169**	**37,733**
Scope 2						
Stationary Energy	Governmental	Electricity	34	0.06	0.07	34
	Commercial (Gas Station project)		55	0.09	0.11	55
	Commercial (Casino project)		2,121	2.45	4.80	2,129
Total Scope 2 GHG Emissions			**2,210**	**2.60**	**4.97**	**2,218**
Scope 3						
Transportation	On-road	Governmental (Fleet Vehicles)	8.05	0.02	0.13	8.20
		Governmental (Employee Commute)	34	0.04	0.32	35
		Governmental (Visitors)	23	0.03	0.21	23
		Commercial (Gas Station project)	2,500	1.87	58.28	2,560
		Commercial (Casino project)	74,068	60	-	74,127
Waste	Solid Waste Disposal	Governmental	-	2.54	-	2.54
		Commercial (Casino project)	126	208	-	334
Stationary Energy	Residential	Electricity	860	1.40	1.72	864
		Natural gas	1,072	2.67	0.54	1,075
Total Scope 3 GHG Emissions			**78,690**	**277**	**61**	**79,028**

Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent.

Totals may not sum up due to rounding.

[1] The GHG Protocol for Cities is used to develop communitywide GHG emissions inventories for jurisdictions with distinct geographical boundaries and is recommended for use by EPA for tribal GHG emissions inventories.

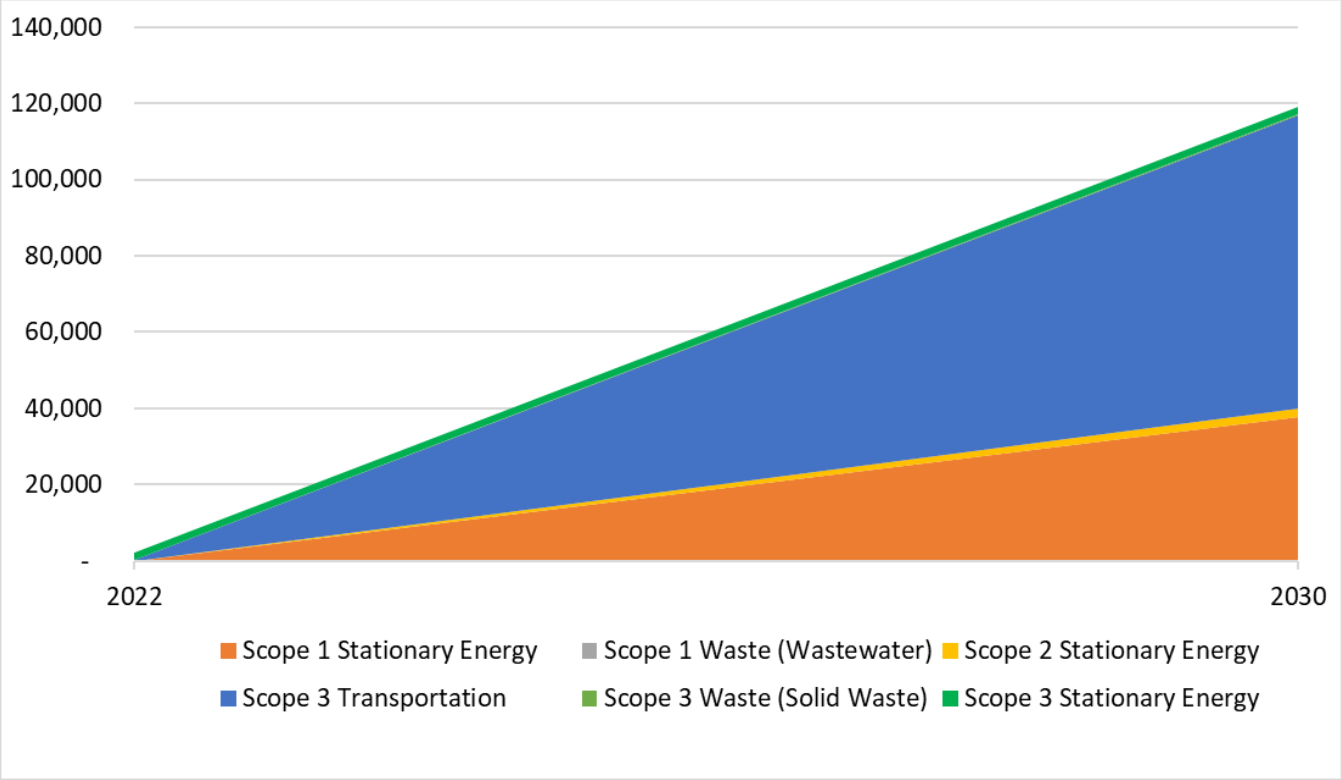

Figure 3 Tejon Tribe's GHG Inventory and Forecast from 2022 to 2030

3 METHODOLOGY

This section outlines the methodology used for calculating and reporting GHG emissions in the PCAP GHG emissions inventory and forecast. It discusses protocols and methods used and the GHG emission inventory and forecast boundaries including the emissions sectors and sources. It also describes the main data inputs used for GHG emissions estimates (known as activity data), methods for collecting or estimating activity data, and assumptions used in the GHG inventory and forecast.

3.1 GHG EMISSIONS GLOBAL PROTOCOL FOR COMMUNITYWIDE GREENHOUSE GAS EMISSIONS REPORTING

Several GHG protocols have been developed to provide guidance for governments to account for GHG emissions accurately and consistently. As recommended by EPA, the Global Protocol for Community-Scale Greenhouse Gas Inventories (also known as GHG Protocol for Cities), version 1.1 (World Resources Institute 2021) is used for estimating and reporting GHG emissions for the PCAP GHG inventory and forecast. The GHG Protocol for Cities is used to report communitywide GHG emissions for jurisdictions with distinct geographical boundaries that are smaller than the typical scale of states or nations, and as such is appropriate for use for many tribal governments. The GHG Protocol for Cities recommends reporting GHG emission sources by both emissions "scope" and emissions "sector." The scope of emissions sources indicates the physical location of GHG emissions sources and the level of control a government may have over the sources. The three emissions scopes are described in the following list.

Scope 1: Emissions that occur within the geographical boundary or are under direct control of the reporting government.

Scope 2: Emissions that are generated by purchased energy, where the actual energy generation source is outside of the geographical boundary, but the use of that energy is within the geographical boundary (e.g., grid-purchased electricity consumption within the geographical boundary).

Scope 3: All other emissions sources that are not included in either scope 1 or scope 2.

The GHG emissions sector further organizes emissions reporting based on the activity that generates emissions. There are six primary sectors included in the GHG Protocol for Cities; however, all these sectors do not exist or do not contribute significant emissions in the Tejon Tribe GHG inventory and forecast. The six GHG emissions sectors include:

- Stationary energy,
- Transportation,
- Waste,
- Industrial processes and product use,
- Agriculture, forestry, and other land use, and
- Other scope 3 emissions sources.

The three primary sectors from the GHG Protocol for Cities relevant to the Tejon Tribe are the Stationary energy, Transportation, and Waste sectors. The GHG emissions sectors can be further organized into sub-sectors and sub-categories to provide better detail to GHG emissions reporting.

3.1.1 Tribal Greenhouse Gas Inventory Tool

EPA has provided the Tribal Greenhouse Gas Inventory Tool (TGIT) (community module and government module) to support tribal communities in evaluating their GHG emissions following the GHG Protocol for Cities. This tool was used for estimating GHG emissions for most sectors and sources for Tejon Tribe's GHG emissions inventory and forecast. For sectors and sources where the TGIT was not compatible, the GHG emissions were estimated externally from the TGIT following the GHG Protocol for Cities or obtained directly from other sources.

3.2 GEOGRAPHIC BOUNDARY

The geographic boundary of the PCAP includes the governmental boundary of Tejon Tribe and the Tribal member residences located in Kern County. Until June 2022, the Tejon Tribe only occupied an approximately 10-acre site in the City of Arvin, California, known as the Tribe's Community Center Property. The site consists of four government buildings and a parking area (Figure 4). In June 2022, the Tribe acquired approximately 306 acres in Kern County, California (referred to herein as the Mettler Site), located approximately 5 miles from the Tribe's Community Center Property. Currently, Tejon Tribe's governmental boundary (also known as the Tribe's geographical boundary) includes the Community Center Property and the Mettler site. Table 3 shows the Tribe's demographic data used for developing the GHG inventory and forecast.

Table 3 Demographics Data for the Tejon Tribe PCAP GHG Emissions Reporting

Demographics	Total Count	Source
Total Government Employees	19	Data provided by Tejon Tribe
Total Visitors Per Year	6,320	Tejon Tribe staff estimate of annual visitors based on average event attendance
Total Tribal Members	1,250	Tejon Tribe website (Tejon Indian Tribe, 2022)

Figure 4 Map of Tejon Tribe's Community Center Property

3.2.1 Development Projects Proposed at the Tribe's Geographical Boundary

Currently, the Tribal Government conducts operations at the Community Center Property. A gas station project is proposed to be built at the Community Center Property and a casino project is proposed at the Mettler site. The gas station project will consist of a convenience store and fueling equipment including two diesel lanes, six two-sided gasoline dispensers, and three underground storage tanks. The casino project is proposed to be built on 80 acres of land, which will consist of the proposed casino resort and associated facilities including a fire and sheriff station, water infrastructure, and wastewater treatment and disposal facilities (DOI 2020).

3.2.2 Geographic Boundary for the PCAP GHG Inventory and Forecast

The PCAP communitywide GHG inventory is based on current operations of the Tribal government which are being conducted at the Community Center Property and the energy consumption at Tribal member residences located throughout Kern County. The communitywide GHG emissions forecast is based on the future Tribal government operations, future energy consumption at Tribal member residences, the gas station project proposed at the Community Center Property, and the casino project proposed at the Mettler site (see Section 3.5 for details). The Mettler site was not included in the baseline inventory because the site was acquired by the Tribe in June 2022 and was entirely undeveloped in 2022, which is the inventory baseline year. Note that construction of the proposed casino

project started at the Metler site in 2024 and is expected to be completed with the project fully operational before 2030. Construction of the proposed gas station project has not started yet but is expected to be completed and fully operational before 2030. As such the casino project and the gas station project are not included in the GHG inventory but are included in the GHG forecast.

3.3 TIME PERIOD

3.3.1 GHG Emissions Inventory

2022 is used as the baseline year for this GHG inventory as this is the most recent year for which activity data for estimating GHG emissions were available.

3.3.2 GHG Emissions Forecast

Tejon Tribe's communitywide emissions are forecasted for 2030. The year 2030 is chosen as the forecast year for this PCAP to align with the emission reduction target year of the United States for the goal of reducing U.S. greenhouse gas emissions 50-52% below 2005 levels in 2030 (The White House 2021).

3.4 GREENHOUSE GASES

The GHG Protocol for Cities recommends reporting the following seven gases for a GHG inventory: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3). The GHG inventory for Tejon Tribe accounts for the three most common and dominant gases reported in most local inventories of similar scale: CO_2, CH_4, and N_2O. GHG emissions from other gases were not estimated because these are either not generated within the PCAP's geographical boundary or activity data and/or emissions factors for estimating GHG emissions from these gases were not available.

This PCAP GHG inventory and forecast utilizes AR5 100-year GWP factors[1] to assess the relative warming potential of these gases compared to CO_2. Converting all GHG emissions to CO_2e allows for reporting all GHGs using the same metric. Table 4 shows the AR5 GWP factors used in the PCAP GHG inventory and forecast.

Table 4 AR5 GWP Factors used in the PCAP GHG Inventory and Forecast

Gas	Carbon Dioxide (CO_2)	Methane (CH_4)	Nitrous Oxide (N_2O)
100-year GWP	1	28	265

3.5 DATA REVIEW

This section outlines the approaches and presents the data and sources used for developing the PCAP GHG emission inventory and forecast. It also outlines the rationale for utilizing the selected data sources.

3.5.1 GHG Emissions Inventory

For most sectors, the activity data for developing PCAP GHG inventory was obtained directly from the Tribe for the year 2022. This included government operations activity data, approximated using mileage logs, bills, and invoices for the year 2022, collected directly from the Tribe. For some emission sectors, the activity data for 2022 was estimated based on representative data such as energy consumption in residences and governmental solid waste. Activity data

[1] GWP is a measure used to compare the potency of different GHGs in terms of their ability to trap heat in the atmosphere over a specific time period. The 100-year GWP factor is a measure used to quantify the relative contribution of a GHG to global warming over a 100-year period compared to carbon dioxide which is assigned a GWP of 1 and is referred to as carbon dioxide equivalent (CO_2e).

for these sources was estimated using published datasets from various years, such as the 2020 United States Energy Information Administration (EIA) Residential Energy Consumption Survey (RECS) (EIA 2023) and the volume to weight trash conversion factors by EPA (EPA 2016). Although these estimates are not tied directly to the year 2022, they provide a reasonable basis for understanding the comparative scale of different communitywide GHG emissions sources in the 2022 inventory year. Table 5 provides an overview of the activity data that was used to develop the GHG emissions inventory and methods for estimating activity data in detail. The data is organized by sector, sub-sector, and sub-categories as per GHG Protocol for Cities, and includes the process for data collection, the approach for estimating activity data, input data used to estimate activity data where needed, and the approach used for developing the GHG emissions estimates associated with each source.

Table 5 Data Review Matrix for the PCAP GHG Inventory

GHG Protocol for Cities Categorization				Activity Data	Process for Collecting Activity Data (External/Site-Specific)	Approach for Estimating Activity Data (If Applicable)	Input Data for Activity Data Estimation (If Applicable)	Data Source	Calculation Method (TGIT/ External Calculations)
Sector	Sub-Sector	Sub-Category	Emission Source						
Scope 1									
Stationary Energy	Governmental	Propane	Fuel combustion within the Tribe's geographical boundary	3,454 gallons of propane used annually	Site-specific data provided by Tejon Tribe	Annual propane consumption for 2022 based on Suburban Propane Invoices available for 2022 - 2023	1. 6,908 gallons of propane use for 2022 and 2023 2. 0.5 factor for converting propane consumption for two years (2022 and 2023) to annual propane consumption	1. Suburban Propane Invoices available for 2022 - 2023 2. Assumption	TGIT government module
Waste[1]	Wastewater treatment and discharge	Governmental	Wastewater treatment and discharge	19 employees	Site-specific data provided by Tejon Tribe	NA	1. 19 employees	1. Provided by Tejon Tribe *Note: Including only 19 employees (and 0 visitors) in the emissions estimates because TGIT estimates wastewater emissions based on residents. This is a conservative estimate because the time spent by employees in a workplace is comparatively less than the time spent at the residence. The rationale for not including visitors is that it is assumed that this conservative estimate for employees already likely overestimates wastewater emissions. Considering the total time spent at Tejon's facilities by visitors is likely much less than total employee time spent, the visitor wastewater generation emissions would not be more than that generated by employees.*	
Scope 2									
Stationary Energy	Governmental	Electricity	Consumption of grid-supplied energy consumed within the Tribe's geographical boundary	139,857 kWh electricity used annually	Site-specific data provided by Tejon Tribe	NA	1. 110,857 kWh electricity consumption in Tribe buildings and facilities 2. 29,000 kWh electricity consumption for operating the South Valley Pump for water well	1. Electricity invoices for all months of 2022, with the exceptions of January, April, September, and November, were available from PG&E. Average electricity consumption for the missing month's invoices was estimated based on the average usage from the preceding and succeeding months. 2. South Valley Pump Testing Report	TGIT government module
Scope 3									
Transportation	On-road	Governmental (Fleet Vehicles)	Emissions from transboundary transportation	22,077 annual government operations VMT	Site-specific data provided by Tejon Tribe	NA	NA	Vehicle mileage logs	External calculations using CARB's EMFAC tool
		Governmental (Employee Commute)		98,800 annual employee commute VMT	Estimated based on data provided by Tejon Tribe staff	VMT estimated based on number of employees, number of commute days in a week, number of weeks in a year, average one-way trip length, factor for two-way trips, portion of transboundary trips assumed to be induced by the Tribe as per GHG Protocol for Cities	1. 19 employees 2. 4 commute days in a week 3. 52 weeks in a year 4. 25 miles average one-way trip length 5. 2 two-way trip length factor 6. 50% transboundary trips assumed to be induced by the Tribe	1. Provided by Tejon Tribe 2. Provided by Tejon Tribe 3. Weeks in a year 4. Distance between the center of City of Bakersfield (USPS post office) to Tejon tribe site (measures using Google Maps) 5. Factor for two-way trip 6. GHG Protocol for Cities (World Resources Institute 2021)	
		Governmental (Visitors)		64,481 annual government operations VMT		VMT estimated based on information on event, number of members/families, number of cars per member/family, number of visitor commute days in a year for different events, average one-way trip length, factor for two-way trips, portion of transboundary trips	1. Information on events: a. family events occurring twice a week (i) 60 people in a week, (ii) 52 weeks in a year, (iii) 2.89 car occupancy (persons per family using one car) b. Elders' events occurring once a month (i) 30 elders a month, (ii) 12 months in a year, (iii) 1 car per elder c. Cultural Gatherings occurring every	1. Staff estimate of average attendance; car occupancy is assumed to be equal to persons per household in California (US Census Bureau 2022). 2. Distance between the center of City of Bakersfield (USPS post office) to Tejon tribe site (measures using Google Maps) 3. Factor for two-way trip 4. GHG Protocol for Cities (World Resources Institute 2021)	

GHG Protocol for Cities Categorization				Activity Data	Process for Collecting Activity Data (External/Site-Specific)	Approach for Estimating Activity Data (If Applicable)	Input Data for Activity Data Estimation (If Applicable)	Data Source	Calculation Method (TGIT/ External Calculations)
Sector	Sub-Sector	Sub-Category	Emission Source						
						assumed to be induced by the Tribe as per GHG Protocol for Cities	Sunday (i) 52 weeks in a year, (ii) 1 Sunday every week, (iii) 50 members (iv) 2.89 car occupancy (persons per family using one car), (iv) 1 car per family. d. Tribal Council Meetings occurring every three months (i) 4 meeting each year (ii) 60 members attending each meeting (iii) 1 car per member. 2. 25 miles average one-way trip length 3. 2 two-way trip length factor 4. 50% transboundary trips assumed to be induced by the Tribe		
Waste	Solid Waste Disposal	Governmental	Solid Waste Disposal	21 tons of solid waste annually		Tonnage of solid waste estimated based on volume of the trash bin, number of times waste is collected in a week, number of weeks in a year, average weight of 1 cubic yard trash, and pounds to tons conversion factor	1. 3 cubic yard volume of waste bin 2. 1 time waste collection per week 3. 52 weeks in a year 4. 275 lbs average weight of 1 cubic yard waste 5. 0.0005 pounds to tons conversion factor	1. Provided by Tejon Tribe 2. Provided by Tejon Tribe 3. Weeks per year 4. Volume to weight trash conversion factors (EPA 2016) 5. Onlineconversion.com	EPA's Waste Reduction Model (WARM)
Stationary Energy	Residential	Electricity	Fuel combustion outside the Tribe's geographical boundary	3,567,907 kWh electricity used annually	Estimated based on site specific data and external sources	Annual electricity consumption based on number of Tribal members households and annual electricity consumption per household	1. 1,250 Tribal members in 2022 2. 2.89 persons per household 3. 8,249 kWh annual electricity consumption per household	1. Tejon Tribe website (Tejon Indian Tribe 2022) 2. Persons per household in California (US Census Bureau 2022 3. Annual household site electricity consumption in the West from Table CE2.5 Annual household site fuel consumption in the West—totals and averages, 2020 from U.S. Energy Information Administration Residential Energy Consumption Survey (EIA 2023)	TGIT community module
		Natural Gas	Consumption of grid-supplied energy consumed outside the Tribe's geographical boundary	19,550 MCF natural gas used annually		Annual natural gas consumption based on number of Tribal members households and annual electricity consumption per household	1. 1,250 Tribal members in 2022 2. 2.89 persons per household 3. 452 CCF annual natural gas consumption per household 4. 0.10 CCF to MCF conversion factor	1. Tejon Tribe website (Tejon Indian Tribe 2022) 2. Persons per household in California (US Census Bureau 2022 3. Annual household site natural gas consumption in the West from Table CE2.5 Annual household site fuel consumption in the West—totals and averages, 2020 from U.S. Energy Information Administration Residential Energy Consumption Survey (EIA 2023)	

Notes: NA = Not Applicable; kWh = kilowatt hours; VMT = Vehicle Miles Traveled; TGIT = Tribal Greenhouse Gas Inventory Tool; WARM = Waste Reduction Model.

[1] GHG emissions from the treatment of wastewater occurring within the Tribe's geographical boundary in on-site septic tanks. The activity data inputs to calculate emissions in the TGIT are number of Tejon tribe employees for this emissions source.

3.5.2 GHG Emissions Forecast

The GHG emissions forecast provides an understanding of how new development would increase future GHG emissions from the levels in 2022. Tejon Tribe's GHG emissions forecast consists of emissions from future Tribal government operations, future energy consumption at Tribal member residences, the proposed gas station project, and the proposed casino project. Given the short period of time between 2022 and 2030, the number of Tribal members is not expected to change significantly between the inventory year (2022) and the forecast year (2030). Consequently, no significant change is expected in energy consumption at residences and government services as these factors directly relate to the number of members in the Tejon Tribe. As such, future emissions from Tribal operations and energy consumption at Tribal member residences is also not expected to change significantly in 2030 as compared to 2022 and are assumed to be the same as they were in 2022. Future emissions from the proposed casino project were available from the Tejon Indian Tribe Trust Acquisition and Casino Project Final Environmental Impact Statement - Volume I (EIS) (DOI 2020) and were directly used for developing the PCAP GHG emissions forecast. **Error! Reference source not found.** shows the emissions results from the EIS used for this PCAP GHG emissions forecast, alignment of EIS emissions categories with emissions categories defined in the GHG Protocol for Cities, and the rationale of alignment. The future emissions from the proposed gas station project were estimated using the TGIT community module and external calculations.

In summary, no additional calculations were done for forecasting emissions from government operations, future energy consumption at Tribal member residences, and the proposed casino project. Calculations were performed only to estimate future emissions from the proposed gas station project.Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent.

Emission totals shown here may not exactly match the values in the EIS as the EIS uses GWP factors from IPCC AR4, while the PCAP GHG emissions inventory and forecast use GWP factors from IPCC AR5.

provides an overview of the activity data that was used to estimate future emissions from the proposed gas station project. The data is organized by sector, sub-sector, and sub-categories as per GHG Protocol for Cities, and includes the process for data collection, the approach for estimating activity data, input data used to estimate activity data, and the approach used for forecasting GHG emissions associated with the proposed gas station project.

Table 6 Data Obtained from the EIS Developed for the Casino Project Used for the PCAP GHG Forecast

EIS Categories		GHG Protocol for Cities Categorization					Emissions Per Year ($MTCO_2e$)			
Sector	Description	Sector	Sub-Sector	Sub-Category	Emission Source	Scope	CO_2	CH_4	N_2O	Total
Area	Emissions associated with gasoline consumption from landscaping equipment.	Stationary Energy	Commercial	Gasoline	Fuel combustion within the Tribe's geographical boundary	1	0.09	0.01	—	0.10
Stationary	Emissions from diesel use for emergency generators and process boilers.	Stationary Energy	Commercial	Diesel	Fuel combustion within the Tribe's geographical boundary	1	4,508	7.24	—	4,515
Water/ Wastewater	Emissions from water used and wastewater generated by the project	Waste	Commercial	Wastewater treatment and discharge	Wastewater treatment and discharge	1	98	41	9.41	149
Energy	Result of activities in buildings that consume energy in the form of natural gas	Stationary Energy	Commercial	Natural Gas	Fuel combustion within the Tribe's geographical boundary	1	32,849	18	160	33,026
	Result of activities in buildings that consume energy in the form of Electricity			Electricity	Consumption of grid-supplied energy consumed within the Tribe's geographical boundary	2	2,121	2	5	2,129
Mobile	Emissions are generated by resident, worker, customer, and delivery vehicles visiting the project site.	Transportation	On-road	Commercial (Casino)	Emissions from transboundary transportation	3	74,068	60	—	74,127
Solid Waste	Emissions from waste disposed into landfill	Waste	Commercial	Solid Waste Disposal	Solid Waste Disposal	3	126	208	—	334

Notes: CO_2 = carbon dioxide; CH_4 = Methane; N_2O = Nitrogen oxide; $MTCO_2e$ = Metric tons of carbon dioxide equivalent.

Emission totals shown here may not exactly match the values in the EIS as the EIS uses GWP factors from IPCC AR4, while the PCAP GHG emissions inventory and forecast use GWP factors from IPCC AR5.

Table 7 Data Review Matrix for the PCAP GHG Forecast

GHG Protocol for Cities Categorization				Activity Data	Process for Collecting Activity Data (External/Site-Specific)	Approach for Estimating Activity Data (If Applicable)	Input Data for Activity Data Estimation (If Applicable)	Data Source	Calculation Method (TGIT/ External Calculations)
Sector	Sub-Sector	Sub-Category	Emission Source						
Scope 1									
Stationary Energy	Commercial (Gas station project)	Natural Gas	Fuel combustion within the Tribe's geographical boundary	327 MCF of annual natural gas consumption	Estimated based on data provided by Tejon Tribe staff	Average natural gas consumption estimated based on square footage of convenience store and natural gas consumption of a convenience store with a gas station per square footage.	1. 4,500 sf of the convenience store 2. 72.6 cubic feet per square foot natural gas consumption at a convenience store with a gas station 3. 0.001 factor for converting cubic feet to MCF	1. Feasibility Study Summary. Tribal Gas Station & C-Store (FAD) 2. Table C32. Natural gas consumption totals and conditional intensities by building activity subcategories from U.S. Energy Information Administration Commercial Building Energy Consumption Survey (EIA 2022) 3. conversion.org	TGIT community module
Scope 2									
Stationary Energy	Commercial (Gas station project)	Electricity	Consumption of grid-supplied energy consumed within the Tribe's geographical boundary	228,150 kWh of annual electricity consumption	Estimated based on data provided by Tejon Tribe staff	Average electricity consumption estimated based on square footage of convenience store and electricity consumption of a convenience store with a gas station per square footage	1. 4,500 sf of the convenience store 2. 51 kWh per square foot electricity consumption at a convenience store with a gas station	1. Feasibility Study Summary. Tribal Gas Station & C-Store (FAD) 2. Table C22. Electricity consumption totals and conditional intensities by building activity subcategories from U.S. Energy Information Administration Commercial Building Energy Consumption Survey (EIA 2022)	TGIT community module
Scope 3									
Transportation	On-road	Commercial (gas station project)	Emissions from transboundary transportation	4,471,250 annual VMT from cars coming to the gas station	Estimated based on external data source	VMT estimated based on average daily traffic at gas station, number of days in a year, average one-way trip length, factor for two-way trips, portion of transboundary trips assumed to be induced by the Tribe as per GHG Protocol for Cities	1. 490 average daily traffic at the gas station 2. 365 days in a year 3. 25 miles average one-way trip length 4. 2 two-way trip length factor 5. 50% transboundary trips assumed to be induced by the Tribe	1. Santee Arco Station Project. Initial Study/Mitigated Negative Declaration (Royal Share LLC 2021) 2. Days in a year 3. Distance between the center of Bakersfield city (USPS post office) to Tejon tribe site (measures using Google Maps) 4. Factor for two-way trip 5. GHG Protocol for Cities (World Resources Institute 2021)	External calculations using CARB's EMFAC tool

Note: NA = Not Applicable; kWh = kilowatt hours; VMT = Vehicle Miles Traveled; sf = square feet; mcf = thousand cubic feet; TGIT = Tribal Greenhouse Gas Inventory Tool; CARB = California Air Resources Board; EMFAC = EMission FACtor model; EIA = Energy Information Administration.

3.6 GREENHOUSE GAS EMISSIONS INVENTORY CALCULATIONS BY SCOPE AND SECTOR

This section outlines the approach used for estimating GHG emissions from each sector, sub-sector, and sub-category for the PCAP GHG emissions inventory.

3.6.1 Scope 1

STATIONARY ENERGY

This section describes methodology for estimating GHG emissions associated with propane consumption within the Tribe's geographical boundary. Since no community-specific activities take place within the Tribe's geographical boundary, this section only reports emissions from the governmental operations. GHG emissions for the Stationary Energy sector were calculated using the TGIT, with activity data entered into the TGIT provided in Table 8.

Table 8 Activity Data for Scope 1 Stationary Energy Sector for PCAP GHG Inventory

Sub-Sector	Activity Data Type	Activity Data Value	Activity Data Unit	Governmental
Governmental	Propane Use	3,454	Gallons	Propane

Governmental

Propane

Stationary energy scope 1 GHG emissions for the Tejon Tribe include propane consumption in government buildings and facilities. Annual propane consumption data was available from purchase records available for 2022 and 2023 from Suburban Propane which is the main provider for propane services. The total propane consumption for two years (2022 and 2023) was divided in half to estimate annual propane consumption in 2022.

WASTE

Waste scope 1 GHG emissions for the Tejon Tribe include GHG emissions from the treatment of wastewater occurring within the Tribe's geographical boundary in an on-site septic tank. Since no community-specific activities take place within the Tribe's geographical boundary, this section reports emissions from the governmental wastewater treatment only. GHG emissions for the Waste sector were calculated using the TGIT, with activity data entered into the TGIT provided in Table 9.

Table 9 Activity Data for Scope 1 Waste Sector (Wastewater Treatment and Discharge) for PCAP GHG Inventory

Sub-Category	Activity Data Type	Activity Data Value	Activity Data Unit
Governmental (Wastewater Treatment and Discharge)	Total Employees	19	-

Wastewater Treatment and Discharge

Government Wastewater

Governmental wastewater is collected and treated through an on-site septic tank at the Community Center Property. The Tribe at present does not collect granular data from the wastewater treated using septic tank. Hence, GHG emissions from wastewater were estimated using the number of people using the site as activity data. The TGIT community module was used to estimate GHG emissions generated from wastewater collection and treatment for on-site septic tanks. Data on the number of people using the site including employees and visitors was estimated

based on data provided by Tejon Tribe staff. However, only number of employees data was used as activity data. Estimate of number of visitors using the site was not accounted for to estimate activity data for this sub-sector, because TGIT estimates wastewater emissions based on number of residents. Using the number of employees is a conservative estimate because the time spent by employees in a workplace is comparatively less than the time spent at the residence, and as such there would be less wastewater generating activities at a workplace than a residence. The rationale for not including visitors is that it is assumed that this conservative estimate for employees already likely overestimates wastewater emissions at the Community Center Property . Considering the total time spent at Tejon's facilities by visitors is likely much less than total employee time spent, the visitor wastewater generation emissions would not be more than that generated by employees. Hence, only the number of employees was entered into TGIT as activity data for this sector.

3.6.2 Scope 2

STATIONARY ENERGY

This section describes methodology for estimating GHG emissions associated with consumption of grid-supplied electricity consumed within the Tribe's geographical boundary. Since no community-specific activities take place within the Tribe's geographical boundary, this section reports emissions from the governmental operations grid electricity consumption only. GHG emissions for the Stationary Energy sub-sector were calculated using the TGIT, with activity data entered into the TGIT provided in Table 10.

Table 10 Activity Data for Governmental Scope 2 Stationary Energy Sector for PCAP GHG Inventory

Sub-Sector	Activity Data Type	Activity Data Value	Activity Data Unit
Governmental (Buildings and facilities)	Electricity Use	110,857	kWh
Governmental (Pump for Water Well)	Electricity Use	29,000	kWh

Note: kWh= kilowatt hours.

Governmental

Electricity

Grid supplied electricity is consumed at the Community Center Property in the government buildings and facilities and for operating the south valley pump for the water well. Electricity consumed for government buildings and facilities was available from invoices from Pacific Gas & Electricity for all months of 2022, with the exceptions of January, April, September, and November. Average electricity consumption for the remaining months was estimated based on the average usage from the preceding and succeeding months. Estimated annual electricity consumption by the water well pump was available from South Valley Pump Testing Report provided by the Tejon Tribe. GHG emissions for the Stationary Energy sub-sector were calculated using the TGIT, with activity data entered into the TGIT provided in Table 10.

3.6.3 Scope 3

TRANSPORTATION

The PCAP GHG inventory only accounts for scope 3 GHG emissions generated from on-road vehicle use in transboundary trips, as the Tribe's geographical boundary does not include roadways. The GHG Protocol for Cities recommends including both scope 1 and scope 3 GHG emissions for vehicle travel using the origin-destination method. This method requires understanding where vehicle trips begin and end and being able to account for the distance of travel for each trip that occurs within the Tribe's geographical boundaries (scope 1) and distance of trips that occurs outside of the Tribe's geographical boundary (scope 3). However, since the Tejon Tribe does not have

roadways within the Tribe's geographical boundaries, scope 1 emissions are negligible compared to scope 3. This section describes methodology for estimating GHG emissions associated with fuel combustion from transboundary trips from government fleet, employee commute, and visitor travel.

TGIT uses fuel consumption as the base data for estimating GHG emissions. However, fuel consumption records were not available for any of the sub-categories. Data on vehicle miles traveled (VMT) was available for the government fleet from the Tejon Tribe's vehicle mileage logs. VMT by employee commute and visitor travel was estimated based on number of employees and visitors. GHG emissions were estimated externally from the TGIT following the GHG Protocol for Cities for these sub-categories. Table 11 provides activity data and Table 12 provides average vehicle travel GHG emission factors by sub-category used for estimating transportation GHG emissions.

Table 11 Activity Data for Governmental Scope 3 On-Road Transportation Sector for PCAP GHG Inventory

Sub-Category	Activity Data Type	Activity Data Value	Activity Data Unit
Governmental (Vehicle Fleet)	Vehicle Miles Traveled	22,077	—
Governmental (Employee Commute)	Vehicle Miles Traveled	98,800	—
Governmental (Visitor Commute)	Vehicle Miles Traveled	64,481	—

Table 12 Average Vehicle Emission Factor for estimating Governmental Scope 3 On-Road Transportation Sector Emissions for the PCAP GHG Inventory

Sub-Category	CO_2 (MT/VMT)	CH_4 (MT/VMT)	N_2O (MT/VMT)
Governmental (Vehicle Fleet)	0.000365	0.0000000311	0.0000000214
Governmental (Employee Commute)	0.000349	0.0000000162	0.0000000122
Governmental (Visitor Commute)	0.000349	0.0000000162	0.0000000122

Note: MT = Metric tons; CO_2 = Carbon dioxide, CH_4 = Methane; N_2O = Nitrous oxide; CO_2e = Carbon dioxide equivalent; VMT = Vehicle miles traveled.

On-Road

The On-road sub-sector includes GHG emissions generated from on-road fuel-powered passenger and light duty vehicles. This sub-sector uses VMT as the activity data. Where data was not available, VMT was estimated based on average trip length and number of trips. The average trip length of a one-way trip was assumed to be the distance from the boundary of the Community Center Property along David Road to the center of the City of Bakersfield, which is assumed to be the United States Postal Services office along the 18th Street (Figure 5). This is an approximately 25-mile one-way trip based on distance measured through Google Maps. This estimate results in a 50-mile two-way transboundary trip distance, which would be the distance travelled by a car coming to the Tribe's Community Center Property from the original location and going back to the original location. This distance was used to represent average transboundary travel conditions, assuming that the majority of workers and visitors live in the City of Bakersfield or elsewhere in Kern County that is a similar distance from the Tribe's Community Center Property.

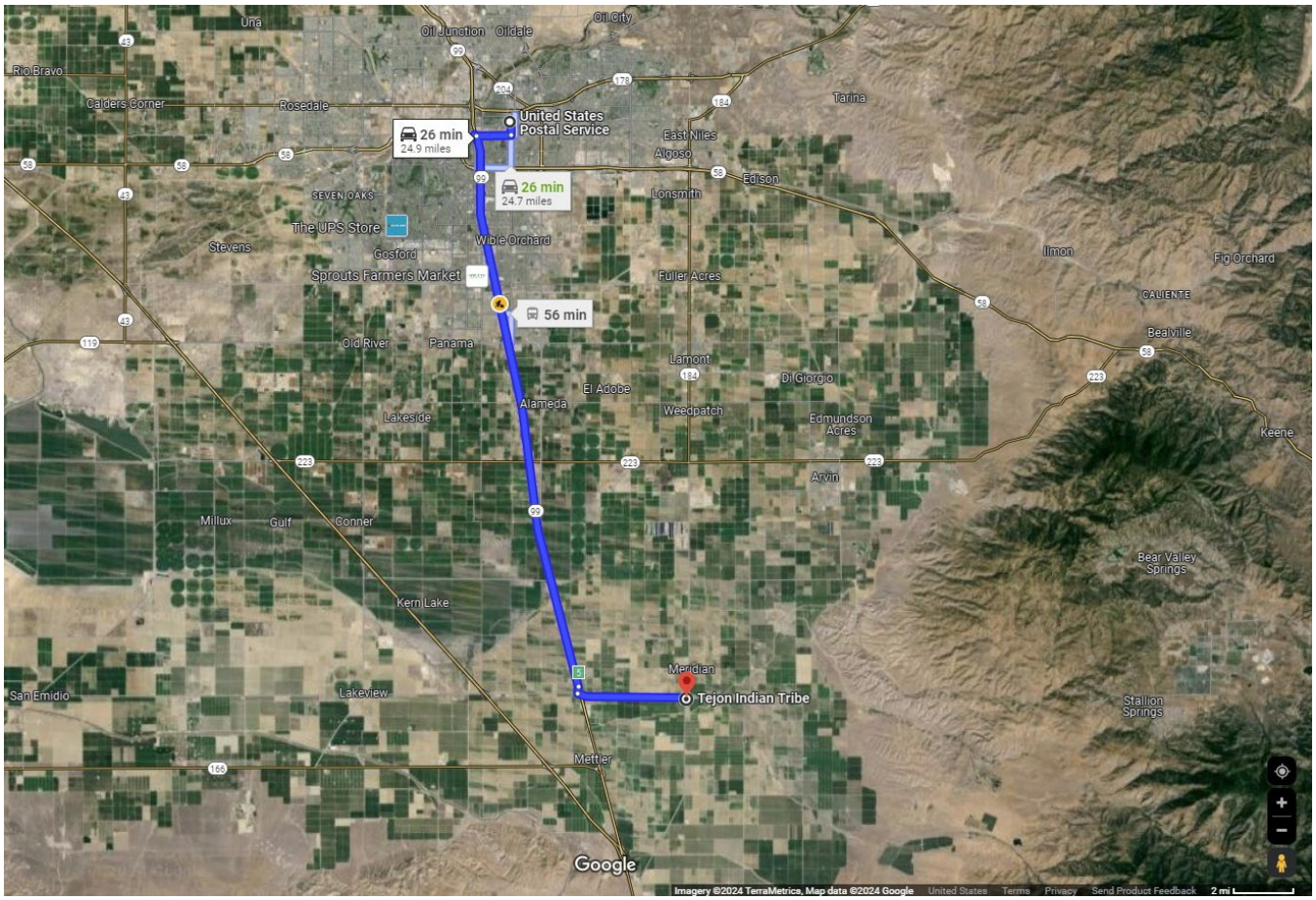

Figure 5 Average Trip Length of a One-Way Trip Measured from the boundary of the Community Center Property to the center of the City of Bakersfield (Screenshot from Google Maps)

Governmental (Vehicle Fleet)

The GHG emissions associated with Tejon Tribe vehicle fleet were calculated by multiplying the annual VMT by the average vehicle emission factor. Annual VMT data for vehicle fleet was available from the vehicle mileage logs provided by the Tribe. Tejon Tribe government uses gasoline fueled vans for government operations. The vehicle emission factors for gasoline fueled light trucks were estimated using CARB's on-road EMFAC model (CARB 2021) for estimating emissions from Tejon Tribe governmental vehicle fleet.

Governmental (Employee Commute)

The GHG emissions associated with Tejon Tribe employee commute were calculated by multiplying the estimated annual employee commute VMT and the average vehicle emission factor. Most employees live in the City of Bakersfield. As such, employee commute VMT was based on number of two-way transboundary trips per employee, average two-way trip length, number of employees, and share of transboundary trips assumed to be induced by the Tribe as per GHG Protocol for Cities. Data on the number of Tejon Tribe employees was provided by the Tribe. The employee vehicle mix and fuel use mix for passenger and light duty vehicles were assumed to be the same as Kern County's vehicle mix and fuel use mix. Hence, the Kern County vehicle emission factors from CARB's on-road EMFAC model were used to calculate GHG emissions (CARB 2021).

Governmental (Visitor Commute)

The GHG emissions associated with visitor commute on-road transportation were calculated by multiplying the estimated visitor commute annual VMT and the average vehicle emission factor. Tejon Tribe hosts multiple cultural events throughout the year which attracts Tribal members to the Tribe's Community Center Property. Brief description of these events is provided below:

i. Family events occurring twice a week, with an average of 60 attendees per week;

ii. Elders' events occurring once a month, with an average of 30 attendees per month;

iii. Cultural Gatherings occurring every Sunday, with an average of 50 attendees each Sunday; and

iv. Tribal Council Meetings occurring every three months, with an average of 60 attendees in each meeting.

VMT was based on number of visitors visiting the Community Center Property for various events per year, average two-way trip length, and share of transboundary trips assumed to be induced by the Tribe as per GHG Protocol for Cities. Data on number of visitors was provided by Tejon Tribe staff based on average event attendance. This estimate only includes the number of visitors attending cultural events at the site and not the number of people visiting the site for delivery of goods. Given the data availability limitations and time constraints for the PCAP submittal timeline, this approach was determined to be a reasonable method to estimate visitor commute VMT at the Tribe's Community Center Property.

It was assumed that the vehicle mix and fuel use mix for passenger and light duty vehicles is the same as that of Kern County. Hence, the Kern County vehicle emission factors from CARB's on-road EMFAC model were used to calculate GHG emissions (CARB 2021).

WASTE

Solid waste Disposal

This section describes methodology for estimating GHG emissions associated with solid waste disposal at landfill(s) located outside the Tribe's geographical boundaries. GHG emissions for the scope 3 Waste sector were calculated using EPA's Waste Reduction Model (WARM), with activity data entered into the TGIT provided in Table 13.

Table 13 Activity Data for Scope 3 Waste Sector for PCAP GHG Inventory

Sub-Category	Activity Data Type	Activity Data Value	Activity Data Unit
Governmental (Solid Waste)	Weight of Waste Produced	21	tons

Governmental Solid Waste Disposal

GHG emissions from solid waste disposal were estimated using the EPA's WARM version 15.1 (EPA 2023) using tons of waste as activity data. Tonnage of solid waste was estimated based on volume of the waste bin at the Community Center Property, number of times waste is collected in a week, and average weight of 1 cubic yard mixed municipal solid waste. Information on the volume of the waste bin and collection pattern was provided by the Tejon Tribe. EPA's volume to weight trash conversion factor (EPA 2016) was used to estimate average annual weight of the waste by the volume of the waste bin.

STATIONARY ENERGY

This section describes methodology for estimating GHG emissions associated with electricity and natural gas consumption at Tribal member residences outside the Tribe's geographical boundary. GHG emissions for the Stationary Energy sub-sector were calculated using the TGIT, with activity data entered into the TGIT provided in Table 14.

Table 14 Activity Data for Scope 3 Stationary Energy Sector for PCAP GHG Inventory

Sub-Sector	Activity Data Type	Activity Data Value	Activity Data Unit
Residential	Electricity Used	3,567,907	kWh
Residential	Natural Gas Used	19,550	MCF

Note: kWh = kilowatt hours; MCF = thousand cubic feet.

Residential

Electricity

Stationary energy scope 3 GHG emissions for the Tejon Tribe include electricity consumption in Tribal member residences located throughout Kern County. Annual electricity consumption data was estimated based on number of Tribal members households and annual electricity consumption per household. Data on number of Tribal members was available from the Tejon Tribe website and number of households were estimated using persons per household in California available from the QuickFacts-California page from the US Census Bureau (US Census Bureau 2022). Average electricity consumption per household data was extracted from Table CE2.5 Annual household site fuel consumption in the West—totals and averages, 2020 from EIA RECS for the "urban" category (EIA 2023).

Natural Gas

Stationary energy scope 3 GHG emissions for the Tejon Tribe include natural gas use in Tribal member residences located throughout Kern County. Annual natural gas use data was estimated based on number of Tribal members households and annual natural gas use per household. Data on number of Tribal members was available from the Tejon Tribe website and number of households were estimated using persons per household in California available from the QuickFacts-California page from the US Census Bureau (US Census Bureau 2022). Average natural gas use per household data was extracted from Table CE2.5 Annual household site fuel consumption in the West—totals and averages, 2020 from EIA RECS for the "urban" category (EIA 2023).

3.7 GHG EMISSIONS FORECAST CALCULATIONS BY SCOPE AND SECTOR

The PCAP GHG emissions forecast consists of emissions generated from current Tribal government operations, future energy consumption at Tribal member residences, the proposed gas station project, and the proposed casino project. It was assumed that government operations and energy consumption at Tribal member residences will continue to be the same in the future (see section 3.3.2 for detailed explanation and assumptions). As such emissions estimate for all government operations and energy consumption at Tribal member residences for GHG emissions forecast are estimated to be the same as that for the GHG emissions inventory. No additional calculations were done for forecasting emissions from government operations and energy consumption at member residences. Future emissions from the proposed casino project were available from the EIS developed for the casino project (DOI 2020). As such, no additional calculations were done for forecasting emissions from the casino project. Emission results for the EIS were directly used for developing the PCAP GHG emissions forecast (see Table 6 for details). GHG emissions calculations were only performed to estimate future emissions from the proposed gas station project.

This section outlines the approach used for estimating GHG emissions forecast from the proposed gas station project. The section is organized by scope, sector, sub-sector, and sub-categories as per GHG Protocol for Cities and provides details on the approach used for forecasting future GHG emissions from the proposed gas station project.

3.7.1 Scope 1

STATIONARY ENERGY

This section describes methodology for estimating future GHG emissions associated with natural gas consumption within the Tribe's geographical boundary. GHG emissions for the Stationary Energy sub-sector were calculated using the TGIT, with activity data entered into the TGIT provided in Table 15.

Table 15 Activity Data for Scope 1 Stationary Energy Sector for the PCAP GHG Forecast

Sub-Sector	Activity Data Type	Activity Data Value	Activity Data Unit
Commercial	Natural Gas Used	327	MCF

Note: MCF = thousand cubic feet.

Commercial

Natural Gas

GHG emissions from natural gas use in the gas station project were calculated using the TGIT community module with annual natural gas consumption estimated from the EIA Commercial Buildings Energy Consumption Survey (CBECS). Annual natural gas use was estimated based on square footage of the convenience store proposed at the gas station project and the average natural gas consumption per square foot in a convenience store with a gas station. The square footage of the proposed convenience store was available from the feasibility study conducted for the gas station project (FAD ND).

Average natural gas use data was extracted from Table C32- Natural gas consumption totals and conditional intensities by building activity subcategories from EIA CBECS (EIA 2022). Average natural gas use data in a convenience store with a gas station is available under the "food sales" category. Data used to calculate annual natural gas consumption are provided in Table 15.

3.7.2 Scope 2

STATIONARY ENERGY

This section describes methodology for estimating future GHG emissions associated with consumption of grid-supplied electricity consumed within the Tribe's geographical boundary. GHG emissions for the Stationary Energy sub-sector were calculated using the TGIT, with activity data entered into the TGIT provided in Table 16.

Table 16 Activity Data for Scope 2 Stationary Energy Sector for the PCAP GHG Forecast

Sub-Sector	Activity Data Type	Activity Data Value	Activity Data Unit
Commercial	Electricity Used	228,150	kWh

Note: kWh = kilowatt hours.

Commercial

Electricity

GHG emissions from electricity consumption in the gas station project were calculated using the TGIT community module with annual electricity consumption estimated from the EIA CBECS. Annual electricity consumption was estimated based on square footage of the convenience store proposed at the gas station project and the average electricity consumption per square foot in a convenience store with a gas station. The square footage of the proposed convenience store was available from the feasibility study conducted for the gas station project (FAD ND).

Average electricity consumption data was extracted from Table C22- Electricity consumption totals and conditional intensities by building activity subcategories from EIA CBECS (EIA 2022). Average electricity consumption data in a convenience store with a gas station is available under the "food sales" category. Data used to calculate annual electricity consumption are provided in Table 16.

3.7.3 Scope 3

TRANSPORTATION

The PCAP GHG forecast only accounts for scope 3 GHG emissions generated from on-road vehicle use in transboundary trips. The proposed gas station project is not expected to emit any scope 1 on-road transportation emissions because limited vehicle use is expected within the boundary of the gas station project. This section describes methodology for estimating GHG emissions associated with fuel combustion from transboundary trips from vehicles visiting the proposed gas station for fueling or using the convenience store. GHG emissions were estimated

externally from the TGIT following the GHG Protocol for Cities. Table 17 provides activity data and Table 18 provides average vehicle travel GHG emission factors used for estimating future on-road transportation emissions from the vehicles visiting the proposed gas station project.

Table 17 Activity Data for Commercial Scope 3 Transportation Sector for PCAP GHG Forecast

Sub-Category	Activity Data Type	Activity Data Value	Activity Data Unit
Commercial	Vehicle Miles Traveled	4,471,250	-

Table 18 Average Vehicle Emission Factor for estimating Commercial Scope 3 Transportation Sector Emissions for the PCAP GHG Forecast

Sub-Category	CO_2 (MT/VMT)	CH_4 (MT/VMT)	N_2O (MT/VMT)
Commercial	0.146835	0.0000125087	0.0000086335

Note: MT = Metric tons; CO_2 = Carbon dioxide, CH_4 = Methane; N_2O = Nitrous oxide; CO_2e = Carbon dioxide equivalent; VMT = Vehicle miles traveled.

On-Road

Commercial (Gas Station Project)

The On-road sub-sector includes GHG emissions generated from VMT by vehicles visiting the gas station project. VMT was based on average daily traffic at the gas station, average two-way trip length, and share of transboundary trips assumed to be induced by the Tribe as per GHG Protocol for Cities. Data on the expected number of daily visits to the proposed gas station project was not available, so estimates from analyses for other gas station projects were used to gain an estimate of the number of trips per day generated by the gas station. The average daily traffic at the gas station from the Santee Arco Station Project available from the project's Initial Study/Mitigated Negative Declaration study (Royal Share LLC 2021) was assumed to be the average daily traffic at Tejon Tribe's proposed gas station project. The study conducted for the Santee Arco Station Project uses Institute of Transportation Engineer's Guidelines for Transportation Impact Studies for developing the trip generation estimates. Since Kern Council of Governments also uses the same guidelines for trip generation estimates, it was assumed that average daily traffic estimates for the Santee Arco Station Project can be used as a proxy for average daily traffic at Tejon Tribe's proposed gas station project. Methodology used to estimate average two-way trip length and share of transboundary trips assumed to be induced by the Tribe is described in Section 3.6 (On-road sub-sector).

It was assumed that the vehicles mix that will be visiting the proposed gas station project for refueling gasoline and diesel will be the same as that of Kern County. Hence, vehicle emission factor was assumed to be the same as Kern County's vehicle emission factor for gasoline and diesel fueled vehicles estimated using CARB's on-road EMFAC model (CARB 2021). The GHG emission factors used include both light- and heavy-duty vehicles.

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Appendix B

GHG Reduction Quantification

Measure for Community Center Property (10-Acre Land)

Items	Sectors	Measure	Location	Annual Reduction(+)/Increase(-)	Unit	MTCO2/Unit Emission Reduction Factor	GHG Emission Reduction Potential	Cost($)	Calculation Methodology
1	Energy	Solar PV (Grid)	10-Acre Land	755,877.00	kWh	0.00024203961	182.9521744	$ 2,100,000	To calculate the emission reduction using the NREL PVWatt application, you multiply the amount of energy consumption by the grid emission intensity. Given: Energy consumption reduction: 755 MWh Grid emission intensity: 0.00024 metric tons CO2 per kWh We can use the following formula to find the emission reduction: Emission reduction = Energy consumption reduction * Grid emission intensity Substituting the values: Emission reduction = 755 MWh * 0.00024 metric tons CO2 per kWh Now, let's perform the calculation: Emission reduction = 755 MWh * 0.00024 metric tons CO2 per kWh ≈ 181.2 metric tons CO2 So, the proposed PV system will result in an emission reduction of approximately 181.2 metric tons of CO2.
2		BESS (NG Power Plant)	10-Acre Land						
3		Energy Efficiency	10-Acre Land	22,150.00	kWh	0.00024203961	5.361177366	$ 135,000.00	To calculate the emission reduction introduced by the proposed energy efficiency measures, we first determined the reduction in energy consumption and then multiplied it by the grid emission intensity. Given: - Proposed annual energy consumption reduction: 20% - Grid emission intensity: MTCO2/kWh 1. Determine the reduction in energy consumption. 2. Multiply the reduction in energy consumption by the grid emission intensity to find the emission reduction. The tribe's monthly electricity bill indicates an annual energy consumption of 110,275 kWh. Introduced reduction in energy consumption = 20% of 110,275 kWh Emission reduction = (20% of 110,275 kWh) * Grid emission intensity Given the value of 110,275 kWh and the grid emission intensity (MTCO2/kWh), the amount of emission reduction is 5.36 MTCO2
4		taff Transportation Electrificatio	10-Acre Land	(24,700.00)	kWh	0.00024203961	-5.978378372	$ 587,500.00	
5		overnmental Fleet Electrificatio	10-Acre Land	(5,519.25)	kWh	0.00024203961	-1.335877119	$ 30,000.00	
6	Transportation	taff Transportation Electrificatio	10-Acre Land	98,800.00	VMT	0.00035273306	34.85002601	$ 640,000.00	To calculate the aggregated emission reduction introduced by replacing the tribal staff's vehicles with electric vehicles, we need to consider both the emission reduction from avoiding fossil fuel car usage and the emission increase from the electricity consumption of electric vehicles. Given: Number of tribal staff vehicles: 18 Vehicle Mile Travel (VMT) caused by each vehicle Emission generated by fossil fuel vehicles per mile of travel Electricity consumption of electric vehicles: 30 MWh/year We used the following steps: 1. Calculate the emission reduction from avoiding fossil fuel car usage. 2. Calculate the emission increase from the electricity consumption of electric vehicles. 3. Subtract the emission increase from the emission reduction to find the net emission reduction.
7		overnmental Fleet Electrificatio	10-Acre Land	22,077.00	VMT	0.00037125128	8.19611443	$ 30,000.00	
Total							**226.8020126**	**$ 2,852,500**	

Measure for Mettler Site (300-Acre

Items	Sectors	Measure	Location	Annual Reduction(+)/Increase(-)	Unit	MTCO2/Unit Emission Reduction Factor	GHG Emission Reduction Potential	Cost($)	Calculation Methodology
1	**Energy**	Solar PV (Grid)	300 Acre	3,023,508.00	kWh	0.00024203961	731.81	$ 8,400,000	To calculate the emission reduction using the NREL PVWatt application, we multiplied the amount of energy consumption by the grid emission intensity. Given: Energy consumption reduction: 3 GWh Grid emission intensity: 0.00024 metric tons CO2 per kWh We can use the following formula to find the emission reduction: Emission reduction = Energy consumption reduction * Grid emission intensity Substituting the values: Emission reduction = 3 GWh * 0.00024 metric tons CO2 per kWh Now, let's perform the calculation: Emission reduction = 3 GWh * 0.00024 metric tons CO2 per kWh ≈ 731.81 metric tons CO2 So, the proposed PV system will result in an emission reduction of approximately 731.81 metric tons of CO2.
2	**Water**	BESS (NG Power Plant)	300 Acre	21,717.50	kWh	0.00024203961	5.26	TBD	Following the "*Energy Recovery from Wastewater Treatment Plants in the United States: A Case Study of the Energy-Water Nexus*" paper (https://www.mdpi.com/2071-1050/2/4/945) Twe calculated the reduction in CO2 emissions annually due to the electricity generation from the proposed digester, we can use the following steps: Calculate the total electricity generation per year: Total electricity generation = Electricity generated per day * 365 days Calculate the CO2 emissions reduction per year: CO2 reduction = Total electricity generation * CO2 emissions factor Let's perform the calculations: Total electricity generation per year: Electricity generated per day = 350 kWh per million gallons * 170,000 gallons/day / 1,000,000 = 59.5 kWh Total electricity generation = 59.5 kWh/day * 365 days = 21,717.50 kWh/year CO2 emissions reduction per year: CO2 reduction = 21,717.50 kWh/year * 0.00024203961 MTCO2/kWh ≈ 5.26 MT CO2/year So, the proposed digester will reduce approximately 5.26 metric tons of CO2 emissions annually.
8		WWTP Digester	300 Acre	21,717.50	kWh		5.26	TBD	
Total							**737.07**	**$ 9,152,500**	

Tribal Member Residences - Scope 3

Items	Sectors	Measure	Location	Annual Reduction(+)/Increase(-)	Unit	MTCO2/Unit Emission Reduction Factor	GHG Emission Reduction Potential	Cost($)	Calculation Methodology
1	**Energy**	RESIDENTIAL ENERGY EFFICIENCY AND ELECTRIFICATION PROGRAM (REEEP)	member residences	3,567,907	kWh	0.00024203961	863.57	$ 2,975,000	Following the GoGreen Home Energy Financing Program Methodology available (https://www.treasurer.ca.gov/caeatfa/cheef/reel/forms/bie.pdf) to identiy the list of potential Energy Efificiency Measures and NREL PVWatt to define how much solar needed to cover a typical 1700sqf single family home in Bakersfield area, we calculated the emission reduction resulting from the deployment of energy efficiency measures and a 10 kW PV system, you'll need to follow these steps: 1. **Determine Baseline Electricity Consumption**: Analyze the utility bill of the sample home occupant to determine their baseline electricity consumption in kWh over a given period (e.g., monthly or annually). 2. **Calculate Reduction in Electricity Consumption**: Estimate the reduction in electricity consumption resulting from the deployment of energy efficiency measures (such as efficient lighting and appliances). This reduction would be the difference between the baseline consumption and the expected consumption after the implementation of the measures. 3. **Calculate Electricity Generation from PV System**: Determine the amount of electricity generated by the 10 kW PV system over the same period. This can be calculated based on the system's capacity factor and efficiency. 4. **Calculate Total Electricity Offset**: Combine the reduction in electricity consumption from energy efficiency measures with the electricity generated by the PV system to get the total electricity offset from the grid. 5. **Determine Grid Emission Intensity**: Obtain data on the emission intensity of the power grid from which the sample home receives electricity. This value is typically measured in emissions per kWh. 6. **Calculate Emission Reduction**: Multiply the total electricity offset (step 4) by the grid emission intensity (step 5) to determine the emission reduction resulting from the deployment of energy efficiency measures and the PV system. The formula for calculating emission reduction would be: Emission Reduction (kgCO2) = (Total Electricity Offset from grid (kWh) × Grid Emission Intensity (kgCO2/kWh))

Appendix C

Tejon Workforce Readiness Survey

1 TEJON TRIBE EDUCATIONAL BACKGROUND AND DECARBONIZATION JOB READINESS SURVEY

Welcome to the Tejon Tribe Educational Background and Decarbonization Job Readiness Survey! This initiative is designed to gather insights into the educational qualifications and job interests of our tribe members, focusing on the burgeoning opportunities within decarbonization projects.

These projects include energy efficiency improvements, renewable energy installations, and broader environmental sustainability efforts, which are expected to create a wide array of job opportunities. Positions range from technical roles like technicians and maintenance workers, to administrative and project management roles, as well as planning and environmental specialists among others.

Your feedback will help us tailor educational programs and job training initiatives to better align with these emerging opportunities.

Please rest assured that the survey is anonymous, and your responses will be confidential.

2 TARGET AUDIENCE

Members of the Tejon Tribe in California.

3 SURVEY QUESTIONS

3.1 SECTION 1: DEMOGRAPHIC INFORMATION

1. Age Group:
- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

2. Gender:
- Male
- Female
- Prefer not to say
- Other

3.2 SECTION 2: EDUCATIONAL BACKGROUND

3. Highest Level of Education Completed:
- Some high school
- High school graduate
- Some college
- Trade/Technical/Vocational training
- Associate degree
- Bachelor's degree
- Graduate or professional degree

4. Field of Study (if applicable):
- STEM (Science, Technology, Engineering, Mathematics)
- Business/Administration
- Environmental Science/Studies
- Liberal Arts/Humanities
- Vocational/Technical Studies
- Other (Please specify)

5. Additional Certifications or Skills:
- Renewable Energy Certifications
- Environmental Management
- Project Management
- Technical/Trade Skills
- None
- Other (Please specify)

3.3 SECTION 3: INTEREST AND READINESS FOR DECARBONIZATION JOBS

6. Awareness of Decarbonization Projects:
- Yes
- No

7. Interest in Working in Decarbonization Projects:
- Very interested
- Somewhat interested
- Not interested
- Unsure

8. Preferred Type of Decarbonization Job:
- Technical/Engineering
- Administrative

- Research
- Education and Training
- Maintenance
- Environmental
- Project Management
- Planning
- Other (Please specify)

9. Skills or Training Needed for Desired Job:
- None, I have the necessary skills/training
- Technical skills/training
- Administrative skills/training
- Environmental management and sustainability
- Project management
- Other (Please specify)

10. Willingness to Participate in Job Training Programs:
- Very willing
- Somewhat willing
- Not willing
- Unsure

3.4 SECTION 4: ADDITIONAL COMMENTS

11. Any other comments or suggestions regarding education and employment opportunities related to decarbonization on the reservation?
- Yes (Please specify)
- No

4 CLOSING REMARKS

Thank you for participating in this survey! Your input is crucial in shaping the future of our community's employment and educational opportunities in the emerging field of decarbonization. Your feedback will guide us in developing targeted training programs and educational resources to support our tribe members in taking advantage of these new job opportunities. If you have any questions or wish to learn more about this initiative, please contact us at [insert contact information].