Fallon Paiute Shoshone Tribe

Comprehensive Climate Action Plan (CCAP)

DRAFT

Acknowledgements

Acronyms

Acronym	Definition
AC	Air Conditioning
AVERT	Avoided Emissions and generation Tool
AWD	All Wheel Drive
BAU	Business As Usual
BIA	Bureau of Indian Affairs
BLM	Bureau of Land Management
BPI	Building Performance Institute
BRIC	Building Resilient Infrastructure and Communities
CCAP	Climate Change Adaptation Plan
CEJST	Climate and Economic Justice Screening Tool
CFI	Charging and Fueling Infrastructure
CHR	Community Health Representative
COBRA	Consolidated Omnibus Budget Reconciliation Act
CPRG	Climate Pollution Reduction Grant
DCFC	Digital Current Fast Charge
DOE	Department Of Energy
EF	Emission Factor
EJ	Environmental Justice
EPA	Environmental Protection Agency
EPD	Environmental Protection Department
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FPST	Fallon Paiute-Shoshone Tribe
FTA	Federal Transit Administration
FTE	Full Time Employee
GHG	Green House Gas

GHGI	Green House Gas Inventory
GROW	Goal, Reality, Options, Will
GWP	Global Warming Potential
HEAR	Home Electrification & Appliance Rebates
HEPA	High Efficiency Particulate Air
HFC	Hydrofluorocarbons
HHS	Health and Human Services
HIP	Home is Possible
HR	Human Resources
HUD	Housing and Urban Development
HVAC	Heating, Ventilation, and Air Conditioning
ICDBG	Indian Community Development Block Grant
IHBG	Indian Housing Block Grant
IPCC	Intergovernmental Panel on Climate Change
IRA	Inflation Reduction Act
ISDEAA	Indian Self-Determination and Education Assistance Act
IT	Information Technology
ITEP	Institute for Tribal Environmental Professionals
LIDAC	Low-Income and Disadvantaged Communities
LULUCF	Land Use, Land-Use Change, and Forestry
MSW	Municipal Solid Waste
MT	Metric Tons
NCEF	Nevada Clean Energy Fund
NEI	National Emissions Inventory
NEMT	Non-Emergency Medical Transportation
NEPA	National Environmental Policy Act
NEVI	National Electric Vehicle Infrastructure
NPS	National Park Service
NRCS	Natural Resource Conservation Service
NV	Nevada
PCAP	Priority Climate Action Plan

PM	Project Management
PV	Photovoltaics
PW	Public Works
RACI	Responsible, Accountable, Consulted, and Informed
RECS	Renewable Energy Certificates
SLOPE	State and Local Planning for Energy
SOAR	Strengths, Opportunities, Aspirations, Results
SWOT	Strength, Weaknesses, Opportunities, Threats
TA	Tribal Administrator
TEK	Traditional Ecological Knowledge
TERO	Tribal Employment Rights Office
THPO	Tribal Historic Preservation Officer
USGS	United States Geological Survey
USDA	United States Department of Agriculture
VMT	Vehicle Miles Traveled
VW	Volkswagen
WARM	Waste Reduction Model
WIOA	Workforce Innovation and Opportunity Act

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Executive Summary

The Fallon Paiute-Shoshone Tribe (FPST), located in western Nevada, recognizes the increasing threat that climate change poses to the community, resources and the traditional ways of life. The Comprehensive Climate Action Plan (CCAP) is a proactive effort to protect public health, the environment, cultural and naturals resources and ensure long-term resilience of the Tribe's environment and economy.

The Tribe is concerned about:
- Rising temperatures and prolonged droughts
- Greenhouse gas emissions impacts
- Increased frequent of wildfires within the area and region
- Impacts to agriculture, water resources and infrastructure
- Wildlife and traditional plant species

These climate impacts threaten the Tribe's cultural and natural resources and food sovereignty. The CCAP was developed to build resilience and protect its resources, traditions of the Tribe and future generations from the impacts of climate change.

1   Introduction

The Fallon Paiute-Shoshone Tribe (FPST) is a federally recognized sovereign Tribal Nation located in Churchill County, Nevada. Traditionally known as the Toi-Ticutta, or "Cattail Eaters," the Tribe is composed of Northern Paiute and Western Shoshone people who have lived in the Lahontan Valley and greater Great Basin region for thousands of years. Their deep ancestral ties to the land, water, and sky continue to guide cultural identity, spiritual practices, and stewardship of sacred landscapes.

The Tribe's land base spans approximately 8,339 acres across two main areas: The Fallon Reservation, located about eight miles northwest of Fallon, and the Fallon Colony, situated within city limits. As of 2025, the Tribe has 1,568 enrolled members, many of whom reside on or near Tribal lands. A recent additions of 10,000-acres to its land base, under the National Defense Authorization Act, reflects the Tribe's continued restoration of its homelands.

Fox Peak—Numunaa Nobe, or "First Parent's Home"—is the spiritual center of the Fallon Paiute-Shoshone world. It holds deep ceremonial and historical significance and remains a living site of prayer, cultural teaching, and intergenerational learning. Sacred areas such as Grimes Point, Hidden Cave, Spirit Cave, Stillwater Marsh, Carson Sink, Dixie Valley, and Walker Lake (Agai Pah) continue to anchor the Tribe's cultural identity and seasonal lifeways.

FALLON PAIUTE-SHOSHONE TRIBE

Figure I-A
FPST Reservation, Colony, and Vicinity Map
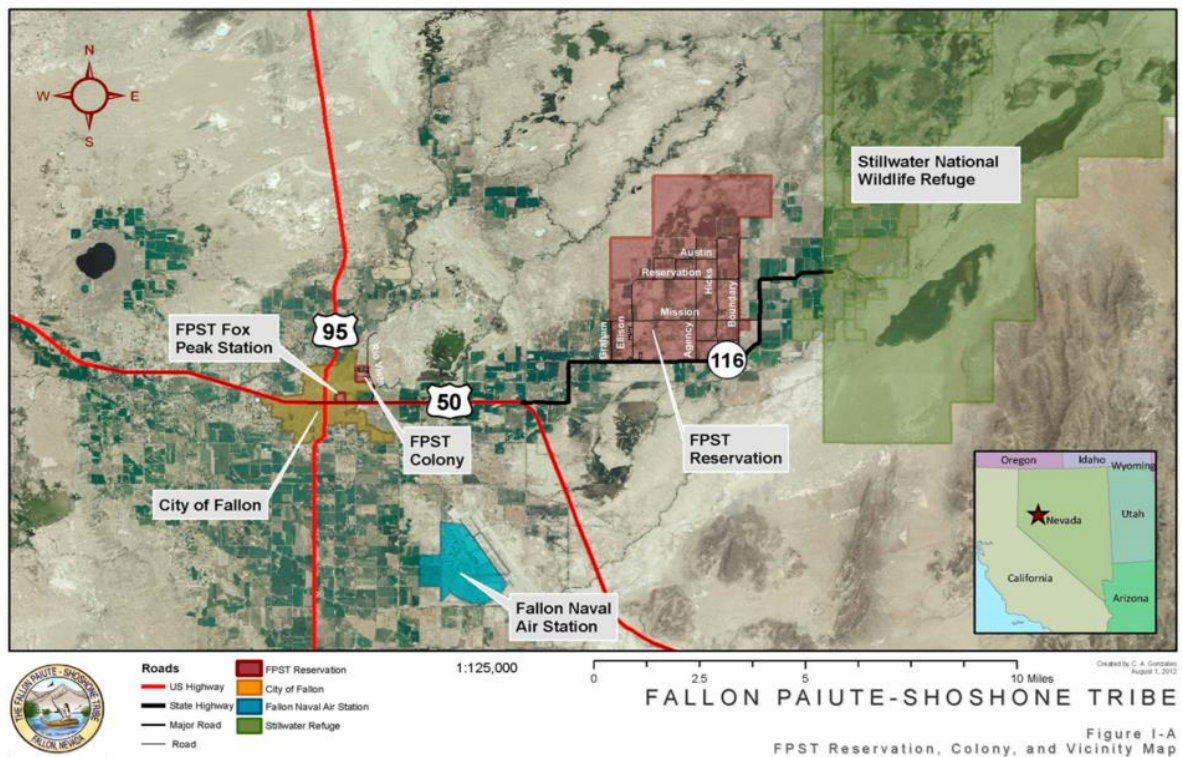
This map shows the Fallon Paiute-Shoshone Reservation and Colony boundaries, along with surrounding areas of significance. It defines the geographic scope of the PCAP and CCAP, covering Tribal lands, residential zones, key infrastructure, and cultural landmarks essential to climate planning and resilience.

The FPST maintains a strong network of essential services that support community health and resilience, including the Health Center, Transportation, Environmental Protection, Public Works, Natural Resources, Housing, Law Enforcement, Education, Senior Services, Education, CHR and Behavioral Health, Emergency Management, and Wellness Center.

In addition, the Tribe operates successful enterprises—such as Fox Peak Station (Fallon and Fernley), Fox Peak Cinema, and the upcoming Desert Embers Dispensary—supporting local employment and economic self-sufficiency.

The Fallon Paiute-Shoshone Tribe is advancing comprehensive environmental protection strategies to reduce greenhouse gas (GHG) emissions and promote long-term climate resilience.

1.1 CPRG Overview

On March 1, 2023, the U.S. Environmental Protection Agency (EPA) announced the availability of $250 million in planning grants, which included a $25 million set-aside for tribes and territories, to reduce climate pollution associated with greenhouse gas emissions and other harmful air pollution. This funding is part of the 5 billion Climate Pollution Reduction Grant (CPRG) funded through the 2020 Inflation Reduction Grant (IRA).

The CPRG program has three broad objectives:

- Tackle damaging climate pollution, while supporting the creation of good jobs and lowering energy costs for families.
- Accelerate work to address environmental injustice and empower community-driven solutions in overburdened neighborhoods.
- Deliver cleaner air by reducing harmful air pollution in places where people live, work, play, and go to school.

This strategy will allow communities to address climate change and identify opportunities to revitalize the energy sector, while addressing historic environmental injustices and inequities. The CPRG program is split into two phases, a planning phase and an implementation phase. The FPST Environmental Protection Department received $ 169,749 in funding for the planning phase of the CPRG.

Under the CPRG Planning Grant program, grant recipients are required to develop and submit two deliverables over the course of the program period:

- A Priority Climate Action Plan (PCAP), completed on April 1, 2024.
- A Comprehensive Climate Action Plan (CCAP), completed in August 2025.

This document is intended to fulfill the CCAP deliverable obligation for the Fallon Paiute Shoshone Tribe.

1.2 CCAP Purpose and Scope

The purpose of the Comprehensive Climate Action Plan (CCAP) is to reduce vulnerability, build resilience, and facilitate adjustments to the changing climate, and protect human health, well-being, and its cultural and natural resources. The geographic scope of the CCAP is the Fallon Paiute Shoshone Tribe Reservation and Colony. The FPST Reservation and Colony have an area of approximately 18,339 acres, and a population of approximately 1,200 people.

1.3 Approach to developing the CCAP

While the Priority Climate Action Plan focused on identifying near-term, high-impact, implementation-ready GHG reduction measures in three key sectors—transportation, electricity use, and solid waste—the CCAP expands the planning framework to include all sources and sinks of emissions. It introduces long-term modeling, deeper infrastructure assessments, and pathways for policy, funding, and workforce development.

The CCAP includes robust data analysis, detailed implementation timelines, and measurable indicators. It quantifies the co-benefits of GHG reduction strategies—such as improved air quality, energy cost savings, and cultural preservation—and integrates Traditional Ecological Knowledge (TEK) and community input. Together, these elements reflect FPST's commitment to sovereignty, sustainability, and environmental justice.

2   Tribal Organization and Considerations

2.1 The Tribal CCAP Development and Advisory Team

The development of the CCAP included building from the Priority Climate Action Plan, which defined the Tribe's resilience priorities. This included research, surveys, public meetings and department and council input. An Advisory Team was formed, which included the participation of representation from the Fallon Business Council (FBC), Environmental Protection Department (EPD), Public Works Department (PWD), Health Center Department (HCD) Emergency Management Department (EMD), Housing Department (HD), Wetlands Management (WM), Community Learning Center (CLC) and Natural Resources Department (NRD).

2.2 Special Considerations for Tribal Entities

The FPST, located in the Carson Desert of west-central Nevada, faces increasing climate change impacts threatening its environment, economy, health, and cultural heritage. Drawing from scientific data and Tribal knowledge, the CCAP identifies six priority areas of concern.

Priority Area	Key Concerns	Main Vulnerabilities
Wildfire	- Increased frequency & severity due to heat, snowmelt, invasive species	- Smoke-related health issues (esp. elders) - High fire risk in wetlands - Indoor air infiltration
Drought	- Long-term droughts reducing ag water supply - Loss of cultural plants	- Loss of income (agriculture/livestock) - Declining native plant availability - Poor drought planning
Wetlands	- Reduced water delivery & quality - Invasive plants, wildfire risk	- Decline in cattails, bulrush, wildlife - Mercury & fertilizer contamination - Cultural heritage loss
Elevated Temps	- 3.3°F summer temp increase since 2000 - Projected increase up to 6°F	- Heat-related illness risks - Poor cooling in homes - Longer mosquito seasons & algae blooms
Cultural Resources	- Drought, heat, and wildfire impact key plants & sites	- Decline in pine nuts, onions, berries - Shifting harvests off Tribal lands - Loss of cultural practices
Drinking Water	- Sole aquifer over-allocated & under-monitored - Recharge is drought-sensitive	- Limited conservation incentives (flat rates) - Inactive monitoring wells - Future supply uncertainty

Next Steps:

- Integrate adaptation strategies into Tribal programs
- Continue monitoring, outreach & grant-seeking (e.g., BIA Resilience, EPA CPRG)
- Maintain this as a living document with regular updates

By blending Traditional Ecological Knowledge (TEK) with modern scientific insights, and by leveraging both sovereign authority and federal partnership opportunities, the FPST is proactively seeking to safeguard its cultural lifeways and the health of the community and environment. This introduction rooted in respect for the Tribe's history, values, current challenges, sets the tone for a broader CCAP that seeks to uphold sacred responsibilities to the land, while strengthening community resilience.

As a sovereign nation, the FPST holds inherent rights to self-governance, particularly in managing Tribal lands, cultural resources, and community welfare. Federal policies shape its climate response through:

- Trust Responsibility: The United States government has a legal obligation to protect tribal treaty rights and resources, which often translates to collaborative efforts in environmental protection.
- National Environmental Policy Act (NEPA): Requires federal agencies to consult with tribes when projects may affect tribal lands or resources, offering a vital tool to advocate for responsible environmental practices.
- Tribal Consultation Requirements: Various federal statutes and Executive Order 13175 mandate that tribal governments be meaningfully involved in decisions impacting their lands, waters, and sacred sites—helping to integrate tribal priorities into policy-making.
- Funding and Partnership Opportunities: Grant programs through agencies like the Bureau of Indian Affairs (BIA), Environmental Protection Agency (EPA), and Federal Emergency Management Agency (FEMA) support tribal climate adaptation, resilience, and pre-disaster mitigation initiatives.
- Self-Determination Authority: The Indian Self-Determination and Education Assistance Act (ISDEAA) enables tribes to administer federal programs related to environmental protection, infrastructure, and health services—empowering locally driven climate strategies.
- Environmental Justice and Climate Equity: Executive Order 14008 elevates tribal inclusion in national climate policy and directs federal agencies to prioritize environmental justice for Indigenous communities, including access to clean energy and resilient infrastructure.
- Sacred Sites and Cultural Protections: Executive Order 13007 affirms tribal access to and protection of sacred sites on federal lands, a key concern in climate-related land and water management.

2.3 Collaboration

Climate adaptation is a collective responsibility that requires coordinated efforts across all sectors of the Tribe. The effects of climate change, such as flooding, drought and extreme heat, do not respect jurisdictional boundaries. As such, this plan relied on a multi-stakeholder approach to build resilience by leveraging diverse resources, knowledge, and perspectives. This section outlines the structures and processes for collaborative action throughout the implementation of the CCAP.

The Environmental Protection Department formed an Advisory Team, which included representatives of Tribal departments, including the Environmental Protection staff, Public Works, Natural Resources, Health Center, Emergency Management, Housing, Wetlands Management and Community Learning Center. This Team provided expert advice and diverse feedback in developing climate action planning.

The EPD provided community engagement and outreach to gain input from the community through public surveys and public meetings. The EPD created a community survey to determine the focus areas of the climate action plan. According to the community survey, transportation, agriculture and solid waste emit the most GHGs on Tribal land. Because of limited data on agriculture emissions, we instead included electricity use in the GHG inventory. The EPD created a GHG inventory for the three major sources of emissions.

The EPD held community meetings to identify major sources of pollution and emissions, discuss the GHG inventory results and identify near-term, high priority measures, which would reduce the Tribe's greenhouse gas emissions. The EDP created a second community survey to gauge the community's interest on various reduction measures. Input from the surveys and community meetings was used to develop priority reduction measures outlined in the PCAP. The EDP also held departmental meetings, in which department heads and FBC members provided input on reduction measures and priorities.

The EPD collaborated with the Institute of Tribal Environmental Professionals (ITEP) and Northern Arizona University (NAU) to acquire National Emission Inventory data and calculate sectors emissions and reduction estimates. The Native American Environmental Protection Coalition (NAEPC), which the FPST is a member of, assisted with community outreach education assistance. The EPD also attended assistance meetings with the U.S. Environmental Protection Agency (EPA) in developing the CCAP.

3   Greenhouse Gas (GHG) Inventory

The Fallon Paiute Shoshone Tribe's Greenhouse Gas (GHG) Inventory establishes a 2020 sector-based emissions baseline, developed per EPA's Climate Pollution Reduction Grant guidance using 100-year Global Warming Potential (GWP) values from the Intergovernmental Panel on Climate Change (IPCC) 's Fifth Assessment Report (AR5). The methodology generally follows the structure and approach of the EPA's Tribal GHG Inventory Tool.

The GHG emissions inventory focuses on three emission sources: transportation, electricity use and waste generation. These focus areas were selected based on a community survey, public input and data availability. Additionally, transportation and electric consumption are the highest sources of emissions in the U.S and occur on all Tribal land. Emissions were calculated using different downscaling methods using population count and land area factors.

The total estimated annual GHG emissions from the three focus sources (i.e. transportation, electricity use and waste) is 10,997 MT CO2e. On-road transportation is the highest source of emissions and accounts for 87% of total emissions, followed by electricity at 10% and solid waste at 4%.
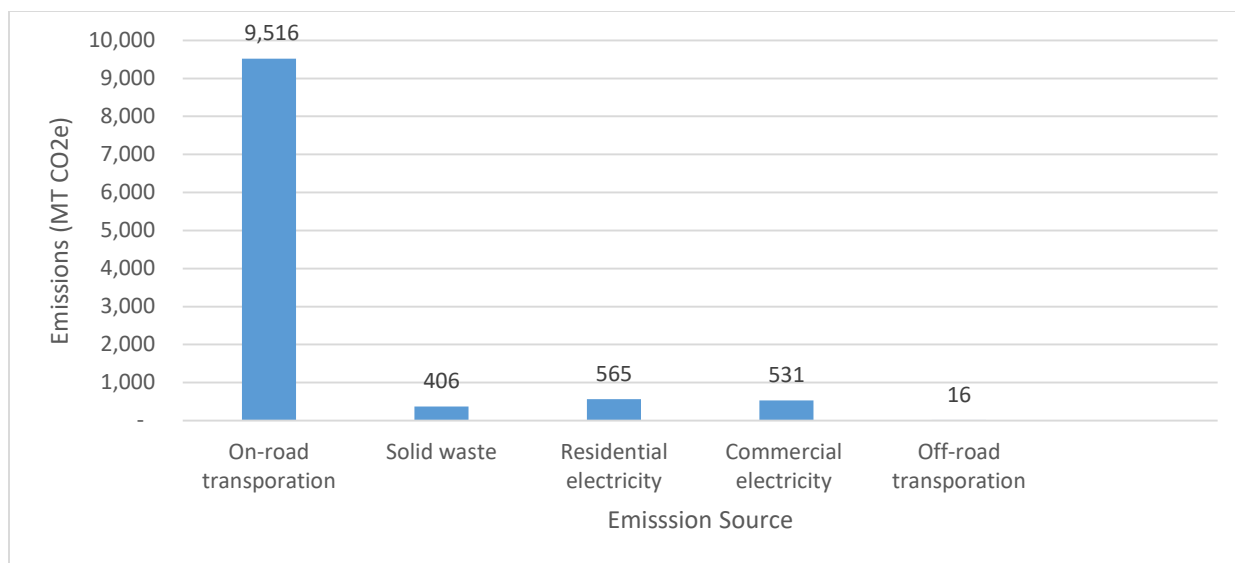
FPST GHG Emissions by Source

3.1 Inventory Methodology

Emissions were scaled using FPST-specific data: ~1,200 residents, ~330 households, and ~137,000 sq. ft. of commercial space. Sectoral estimates combined direct emissions factors with proxy data from Churchill County, Nevada state agencies, and national averages.

The following inventory presents the Fallon Paiute Shoshone Tribe's 2020 GHG baseline emissions by sector. Methodology includes population-based downscaling from Churchill County and national datasets, use of EPA tools (Tribal GHG Inventory Tool, WARM, SLOPE), and IPCC AR5 100-year Global Warming Potentials. Household scaling reflects approximately 330 occupied homes on FPST lands; commercial energy use is scaled using tribal square footage estimates (~137,000 sq. ft.). Emissions factors are drawn from EPA's GHG Emissions Factors Hub (2024) and the National Emissions Inventory (NEI, 2020).

Limitations and Data Gaps: Some values are estimated using proxies from county or state sources where tribal data are not currently available. Fugitive emissions reflect EPA default leakage rates. Waste and wastewater estimates assume average per capita disposal and septic usage patterns. Transportation emissions are derived from vehicle miles traveled and average vehicle mix assumptions.

3.1.1 On-Road Transport

Activity data.
To calculate on-road vehicles emissions, we used a population ratio to downscale county emissions to tribal emissions. The 2020 Churchill County on-road emissions were 202,357 MTCO2e (NEI, 2020), and the county's population in 2020 was 25,516 (US Census Bureau). The Tribal emissions were estimated to be 9,517 MT CO2e. Carbon dioxide (CO2) accounts for 99% of on-road emissions.

$$\text{Tribal onroad emissions} = \frac{\text{Tribal population}}{\text{County population}} \times \text{County onroad emissions}$$

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$$9{,}517 \text{ mt CO2e} = \frac{1{,}200}{25{,}516} \times 202{,}357 \text{ MT CO2e}$$

	CO2 (MT CO2e)	N2O (MT CO2e)	CH4 (MT CO2e)	Total GHG
Tribal On-road emissions	9,448.70	46.22	21.79	9,516.72

3.1.2 Off-Road Transport

Activity data.
Non-road mobile sources of emissions include any source that is not stationary and does not travel on paved roadways. Non-road equipment includes construction, agricultural, recreation, lawn and gardening and commercial equipment. The only significant non-road emission source on tribal lands is agricultural equipment, and therefore we only estimated emissions from this source. To estimate emissions from agricultural equipment, we used land area to allocate county emissions data to tribal emissions. The 2020 Churchill County off-road emissions from agricultural equipment were 5,987 MTCO2e (NEI, 2020), and the county's land area is 4950.16 square miles (3,168,102 acres) (US Census Bureau). The tribal emissions were estimated to be 16 MT CO2e. Carbon dioxide (CO2) accounts for 99% of off-road emissions.

$$\text{Tribal agriculture equipment emissions} = \frac{\text{Tribal land area}}{\text{County land area}} \times \text{Agriculture equipment emissions}$$

$$16 \text{ mt CO2e} = \frac{8{,}339 \text{ acres}}{3{,}168{,}102 \text{ acres}} \times 5{,}987 \text{ mt CO2e}$$

3.1.3 Residential & Commercial Electricity

Activity data.
In the absence of tribal-specific data for residential electricity use, estimates were calculated by scaling county electricity use to tribal electricity use. County electricity use data was obtained from the State and Local Planning for Energy (SLOPE) Platform (National Renewable Energy Laboratory, 2024). To downscale county data to tribal data we used a population factor. According to the 2020 SLOPE data, residential electricity use in Churchill County was 32,953,635 kWh. Using the population factor, the Tribal residential electricity use was calculated to be $1{,}549{,}787\ Kwh$.

$$1{,}549{,}786 \text{ kWh} = \frac{1{,}200}{25{,}516} \times 32{,}953{,}635 \text{ kWh}$$

Similarly, commercial electricity use at the Tribe was limited, so we downscaled SLOPE commercial electricity use. To downscale the county commercial electricity use, we used the ratio of tribal commercial buildings square footage and the county commercial buildings square footage as a scaling factor. We used Eagle view aerial imagery to measure the square footage of tribal departments and businesses. The total square footage of tribal buildings is 137,112 square feet. The county's commercial square footage was obtained from the 2019 Commercial Building Inventory provided by the National Renewable Energy Laboratory (National Renewable Energy Laboratory, 2020). The total square footage of the county's commercial buildings is 2,900,000 square feet. Using the square footage factor, the tribal commercial electricity use was calculated to be 1,455,310 Kwh.

$$1{,}455{,}310 \text{ kWh} = \frac{137{,}112 \text{ square feet}}{2{,}900{,}000 \text{ square feet}} \times 30{,}780{,}666 \text{ kWh}$$

3.1.4 Stationary Combustion (Propane, Fuel Oil, Wood)

Activity data.
- Fuel-heated homes: share of the 330 households using propane/fuel oil/wood.
- Annual gallons/cords per home from RECS for cold/dry climates.
Emission factors.
EPA Emission Factors Hub: propane, distillate oil CO_2, CH_4, N_2O per unit fuel; wood factors available.
Equation (illustrative):
Emissions = Σ(fuel use × EF fuel) by gas.

3.1.5 Solid Waste (Landfilled MSW)

Activity data.
The emissions associated with solid waste generation are known as Scope 3 emissions. Scope 3 emissions can be described as "downstream" emissions, where the activity from one region subsequently causes emissions in another region, as is the case with solid waste generation on Tribal lands. There is no landfill located within the tribal boundaries, and waste is hauled to landfills by different waste collection services. FPST's contribution to methane emissions associated with decomposing waste material at these locations is accounted for in this section.

According to the 2022 Nevada's Sustainable Materials Management Plan, an average of 10 pounds of municipal solid waste is generated per person daily in Churchill County. This average is higher than the state's average of 7.98 pounds per person daily. The average includes solid waste from residential and commercial and institutional locations. Approximately 60 % of solid waste is from residential sources (EPA, 2011), therefore the average residential solid waste per person is 6 pounds/day. Given the Tribe's population of 1,200 people, the yearly solid waste generated is estimated to be 1,314 short tons. The resulting emissions associated with the decomposition of this amount of solid waste are 406 MT CO2e (EPA, 2024b).

3.1.6 Agriculture (Enteric + Manure + Soils/Fertilizer)

Activity data.
FPST-scale agriculture is small.
Methods & factors.
- Enteric CH_4 per head (IPCC 2006 Tier 1 defaults).
- Manure CH_4/N_2O per animal (Tier 1).
- N_2O from soils = applied N × EF.
Equation (simplified):
Emissions = Σ(animals × EF enteric) + Σ(animals × EF manure) + (N applied × EF_N_2O).

3.1.7 Wastewater (Septic)

Activity data.
FPST households primarily use off site community septic system. Activity = population served by septic (~1,200).
Method & factors.
EPA GHGI Wastewater method.
Equation (illustrative):
$CH_4 = Pop \times EF\_CH_4(septic); N_2O = Pop \times EF\_N_2O(septic).$

3.1.8 Fugitive Refrigerants (HFCs)

Activity data.
FPST does not operate oil & gas or other large-scale industrial sources of fugitive emissions. The only fugitive source quantified here is refrigerant leakage (HFCs) from residential and community HVAC/refrigeration equipment.
- Residential: 330 homes × % with AC/refrigerators × typical charge size.
- Commercial/community: count of rooftop/split HPs and walk-ins.

Tools and Resources Used:

- EPA Tribal GHG Inventory Tool
- EPA WARM Model (waste emissions)
- SLOPE Tool (electricity forecasts & emission factors)
- EPA NEI (stationary & mobile sources)
- Emission Factors Hub (EPA, 2023)
- Note: Proxy data and standard assumptions were applied where localized data were unavailable, introducing some uncertainty in estimates.

3.2 Inventory Results

FPST 2020 Sector-Based Greenhouse Gas Emissions (Metric Tons CO_2e)

Sector	2020 Emissions (MT CO_2e)
On-Road Transport	9,516.7
Off-Road Transport	15.8
Residential Electricity	565.0
Commercial Electricity	531.0
Stationary Combustion	883.2
Solid Waste	406.0
Agriculture	36.3
Wastewater	16.8
Fugitive Emissions	61.7

Note: CO_2e = carbon dioxide equivalent. Emissions are estimated using EPA and proxy data sources per CPRG guidance.

Limitations and Uncertainties:

- Transportation emissions are based on Vehicle Miles Traveled (VMT) projections and rural Nevada vehicle mix data.
- Electricity use is scaled from national residential and commercial intensity factors due to lack of local metering.
- Waste and wastewater emissions use EPA default per capita and septic values.
- Fugitive refrigerant emissions use national leakage assumptions due to limited HVAC data.
- Proxy data were used where localized FPST-specific data were unavailable.
- Future inventories aim to incorporate direct metering, local surveys, and refined emissions factors.

Land-Based Carbon Sinks

Land based carbon sinks are natural systems on land that absorb more carbon dioxide from the atmosphere than they emit. Although carbon sequestration estimates are not yet quantified, FPST maintains wetlands and riparian ecosystems with potential to support future carbon offset strategies. Assessment of Land Use, Lan-Use Change and Forestry (LULUCF) potential is a planned improvement in future inventory cycles.

3.3 Inventory Trends and Analysis

The GHG inventory identifies transportation and stationary energy as FPST's largest emissions sources. A detailed Greenhouse Gas Inventory (3.1) identifies emissions by sector and highlights key drivers within the Tribal community. Building upon this baseline, Business-As-Usual (BAU) Projections (5) estimate future emissions in the absence of intervention, enabling comparison with potential mitigation scenarios.

Scenario Projections and GHG Reduction Measures (6) explore feasible actions such as fleet electrification, renewable energy expansion, and building efficiency improvements. These efforts are detailed in the GHG Reduction Measures and Implementation Plans outlined in Sections 6.1–2. This outlines the technical foundation and strategic approach used to guide the FPST's greenhouse gas (GHG) emissions reduction planning. The planning framework integrates quantitative data, scenario modeling, equity assessments, and implementation strategies to support the Tribe's transition toward a low-carbon and climate-resilient future.

To align with climate goals and Tribal priorities, GHG Reduction Targets are defined and supported by an Equity Integration and Justice40 Framework (7) to ensure benefits are directed toward disadvantaged community members. A robust Monitoring, Reporting, and Evaluation Framework (7.3) is included to track progress, reinforce accountability, and support adaptive management, while the Benefits Analysis (8) quantifies co-benefits such as health improvements, energy savings, and workforce development opportunities.

Workforce Planning (9) identifies capacity-building needs and employment pathways to support the implementation of selected measures. A second Equity and Justice40 Alignment Framework ensures that project selection, funding, and community engagement uphold environmental justice and economic fairness.

The Implementation Timeline (10) organizes key actions, responsible departments, and performance indicators into a phased roadmap that supports long-term climate resilience and emissions reduction. Collectively, these components provide a comprehensive and equitable strategy to meet the Tribe's environmental and energy goals.

4   Near-Term and Long-Term GHG Reduction Targets

These goals are aligned with national and Nevada state climate frameworks and reflect the Tribe's commitment to climate leadership, environmental stewardship, and intergenerational sustainability. These targets were informed by the Tribe's 2023 GHG Emissions Inventory, which identified transportation (87%), electricity use (10%), and waste (4%) as the largest emission sources on Tribal lands.

To meet these goals, the Tribe will implement four near term priority GHG reduction measures across these sectors:

- Electrify Tribal fleet vehicles
- Expand EV charging infrastructure
- Conduct energy audits and building retrofits
- Solarize 30 Tribal homes with net metering

Each measure includes estimated reductions and co-benefits:

GHG Measure	Estimated Reduction (MT CO_2e)	Timeline
Tribal Fleet Electrification	60.8	2025–2027
EV Charging Infrastructure	209	2025–2027
Energy Audits and Retrofits	88	2025–2027
Solarize Tribal Homes	686	2025–2027
Total Estimated Reduction	1,043.8	By 2027

Additional planning and modeling will be conducted to identify reduction pathways in solid waste, off-road equipment, and future energy infrastructure upgrades.

The FPST adopts the following long-term greenhouse gas reduction targets:

- 50% reduction below 2020 baseline emissions by 2035
- Net-zero emissions by 2050

5   Business as Usual (BAU) GHG Emission Projections

5.1 BAU Project Methodologies

BAU projections assume 0.5% annual growth rate reflecting Churchill County and FPST trends. This accounts for population, household growth, vehicle use, energy use, and waste generation. Estimates include implementation costs and local workforce readiness, tailored to FPST's opportunities and regional programs.

5.2 BAU Projection Results

Under a business-as-usual scenario, FPST's total emissions are projected to increase by 13% by 2030 and ~15% by 2050, driven largely by transportation and building energy use. These trends underscore the urgency of mitigation measures outlined in this Plan, particularly in transitioning to clean energy and reducing fuel dependence.

Sector	2020 (MT CO$_2$e)	2030 (MT CO$_2$e)	2050 (MT CO$_2$e)	% Growth (2020–2050)
On-Road Transport	9,516.7	10,003.4	11,052.7	+16.1%
Off-Road Transport	15.8	16.6	18.4	+16.5%
Residential Electricity	565.0	593.9	656.2	+16.2%
Commercial Electricity	531.0	558.2	616.7	+16.2%
Stationary Combustion	883.2	928.4	1,025.7	+16.2%
Solid Waste	406.0	426.8	471.5	+16.1%
Agriculture	36.3	38.2	42.2	+16.3%
Wastewater	16.8	17.7	19.5	+16.1%
Fugitive Emissions	61.7	64.9	71.7	+16.2%
Total Emissions	12,050.9	12,636.7	13,815.9	+14.6%

6 GHG Emission Reduction Measures and Implementation Scenario Projections

6.1 GHG Emission Reduction Measures Summary

The FPST's transportation strategy delivers a cohesive approach to reducing greenhouse gas (GHG) emissions while strengthening long-term climate resilience and honoring cultural values. Through fleet electrification, off-road equipment upgrades, expanded elder and CHR mobility services, and climate-resilient EV infrastructure, the Tribe is advancing a clean, reliable, and sustainable transportation system rooted in community needs.

Each GHG Reduction Measure is guided by the Tribe's Climate Change Adaptation Plan, ensuring implementation directly addresses local climate vulnerabilities such as wildfire smoke, extreme heat, drought stress, and infrastructure limitations. Site selection, charger design, and vehicle placement were aligned with Traditional Ecological Knowledge (TEK), land-use constraints, and service priorities to protect cultural areas and support high-impact users like health services and emergency response. The phased implementation process uses a Logic Model and RACI governance structure to coordinate activities across departments and ensure accountability at every stage. Infrastructure elements integrate fire- and heat-resistant designs, solar and battery storage, and siting strategies based on environmental and cultural risk data.

Workforce development is led by the Tribe's Tribal Employment Rights Office (TERO), which supports training and local hiring for EV maintenance, charger operations, emissions tracking, and climate preparedness—ensuring that clean mobility investments also build internal capacity and career pathways for Tribal members.

Public engagement, cultural stewardship, and equity are central to this strategy. EV access is prioritized for underserved areas and essential services, while data tracking enables performance measurement across environmental, health, and economic outcomes.

Primary funding is proposed through various grants, including the EPA, the Department of Energy (DOE) Tribal Energy Program and select Bureau of Indian Affairs (BIA) infrastructure funding. By embedding the Climate Change Adaptation Plan throughout planning, infrastructure design, training, and governance, the Tribe ensures all efforts support both climate mitigation and long-term adaptation. This approach positions the FPST as a regional leader in Tribal climate action—demonstrating how clean transportation, cultural protection, and energy sovereignty can be achieved through coordinated, forward-looking implementation.

Transportation is a major source of greenhouse gas (GHG) emissions for the FPST (FPST), primarily due to a reliance on gasoline-powered vehicles and limited clean transportation infrastructure. Building on the work of the Priority Climate Action Plan (PCAP), this section of the Comprehensive Climate Action Plan (CCAP) focuses on implementing two targeted GHG reduction measures that address aging fleet conditions, energy volatility, and climate risk exposure—while supporting Tribal mobility, sovereignty, and resilience.

The transportation sector accounts for a significant share of the Tribe's emissions footprint. The Tribal fleet, consisting of over 100 vehicles, is essential for delivering health, environmental, housing, and administrative services. However, many vehicles are outdated and inefficient.

Additionally, gaps in electric vehicle (EV) infrastructure, limited rural access to clean technology, and increasing vulnerability to extreme heat and air quality disruptions further highlight the urgency of transitioning to cleaner alternatives. With guidance from Tribal leadership and community input, the PCAP identified and prioritized two high-impact GHG reduction measures, which are now carried forward into the CCAP for implementation:

- GHG Reduction Measure #1: Pilot Electrification of Tribal Vehicles
- GHG Reduction Measure #2: EV Charging Station Deployment

These foundational measures aim to replace up to 20 gasoline-powered vehicles with electric vehicles (EVs), reducing annual emissions by over 60 metric tons (Metric Ton) of CO_2e (Carbon Dioxide Equivalent)

Additionally, the installation of five EV charging stations—intended to support both Tribal operations and community use—is estimated to reduce an additional 209 MT of CO_2e. Beyond emissions reduction, these measures were chosen for their alignment with community values, cultural land protections, and their potential to serve elders and high-use service routes, such as Community Health Representative (CHR) transportation.

The FPST's Electricity Use Sector Plan serves as a strategic framework to reduce greenhouse gas (GHG) emissions, lower energy costs, and enhance energy sovereignty for Tribal members. Grounded in the findings of the Priority Climate Action Plan (PCAP) and aligned with the Climate Change Adaptation Plan (CCAP), this plan charts a path toward a more resilient and sustainable energy future.

Recognizing that electricity use is a major contributor to Tribal emissions—accounting for roughly 10% of the FPST's emissions footprint—the plan outlines a coordinated set of measures to address inefficiencies and promote clean energy adoption. These include energy audits and retrofits, the installation of air-source heat pumps in up to 30 homes, and the deployment of rooftop solar with net metering across 30 additional households. These activities are designed to improve indoor comfort, reduce reliance on fossil fuels, and protect the health of vulnerable populations disproportionately affected by rising utility costs and extreme temperatures.

Implementation is guided by a Logic Model framework and a RACI Model that clearly defines departmental responsibilities and governance oversight. Core departments involved include the Environmental Protection Department, Housing, Public Works, and Project Management (PM), all under the leadership of the Fallon Business Council. The plan also incorporates Traditional Ecological Knowledge (TEK), community input, and green workforce development—principles that are central to both the PCAP and the CCAP.

Monitoring and evaluation metrics—such as kilowatts installed, number of households served, emissions avoided, and utility bill reductions—will be tracked through billing data, community surveys, and audit documentation. Performance indicators established in the PCAP (refer to Appendix C, p. 54) provide the basis for evaluating the impact of energy efficiency measures on both residential and commercial electricity use.

This plan not only builds capacity to meet the Tribe's near-term goals under the CPRG program, but also lays the groundwork for future initiatives identified in the CCAP. It supports long-term resilience to elevated temperatures and energy-related climate risks while enhancing the Tribe's ability to pursue grants, partnerships, and policies that align with self-determination and environmental justice.

Electricity use is a major contributor to greenhouse gas (GHG) emissions for the Fallon Paiute Shoshone Tribe due to aging residential systems, inefficient appliances, and limited access to renewable energy. Building on the Priority Climate Action Plan (PCAP), the Comprehensive Climate Action Plan (CCAP) introduces two targeted measures: retrofitting homes with energy-efficient HVAC systems and weatherization, and installing rooftop solar panels with net metering for up to 30 homes. These upgrades will lower emissions, reduce utility costs, and improve energy reliability—especially for vulnerable households facing extreme heat and high energy burdens.

This section is supported by vulnerability assessments and planning tools, including the GROW and SOAR models, to align mitigation and adaptation strategies. It outlines a phased implementation plan, defines department responsibilities using a RACI model, and incorporates workforce, benefits, and monitoring evaluations to guide progress. Together, these actions promote a clean, resilient, and self-sufficient energy future rooted in Tribal sovereignty and equity.

With guidance from Tribal leadership and community input, the PCAP identified and prioritized two high-impact GHG reduction measures, which are now carried forward into the CCAP for implementation:

- • GHG Reduction Measure #3: Energy Audits and Retrofits
- • GHG Reduction Measure #4: Solarize Tribal Homes

6.2 Implementation Scenario Projections

A Greenhouse Gas (GHG) implementation scenario projection is an estimate of future emissions based on different assumptions about policies, technologies, and economic factors. The FPST uses these projections to model potential outcomes of various mitigation strategies and understand their effectiveness in meeting emissions reduction targets. Components of GHG implementation scenario projections, include:

- Baseline or Business-As-Usual (BAU) scenario: This projection estimates future emissions if no new climate policies or measures are implemented, and current trends continue. This scenario serves as the benchmark against which the effectiveness of new actions is measured.
- Mitigation scenarios: These projections forecast emissions assuming the implementation of specific climate policies, technological advancements, or behavioral changes. Multiple mitigation scenarios are often modeled to explore a range of possible future pathways, from incremental improvements to ambitious, transformational changes.

- Targeted implementation actions: Within mitigation scenarios, specific actions are modeled to quantify their potential impact, including:

  - ➢ Transportation policies: Phasing out fossil-fuel-powered vehicles and expanding public transit options.
  - ➢ Improved energy efficiency: Implementing better building insulation, more efficient appliances, and upgrading industrial processes.
  - ➢ Energy sector transitions: Shifting from fossil fuels to renewable energy sources like wind, solar, and geothermal.

6.3 GHG Emission Reduction Measures

6.3.1 GHG Reduction Measure #1 – Pilot Project: Electrify Tribal Fleet Vehicles

This measure will replace select gasoline-powered vehicles in the Tribal fleet with electric and hybrid models to reduce greenhouse gas (GHG) emissions, cut fuel and maintenance costs, and improve air quality—particularly for elders and staff who rely on Tribal transportation. Due to limited EV infrastructure in the area such as EV charging stations and repair and maintenance of EVs, this pilot project will transition 18% of the fleet to EVs; allowing the Tribe to assess the feasibility of switching its entire fleet to EVs in the future. Key benefits include emissions reduction, cost savings, enhanced service reliability, and improved data for future fleet transitions.

According to the EPA's Greenhouse Equivalencies Calculator, gasoline powered vehicles emit 4.2 MT CO2e per year (EPA, 2024c). By replacing 18% of vehicles, the emissions will be reduced by 60.8 MT CO2e.

Reduction Measure #1: Create a Pilot Project to Electrify Tribal Vehicles	
Description	Replace 18% of Tribal vehicles with EVs.
Estimate of the GHG Emissions Reduction	60.8 MT CO2e
Implementing Agency	FPST Environmental Department, Transportation Department
Milestones for Obtaining Implementing Authority	Tribal Council Approval
Implementation Schedule and Milestones	Year 1: Purchase 10 EVs to replace gas-powered vehicles. Year 2: Purchase 10 EVs to replace gas-powered vehicles.
Geographical location	FPST
Metrics for Tracking Progress	GHG emissions saved from electrifying fleet per year; vehicle miles traveled by electric vehicles.
Applicable Sector	Transportation

Key Components:

- Objective: Initiate a focused fleet electrification pilot aligned with Tribal climate goals.
- Target Focus: Tribal vehicles with high fuel use, outdated models, or essential service roles.
- Timeline: Initial pilot implementation planned within the next 2–3 years.
- Funding: EPA CPRG, DOE Tribal Energy Programs, BIA infrastructure grants.
- Departments: Tribal Administration, Environmental Services, Transportation.
- Coordination: Requires staff training, charger siting, and interdepartmental logistics.
- Expected Outcomes: Reduced emissions and costs; improved reliability and operational readiness.

Table: Overview of Tribal Fleet Electrification Pilot

Component	Summary
Program Objective	Replace aging gasoline fleet vehicles with electric/hybrid models.
Target Criteria	Prioritize by vehicle age, fuel use, condition, and service role.
Departments Involved	Tribal Administrator, Environmental Protection Dept., Transportation Dept.
Coordination Needs	EV training, charger siting, utility coordination, logistics
Timeline	2–3 year pilot rollout
Funding Sources	EPA CPRG, DOE Tribal Energy, BIA grants
GHG Reduction & Benefits	Lower emissions/costs; improved air quality, reliability, and data insights

6.3.1.1 Stakeholder Engagement: Fleet Electrification

Stakeholder engagement is essential to the success of fleet electrification for Tribal transportation. This plan outlines how the FPST will involve key departments, CHRs, Elders, and community members in selecting, deploying, and managing electric vehicles. Through inclusive methods and transparent feedback, the Tribe aims to ensure the pilot EV program meets real mobility needs and reflects Tribal values.

Section	Purpose	Detailed Engagement Approach
Engagement Goals	Define what the engagement process aims to achieve.	Align with community values while prioritizing high-use routes. Raise awareness of EV benefits and address concerns. Ensure equity-driven rollout.
Key Stakeholders	Identify who should be involved and why their role matters.	CHRs, Elders Council, Health Board, Tribal Departments, Administration and Transportation staff, and community members relying on Tribal transit.
Engagement Methods	Outline how engagement will occur to ensure inclusive and effective participation.	Focus groups with CHR and Elder transport riders, staff EV workshops, surveys on vehicle preferences, Tribal Council updates, and EV demo days.
Timing & Frequency	Coordinate engagement activities with each project phase.	Planning: focus groups/surveys. Deployment: training/feedback. Evaluation: surveys on satisfaction and use.
Feedback Loop	Show how input will be collected, used, and communicated back.	Feedback reported quarterly in M&E updates. Input guides vehicle selection and routing. Public/council presentations share results and foster transparency.

6.3.1.2 Vulnerability Assessment- Fleet Electrification Readiness (SWOT Analysis)

This vulnerability assessment for the Tribal Fleet Electrification Pilot Project highlights infrastructure gaps, workforce limitations, and environmental risks that may hinder implementation. Drawing from the Tribe's Climate Change Adaptation Plan, it identifies threats like extreme heat, wildfire smoke, and road degradation, while also noting opportunities for solar integration, green job creation, and climate-resilient planning that respects cultural and land use considerations.

Category	Focus Area	Key Points
Strengths	Community & Leadership	• Tribal values support sustainability and clean transportation • Leadership and departments back energy transition
	Local Knowledge	• Familiarity with roads, climate, and service needs supports implementation
Weaknesses	Infrastructure & Vendors	• Limited EV charging infrastructure • Dependent on external vendors for install/maintenance
	Workforce & Training	• Few EV-certified staff • No formal EV training pipeline
	Environmental Exposure	• EVs may underperform in extreme heat/wildfire smoke • Charging efficiency reduced in high temperatures
	Data & Monitoring	• No telematics system • Gaps in tracking GHG and climate-related performance issues
Opportunities	Funding & Grants	• Eligible for DOE, EPA, BIA, IRA, CPRG funds • Can bundle with solar and energy efficiency efforts
	Solar Integration	• Rooftop or micro grid solar can power EV chargers • Enhances resilience and supports sovereignty
	Workforce Development	• WIOA/TERO can fund green jobs • Potential dual training in EVs and climate adaptation roles
Threats	Climate & Road Risks	• Heat, flooding, and degraded roads reduce EV reliability • Wildfire smoke lowers performance and air quality
	Siting & Cultural Areas	• Siting near sacred lands may raise conflicts • Requires THPO coordination and co-stewardship
	Supply Chain Delays	• EVs and charger components may face backorders, delaying progress

6.3.1.3 Mitigation Strategies- Fleet Electrification (GROW Model)

This section supports the Comprehensive Climate Action Plan by outlining mitigation strategies to reduce transportation-related emissions and promote clean mobility. Using the GROW Model, it defines practical steps for electrifying the fleet, improving infrastructure, boosting efficiency, and building climate-ready capacity. Together, these efforts create a roadmap toward a low-emission, resilient Tribal transportation system.

Strategy Area	Goal (G)	Reality (R)	Options (O)	Will (W)
Fleet Electrification	Reduce emissions by replacing Tribal fleet with EVs/hybrids.	High GHG emissions from aging gas fleet; vulnerable to heat.	Replace high-use vehicles with EVs/hybrids; select heat/dust-resistant models.	Launch 2025 pilot (60.8 MT CO_2e reduction); expand as funding allows.
Infrastructure Development	Build reliable, climate-resilient EV charging systems.	No chargers; infrastructure not heat- or fire-resistant.	Install Level 2/DCFC at Tribal sites with solar-grid systems, shade, and fire-safe siting.	Install chargers in 2025; expand based on usage and seasonal risks.
Operational Efficiency	Improve routing and reduce idle time with climate-aware tools.	No telematics or routing systems; unaware of climate delays.	Add telematics; optimize routes using AQI and heat data; adjust schedules.	Pilot routing software in 2025; review with EPD input.
Staff Training & Awareness	Prepare staff for EV use and climate conditions.	Limited EV experience; health risks from smoke/heat.	Train in EV use, heat/smoke protocols, PPE, and cultural/environmental safety.	Begin 2025; update annually with climate health focus.
Workforce & Equity	Prioritize green job access and benefits for vulnerable groups.	Underrepresented groups may lack access or support.	Hire Tribal EV/solar workers; offer stipends/apprenticeships; prioritize LIDAC homes.	Align with CCAP/GHG Measures; coordinate with TERO/WIOA.
Policy & Governance	Guide actions with aligned codes, data, and resilience goals.	No EV policy or land-use code support.	Develop EV-ready, fire-resilient policies tied to climate/solar goals.	Update by 2026; integrate into TA and Planning workflows.

6.3.1.4 Adaptation Strategies- Fleet Electrification (SOAR Analysis)

The adaptation strategies for the Tribal Fleet Electrification Pilot draw from the Tribe's Climate Change Adaptation Plan to enhance resilience against extreme heat, wildfire, and other environmental risks. Using the SOAR framework, they address infrastructure, fleet flexibility, workforce readiness, emergency response, and funding to ensure a reliable and climate-resilient transition to clean mobility. These strategies support long-term sustainability while meeting the evolving needs of the community.

Area	Strengths	Opportunities	Aspirations	Measurable Results
Infrastructure	Commitment to climate-resilient EV sites	Add solar + batteries; use fire/heat-resistant design; integrate cultural signage	Ensure EV access during outages and heat; reflect Tribal identity in design	≥95% charger uptime during disruptions by 2026
Fleet Diversity	Vehicles adapted for multiple terrains/seasons	Pilot AWD/hybrid EVs for CHR, police, and rural routes	Build all-weather EV fleet tailored to terrain and seasonal needs	3–5 AWD/hybrid EVs deployed and evaluated by 2026
Monitoring	Strong data framework from pilot planning	Expand telematics; track climate exposure; monitor workforce readiness outcomes	Guide deployment with real-time, climate-aware and skills-aligned data	Quarterly reports; annual policy and training updates
Financial Planning	Diverse funding strategy and secured CPRG grant	Leverage WIOA/TERO and cultural education funds; explore phased rollout options	Affordable, inclusive transition with long-term investment in people and fleet	≥60% EVs funded through multiple sources by 2027
Emergency & Health	Coordination with Health and Emergency programs	Use EVs for evacuation, wellness checks, and outreach during smoke/heat events	EVs support health access and climate response with trained local drivers	Emergency EVs deployed and integrated into response plans by 2026

6.3.1.5 Implementation Plan – Fleet Electrification Rollout (Logic Model)

The implementation plan outlines a phased approach to reduce transportation-related GHG emissions and modernize Tribal mobility. Using a Logic Model and informed by the Climate Change Adaptation Plan, it defines key objectives, actions, and responsible departments. The plan supports long-term climate resilience through fleet electrification, infrastructure upgrades, and equitable access. It also addresses environmental and health vulnerabilities identified in the adaptation plan.

Phase & Goal	Inputs	Key Activities	Outputs	Outcomes
Phase 1: Planning & Procurement Goal: Identify vehicle needs and secure funding	- EPA, DOE, BIA, VW funds - Vendor quotes - Staff coordination (TA, EPD, Public Works)	- Assess fleet needs - Identify eligible vehicles - Submit grant applications	- Needs assessment report - Grant submissions - Vendor contracts initiated	- Project readiness established - Financial and technical resources secured
Phase 2: Deployment & Infrastructure Goal: Launch EV fleet and charging stations	- Purchased EVs and chargers - Facility site access - Utility coordination	- Install chargers at central locations - Deliver and register EVs - Schedule routine maintenance	- Operational EV units - Installed and functional chargers - Maintenance calendar	- Reduced fleet emissions - Improved reliability and infrastructure resilience
Phase 3: Training & Tracking Goal: Build internal capacity and monitor impact	- Training materials - Staff time - Emissions tracking platform	- Train fleet users and supervisors - Launch tracking for usage, cost, and emissions	- Staff certified on EV use - Active emissions tracking dashboard	- Fuel and maintenance savings - Data to inform future EV expansion
Phase 4: Evaluation & Scaling Goal: Assess performance and plan next phase	- Usage and performance data - Community feedback	- Evaluate pilot outcomes - Conduct survey and report - Identify next fleet for EV transition	- Performance report - Community insights - Updated transition plan	- Informed scaling strategy - Increased support and engagement from Tribal departments and members

6.3.1.6 Authority to Implement – Fleet Electrocution (RACI Model)

The Authority to Implement plan outlines the leadership structure, departmental roles, and coordination mechanisms necessary to carry out the Tribe's fleet electrification and clean mobility strategy. Using the RACI Model—Responsible, Accountable, Consulted, and Informed—this section defines the lead departments, support teams, oversight bodies, and funding responsibilities for each phase. As part of the Comprehensive Climate Action Plan, it ensures accountability, cross-departmental collaboration, and alignment with CPRG funding and reporting requirements to effectively reduce transportation-related emissions and enhance climate resilience.

Focus Area	Key Metrics	Monitoring Tools	Evaluation Frequency	Responsible Departments
GHG Emissions Reduction	CO_2e reductions (MT), % of fleet electrified	Telematics, fuel use logs, emissions tracking dashboard	Quarterly	Environmental Protection Dept. (EPD),
Vehicle Performance	Uptime %, service interruption logs, charger usage rates	Maintenance records, vendor inspections, charger analytics	Monthly (EVs), Quarterly (chargers)	Transportation Dept. (TD),
Workforce Readiness	# Staff trained, % certified in EV operations/maintenance	Training records, TERO/WIOA reports	Biannually	TERO, Tribal Administrator (TA), Transportation Dept. (TD)
Infrastructure Resilience	% charger uptime during heat/wildfire events, siting compliance	Charger reports, climate incident tracking	Annually	Environmental Protection Dept., Project Management (PM)
Health & Safety Outcomes	# of climate-related fleet disruptions, # of incidents involving heat/smoke	Health provider reports, CHR feedback	Quarterly	Health Center Department (HCD), CHR, Transportation Dept. (TD)
Community Impact	CHR ridership rates, user satisfaction, LIDAC benefit distribution	Surveys, CHR records, ridership data	Annually	CHR, Elders Council, Grants Dept. (GD)
Economic Efficiency	% fuel and maintenance cost reduction, budget utilization	Budget vs. actual cost analysis	Semi-annually	Finance Department (FD), Transportation Dept. (TD)
Scalability & Feedback	Updated transition plan, stakeholder engagement, new vehicle identification	Community surveys, staff workshops, pilot review reports	Post-Phase Review	TA, EPD, PM, FBC

6.3.1.7 Monitoring & Evaluation – Tribal Fleet Electrification

The M&E framework for GHG Reduction Measure #1 enables the FPST to track progress, guide data-driven decisions, and adaptively manage fleet electrification. Grounded in the Climate Change Adaptation Plan, it aligns implementation with climate vulnerability assessments, resilience priorities, and community-centered values.

Phase	Task	Responsible	Accountable	Consulted	Informed	Funding Approach
1 – Fleet Launch	Begin EV/hybrid transition; train staff; upgrade core fleet.	Transportation Dept.	Tribal Admin, Council	EPD, Finance Department (FD)	All Depts.	EPA, DOE, CPRG via EPD; quarterly coordination.
2 – Charging Expansion	Install chargers at key sites; coordinate grid/cultural needs.	Environmental Protection Dept.	Tribal Administrator, FBC	Transport Department (TD), Project Management (PM), NV Energy (NVE), Public Works Department (PWD)	All Depts.	DOE, FHWA, CPRG via EPD & Grants Dept. (GD); site planning.
3 – Public Mobility Access	Expand transit for elders, CHR, and underserved areas via TEK.	Transportation Dept.	FBC, Health Center Department (HCD)	Health Center Department (HCD), CHR, Project Management (PM), Elders Council	Riders, CHR Staff, Community	FTA, CPRG, NV Transit via Transportation Dept. & Grants Dept.; monthly equity planning.
4 – Site Protection & Resilience	Use TEK and climate-resilient design in infrastructure planning.	Planning Dept.	FBC	Tribal Historic Preservation Office (THPO) EPD, PWD	Community Members	EPA EJ, CPRG Resilience via GD; TEK reviews & design integration.

6.3.2 GHG Reduction Measure #2 – EV Charging Station Installation

This measure aims to reduce GHG emissions and strengthen Tribal climate resilience by installing 5–7 Level 2 and Level 3 EV chargers across key locations on Tribal lands by 2027. The project supports clean mobility and prepares infrastructure for Tribal fleet electrification while expanding access to sustainable transportation for the community. It is grounded in the Priority Climate Action Plan (PCAP) and the Climate Change Adaptation Plan (CCAP), which identified transportation as the Tribe's top emission source. Community and TEK input shaped the design and siting approach, ensuring equitable and culturally appropriate outcomes. Key benefits include emissions reduction, improved air quality, energy savings, and long-term cost efficiency.

Reduction Measure #2: EV Charging Station Installation	
Description	Install 5 EV charging stations to charge Tribal and personal vehicles.
Estimate of the GHG Emissions Reduction	209 MT CO2e
Implementing Agency	FPST Environmental Protection Department
Milestones for Obtaining Implementing Authority	Fallon Business Council Approval
Implementation Schedule and Milestones	Year 1: Install 3 EV charging stations. Year 2: Install 2 EV charging stations.
Geographical location	FPST
Metrics for Tracking Progress	Number of EV chargers installed, average annual energy savings per home, Tribal member satisfaction surveys
Applicable Sector	Electricity use, transportation

Key Components

• Objective: Install EV chargers to enable clean mobility, reduce emissions, and build infrastructure resilience
• Target Focus: Tribal fleet, rideshare services, and community EV access points
• Timeline: Install by 2027
• Funding: EPA CPRG, DOE Tribal Energy Program
• Departments: Environmental, Transportation, Housing, Public Works
• Coordination: Utilities, planning, permitting, and TEK-guided site review
• Expected Outcomes: 209 MT CO$_2$e reduction, improved air quality, enhanced energy independence

Overview of EV Charging Station Installation

Component	Summary
Program Objective	Install 5–7 EV chargers to reduce GHG emissions and support clean transport
Target Criteria	High-traffic, grid-ready, TEK-aligned, near essential services
Departments Involved	Environmental, Public Works, Housing, Transportation
Coordination Needs	Utility upgrades, permitting, charger compatibility
Timeline	Install by 2027
Funding Sources	EPA CPRG, DOE Tribal Energy
GHG Reduction & Benefits	209 CO_2e; co-benefits: cleaner air, energy savings, climate resilience

6.3.2.1 Stakeholder Engagement- EV Charging

Stakeholder engagement is essential to the success of EV charging infrastructure on Tribal lands. This plan outlines how the FPST will involve key departments, cultural representatives, and community members in the siting, installation, and long-term management of EV charging stations. Through inclusive methods and ongoing feedback, the Tribe aims to ensure chargers are accessible, culturally appropriate, and widely supported.

Section	Purpose	Detailed Engagement Approach
Engagement Goals	Define what the engagement process aims to achieve.	Identify EV charger sites that reflect cultural values and high-use areas, while increasing awareness, trust, and long-term participation among staff and community members.
Key Stakeholders	Identify who should be involved and why their role matters.	Involve Tribal departments (Environmental, Planning, Public Works), THPO for cultural review, and community groups like Elders Council and CHR to reflect real transportation needs.
Engagement Methods	Outline how engagement will occur to ensure inclusive and effective participation.	Use site visits, community EV demos, workshops, and online surveys to gather public input on charger placement, accessibility, and design.
Timing & Frequency	Coordinate engagement activities with each project phase.	Align outreach with planning (consultation), installation (updates), and operations (ongoing feedback) to maintain transparency and momentum.
Feedback Loop	Show how input will be collected, used, and communicated back.	Gather input through surveys and usage data. Apply feedback to improve siting and training. Share updates annually in the CCAP report to ensure transparency and improvement.

6.3.2.2 Vulnerability Assessment- Charging Readiness (SWOT Analysis)

The Vulnerability Assessment for EV charging infrastructure uses a SWOT framework to evaluate the FPST's capacity to deploy and maintain climate-resilient, culturally appropriate EV stations. Informed by the Climate Change Adaptation Plan, it assesses performance, siting, maintenance, and community readiness under environmental and technical challenges. As part of the broader Comprehensive Climate Action Plan, this assessment supports the Tribe's long-term clean transportation and adaptation goals.

Category	Focus	Condensed Description
Strengths	Resilient Design	Use of weather-rated, heat-tolerant EVSE and solar + battery integration improves reliability during climate extremes.
	Land & Cultural Planning	New Tribal trust lands and cultural consultation support smart, respectful charger siting.
	Operational Readiness	Staff training and remote diagnostics improve system uptime and local response.
	Environmental Monitoring	Climate sensors and local data guide infrastructure placement and adaptation.
Weaknesses	Workforce & Vendor Limits	Limited in-house EVSE skills and vendor delays may disrupt service during extreme events.
	Community Readiness	Low awareness of EV benefits or protocols during emergencies may reduce adoption and use.
Opportunities	Workforce Development	EV programs can train and employ Tribal members in clean tech and infrastructure roles.
	Renewable Integration	Co-locating chargers with solar and storage increases grid independence and resilience.
	Community Engagement	Outreach and Tribal EV demos can boost support and climate literacy.
	Climate-Based Planning	Use CCAP risk data to avoid flood/heat-prone siting and enhance long-term durability.
Threats	Environmental Hazards	Heat, dust, and flooding may shorten charger lifespan or limit performance.
	Grid Limitations	Limited local grid strength may reduce EVSE functionality during peak demand or outages.
	Cultural Site Constraints	Charger placement may face delays without early consultation on sacred or sensitive lands.
	Load Overlap	High EV charging and AC use during heatwaves may strain energy systems without load management.

6.3.2.3 Mitigation Strategies- EV Charging Infrastructure (GROW Model)

These mitigation strategies support cleaner transportation by expanding access to resilient, culturally appropriate EV charging infrastructure. Using the GROW model—Goal, Reality, Options, and Way Forward—and informed by the Climate Change Adaptation Plan, they address environmental, operational, and cultural vulnerabilities. Integrated into the Comprehensive Climate Action Plan, they reduce transportation-related emissions, improve infrastructure reliability, and build community trust in clean mobility.

Strategy Area	G – Goal	R – Reality	O – Options	W – Way Forward
EV Charging Infrastructure	Deploy climate-resilient, accessible, culturally appropriate EV chargers.	Extreme heat, dust, grid stress, limited technicians, and cultural siting conflicts.	Use heat-rated, sealed EVSE; solar + battery backups; consult Cultural Resources; train Tribal staff.	EPF & PM lead siting, training, and resilient rollout in 2025 with interdepartmental support.
Fleet Electrification	Replace high-emission Tribal fleet vehicles with EVs/hybrids.	Aging vehicles, rural terrain limits EV models, high costs.	Pilot EVs by duty cycle; vendor demos; integrate phased replacements.	Transportation Dept. begins phased EV procurement using pilot data and funding opportunities.
Sustainable Public Mobility	Expand clean transit for healthcare, elders, and underserved areas.	Gaps in CHR transit; high fuel use; access barriers.	Electrify CHR vans; clean rideshare options; TEK-informed route planning.	Transportation Dept. & Health Center Dept. co-design pilots with Elders Council; launch rideshare tools.
Workforce Training	Build Tribal EV/EVSE maintenance and operations capacity.	No in-house EV expertise; rely on outside vendors.	Create technician training; vendor partnerships; regional job pathways.	Project Management/TA coordinate with WIOA, vendors, colleges to launch training by late 2025.
Grid & Energy Resilience	Support EV deployment with reliable, secure charging infrastructure.	Grid limits and high demand risk EVSE reliability.	Co-locate solar + battery; stagger charger loads; site energy audits.	NVE & PM teams conduct site audits, apply for DOE resilience funding, and prioritize battery storage.

6.3.2.4 Adaptation Strategies- EV Charging (SOAR Analysis)

These adaptation strategies support climate-ready EV charging systems designed to withstand environmental hazards while addressing cultural and operational needs. Informed by the Climate Change Adaptation Plan and guided by the SOAR framework, they outline proactive steps to ensure charger reliability, enhance resilience, and empower community engagement. Integrated into the Comprehensive Climate Action Plan, these strategies promote a sustainable and accessible clean transportation system aligned with long-term climate goals.

Strategy Area	Strengths	Opportunities	Aspirations	Results
Infrastructure Resilience	Climate-resilient EVSE commitment (heat-, dust-, weather-rated).	Add solar + battery storage for power backup.	Ensure EV access during outages and extreme weather.	Chargers remain operational in adverse conditions; reliability improves.
Fleet Diversification	EV/hybrid vehicle types support varied terrain and seasons.	Monitor EV/hybrid performance in rural/winter use to guide purchases.	Build an all-season fleet for full reservation coverage.	Improved performance year-round; smarter procurement decisions.
Workforce Development	Upskilling efforts for Tribal mechanics/operators.	Partner with EV service providers to build short- and long-term expertise.	Establish a self-reliant EV maintenance workforce.	Increased local capacity; reduced delays and costs over time.
Monitoring & Management	Strong pilot evaluation framework in place.	Use data to refine charger placement and vehicle selection.	Maximize efficiency and community benefit through evidence-based action.	Continuous improvement from data and feedback.
Financial Planning	Diverse funding strategies in development.	Lease options, phased deployment, and cost-sharing models.	Maintain program sustainability beyond external grants.	Reduced risk of delays; greater adaptability to changing conditions.
Community Health & Safety	Air quality monitoring already in place through Purple Air sensors and EPD outreach.	Co-locate EV chargers with cooling centers or alert systems	Support health during climate events with clean mobility access	Protect public health during climate events with EV access

6.3.2.5 Implementation Plan- Charging Infrastructure Rollout (Logic Model)

The EV Infrastructure Implementation Plan outlines a phased, outcome-driven rollout of electric vehicle charging stations for the FPST. Guided by the Climate Change Adaptation Plan, it supports clean transportation, reduces greenhouse gas emissions, and strengthens grid and community resilience. Key phases include planning, installation, maintenance, and engagement to ensure climate-informed infrastructure development within the Tribal transportation system.

Phase	Key Activities	Responsible Entity	Funding Sources	Performance Indicators
1. Planning, Site Selection & Feasibility	Identify optimal Tribal locations; assess site readiness and climate risks; coordinate with leadership and departments.	Project Management (PM); Environmental Protection Department (EPD)	BIA Resilience; DOE Tribal Energy; EPA CPRG; FHWA	Priority sites selected; risks documented; cultural clearance confirmed
2. Funding, Installation & Grid Integration	Secure funding; install EV chargers with solar/battery options; use resilient design and connect to the grid.	Public Works Department (PW); Environmental Protection Department (EPD)	FHWA NEVI; DOE CFI; BIA Tribal Transportation; HUD ICDBG	Chargers operational; solar/battery installed; grid connected; resilient standards met
3. Outreach, Tracking & Workforce Training	Deliver community education; train Tribal workforce; track usage and emissions; implement emergency protocols.	Environmental Protection Department (EPD); Emergency Management Department (EMD)	DOE CFI; EPA EJ Thriving Communities; FHWA; BIA Workforce Training	Workshops held; usage/GHG data tracked; staff trained; protocols in place
4. Operations, Monitoring & Maintenance	Maintain chargers; monitor uptime and safety; manage vegetation and invasive species around sites.	Public Works Department (PW); Environmental Protection Department (EPD)	DOE CFI; BIA Energy Grants; General Fund	Maintenance logs complete; ≥95% uptime; hazards mitigated
5. Evaluation, Expansion & Policy Integration	Assess outcomes, access equity, and cost efficiency' update tribal policies; and develop a strategy for next phase expansion	Project Management (PM); Environmental Protection Department (EPD)	DOE CFI; EPA CPRG; BIA Resilience Grants	Evaluation report published; policy updates adopted; expansion plan approved

6.3.2.6 Authority to Implement – EV Charging Infrastructure (RACI Model)

The Authority to Implement Plan defines the leadership structure and interdepartmental responsibilities guiding the rollout of EV infrastructure, using a RACI model to ensure clarity in roles across all project phases. This section supports the Comprehensive Climate Action Plan by establishing governance for emission-reducing transportation initiatives and ensuring accountability throughout planning, installation, and community engagement. It outlines which Tribal departments are Responsible, Accountable, Consulted, and Informed for each action, providing a framework for effective cross-sector coordination.

Phase	Task	Responsible	Accountable	Consulted	Informed
Phase 1: Planning and Site Selection	Planning and site selection for EV charging infrastructure	Project Management Department	Environmental Protection Department	Public Works Department	Tribal Administrator, FBC
Phase 2: Installation and Upgrades	Installation of charging stations and electrical upgrades	Public Works Department	Environmental Protection Department	Utility Vendors	Tribal Administrator; FBC
Phase 3: Outreach, Education, and Workforce Training	Community outreach, education, and workforce training	TERO/WIOA Program	Environmental Protection Department	Project Management Department, TERO/WIOA Program	Tribal Administrator, FBC
Phase 4: Operations and Maintenance	Long-term operations and maintenance of EV infrastructure	Public Works Department	Environmental Protection Department	Project Management Department; Utility Vendor	Tribal Administrator
Phase 5: Policy, Evaluation, and Reporting	Policy development, evaluation, and performance reporting	Environmental Protection Department, Tribal Administrator	Environmental Protection Department	Project Management Department, IT Department	FBC

6.3.2.7 Monitoring & Evaluation- EV Charging Infrastructure

To ensure the effectiveness and accountability of transportation-related GHG reduction measures, the FPST will implement a structured monitoring and evaluation process using performance indicators, interdepartmental coordination, and community input.

Monitoring Methods

Each transportation initiative will be tracked using project-specific indicators and assigned departmental leads:

- EV Fleet Pilot Project (Lead: Transportation Dept.)
  - o Track mileage, fuel cost savings, and downtime via telematics
  - o Monitor charging frequency, battery range, and maintenance issues
  - o Key Metric: ≥25% reduction in fuel costs by Year 1
- EV Charging Stations (Lead: Environmental Protection Dept. + IT/Data)
  - o Use smart charger analytics to monitor usage, energy draw, uptime
  - o Log community feedback on site safety, access, and performance
  - o Key Metric: Maintain ≥85% charger uptime across all units
- Off-Road Equipment & Agricultural Tools (Lead: Environmental Protection Dept. + Agriculture)
  - o Track fuel usage reductions after replacing diesel tools
  - o Collect user feedback on functionality and operability in the field
  - o Key Metric: Achieve ≥15% GHG reduction in off-road operations
- Transit & CHR Services (Lead: Health/CHR + Transportation)
  - o Monitor ridership trends, route efficiency, and coverage
  - o Evaluate service reliability and community satisfaction
  - o Key Metric: Increase elder/healthcare ridership by ≥10% annually

6.3.3 GHG Reduction Measure #3- Energy Audits and Retrofits

This measure aims to reduce greenhouse gas (GHG) emissions and increase resilience by retrofitting Tribal homes and facilities with energy-efficient systems. The FPST will conduct energy audits and implement upgrades such as air-source heat pumps, insulation, lighting, and appliance replacements. Guided by insights from the PCAP and CCAP, the program targets aging, underperforming buildings that contribute to high utility costs and climate vulnerability. Key benefits include lower emissions, increased comfort, improved air quality, and reduced energy burdens—especially for elders and low-income households.

Reduction Measure #3: Energy Audits and Retrofits	
Description	Conduct energy audits to identify energy-saving opportunities in Tribal homes and facilities. Retrofit 50 Tribal homes with heat pumps.
Estimate of the GHG Emissions Reduction	18 MT CO2 from 10 homes using propane heaters. 50 MT CO2 from 10 homes using oil heaters. 20 MT CO2e from 10 homes using wood heaters.
Implementing Agency	FPST Environmental Department, Housing Department
Milestones for Obtaining Implementing Authority	Tribal Council Approval
Implementation Schedule and Milestones	Year 1: Install heat pumps in 15 homes. Year 2: Install heat pumps in 15 homes.
Geographical location	FPST
Metrics for Tracking Progress	Number heat pumps installed, average annual energy savings per home, Tribal member satisfaction surveys
Applicable Sector	Electricity use

Key Components

• Objective: Improve energy efficiency and reduce emissions through building audits and retrofits
• Target Focus: 30–50 homes, prioritizing propane/oil/wood-using households with high utility burdens
• Timeline: Two-year phased rollout (15 homes per year)
• Funding: DOE, EPA CPRG
• Departments: Environmental Protection Department , Housing Department
• Coordination: Utilities, permitting agencies, retrofit contractors
• Expected Outcomes: 88 MT CO_2e reduction; improved air quality, energy savings, health benefits

Component	Summary
Program Objective	Reduce GHGs and energy burden by upgrading inefficient homes and systems
Target Criteria	Prioritize homes using propane/oil/wood heat, elders, and high-burden families
Departments Involved	Environmental Protection, Housing
Coordination Needs	Utilities, permitting, contractors
Timeline	2-year rollout (15 homes/year)
Funding Sources	DOE, EPA CPRG
GHG Reduction & Benefits	88 MT CO_2e; co-benefits: comfort, indoor air quality, health, energy savings

6.3.3.1 Stakeholder Engagement – Energy Retrofits

Stakeholder engagement is critical to ensuring that energy audits and retrofits meet the needs of Tribal households and facilities. This plan details how the FPST will engage residents, departments, and contractors to identify energy burdens, guide retrofit priorities, and promote culturally appropriate upgrades. Through hands-on outreach and transparent communication, the Tribe aims to deliver equitable, trusted, and effective energy improvements.

Section	Purpose	Detailed Engagement Approach
Engagement Goals	Define what the engagement process aims to achieve.	Engage residents in identifying energy burdens and upgrade priorities, ensure retrofit decisions reflect household needs and cultural values, and build trust through local hiring and training.
Key Stakeholders	Identify who should be involved and why their role matters.	Involve the Housing Department, Environmental Protection Department, Facilities, TERO/WIOA trainees, and tribal residents (especially elders, low-income households, and renters) to ensure inclusive and effective outreach.
Engagement Methods	Outline how engagement will occur to ensure inclusive and effective participation.	Conduct energy burden surveys, household intake forms, home walkthroughs, audit interviews, and workshops. Use focus groups with staff and contractors to streamline retrofit coordination.
Timing & Frequency	Coordinate engagement activities with each project phase.	Align engagement with the Audit Phase (surveys and site visits), Retrofit Phase (satisfaction follow-ups), and M&E Phase (town halls and result-sharing).
Feedback Loop	Show how input will be collected, used, and communicated back.	Use resident feedback to prioritize homes and improve contractor outreach. Report quarterly through housing/environmental updates and adjust engagement based on input.

6.3.3.2 Vulnerability Assessment- (SWOT Analysis)

The FPST faces increasing climate-related risks that impact homes, community facilities, and cultural lifeways. To better inform adaptation and mitigation strategies, this assessment consolidates residential, commercial, and shared vulnerabilities into a single comprehensive SWOT table. This unified approach reflects the interconnected nature of climate hazards—such as extreme heat, drought, and energy system dependence—and highlights key opportunities for energy audits, retrofits, solar installations, and workforce development rooted in Tribal priorities and resilience goals.

SWOT Summary – Energy Efficiency in Tribal Housing

SWOT Category	Focus Area	Key Insights	Scope
Strengths	Environmental	Reducing reliance on wood/propane and sealing homes lowers GHGs and indoor PM2.5, improving health during wildfire smoke events.	Residential
	Infrastructure	Many homes qualify for energy efficiency upgrades, enabling immediate impact.	Residential
	Social	Strong community support for AC, insulation, and weatherization—demonstrated through surveys and outreach.	Residential
Weaknesses	Infrastructure	Aging housing stock lacks insulation, efficient HVAC, and window sealing—raising heat and cold exposure risks.	Residential
	Infrastructure	Homes often lack central air or access to cooling centers, heightening vulnerability during extreme heat.	Residential
	Operational	Limited staff capacity and coordination across departments may slow program rollout and project completion.	Both
Opportunities	Environmental	Rising temperatures increase justification for weatherization and home cooling system investments.	Residential
	Operational	Federal and state programs (EPA, DOE, BIA, HUD IHBG) offer grant funding for audits, retrofits, and workforce training.	Both
	Social	Energy upgrades improve indoor comfort, reduce utility costs, and support public health—especially for elders and low-income households.	Residential
Threats	Climate Hazard	Sharp rise in 95°F+ days (projected 15 → 55 per year by 2050) increases risk of heat-related illness in under-cooled homes.	Residential
	Environmental	Unsealed or poorly ventilated homes are vulnerable to wildfire smoke infiltration, increasing respiratory health threats.	Residential
	Operational	Shortage of qualified local energy auditors and HVAC technicians may delay implementation and reduce access to available funding.	Both

6.3.3.3 Mitigation Strategy- Energy Efficiency Pathways (GROW Model)

To reduce greenhouse gas emissions and boost energy efficiency, the FPST is implementing targeted mitigation strategies across residential and commercial buildings, including energy audits, system upgrades, weatherization, heat pumps, and solar + battery integration. Organized using the GROW Model, these actions aim to lower utility costs, enhance resilience, and prioritize vulnerable households such as elders and low-income families.

Strategy Area	Goal (G)	Reality (R)	Options (O)	Will (W)	Sector
Energy Efficiency	Improve home energy efficiency & comfort	Homes lack insulation, cooling; high energy costs	Audits, weatherization, heat pumps	Prioritize elder/low-income homes; phase retrofits	Residential
Energy Efficiency	Lower facility energy use & costs	Facilities have outdated systems, poor insulation	Audits, HVAC/lighting upgrades, controls	Target Health Center/admin buildings; track performance	Commercial
Cooling Access	Protect residents from heat & smoke	Limited access to cooling/clean-air shelters	Create community cooling shelters	Include in public health & resilience plans	Residential
Renewable Energy	Increase household energy independence	Homes depend solely on grid; outages impact safety	Install solar + battery systems	Expand Solarize Tribal Homes for high-risk households	Residential
Grid Resilience	Ensure service continuity during outages	No micro grid/storage; services vulnerable	Solar + battery at key buildings; micro grid design	Pilot micro grid at Health Center; apply FEMA BRIC	Commercial
Capacity Building	Train staff in energy system management	Limited expertise in energy ops & monitoring	Develop training programs	Include in workforce/capital planning	Shared

6.3.3.4 Adaptation Strategies– Building Resilience Through Retrofits (SOAR Model)

The FPST is implementing targeted adaptation strategies across residential and commercial buildings to improve energy resilience, reduce costs, and enhance comfort—especially for elders, families, and low-income households. Guided by the SOAR Analysis framework, the Tribe is advancing residential upgrades like heat pumps and insulation, while commercial efforts focus on scalable retrofits and performance monitoring. These actions strengthen long-term community well-being and climate readiness

Strategy Area	Strengths	Opportunities	Aspirations	Results	Sector
Energy Efficiency & Demand-Side Management	Commitment to energy equity for vulnerable households; culturally rooted care for elders	Expand weatherization and energy-saving assistance programs	Ensure all Tribal homes are climate-resilient and affordable	Lowered utility costs; improved indoor comfort and resilience	Residential
Energy Efficiency & Demand-Side Management	Scalable retrofit models using audit data	Upgrade systems in Tribal buildings using audit results and program flexibility	Create high-performing Tribal facilities for resilience	Lower emissions; scalable model for building adaptation	Commercial
Renewable Energy Integration	Strong Tribal interest in clean energy; community support for solar	Expand rooftop solar + battery systems for households	Achieve household energy independence and resilience	Reduced grid reliance and utility costs; backup power during outages	Residential
Renewable Energy Integration	Previous Solarize Tribal Homes efforts; interest in campus-scale systems	Pursue solar + micro grid development for facilities	Increase energy independence at essential service locations	Facility energy savings; emissions reduction; improved resilience	Commercial
Smart Energy & Resilient Infrastructure	Exploration of micro grids and battery storage for critical services	Pilot micro grids and control systems at Health Center and admin buildings	Establish resilient facilities as emergency hubs	Continuity of services during climate events	Commercial
Smart Energy & Resilient Infrastructure	Interest in workforce development for local energy management	Train Tribal staff in energy system monitoring and emergency response	Build internal capacity for sustainable infrastructure operations	Skilled workforce and long-term maintenance capacity	Shared

The FPST has combined residential, commercial, and shared adaptation strategies into a single unified logic model. This framework outlines phased activities such as energy audits, heat pump installation, solar integration, weatherization, and workforce training. Consolidating all sectors into one plan supports efficient implementation, data-driven decision-making, and scalable solutions that reduce emissions, lower utility costs, and strengthen community resilience.

Phase & Objective	Activities	Outputs	Outcomes	Sector
Phase 0- Workforce Training & Certification	Host in-person energy audit and heat pump training in Fallon through providers like Home Energy Connection; coordinate with TERO/WIOA.	10-15 Tribal Members trained and certified	Increased internal capacity; reduced contractor dependence	Shared
Phase 1: Energy Audits & Upgrades	Conduct audits; install insulation, lighting, Energy Star appliances	30 homes upgraded	Lower energy use, improved comfort, reduced GHGs	Residential
Phase 2: Heat Pump Deployment	Install heat pumps in homes; retain backup systems	30 homes equipped with efficient heating/cooling	Reduced fossil fuel use; enhanced indoor climate control	Residential
Phase 3: Facility Solar Integration	Install solar + battery on key facilities	Facilities powered with renewable energy	Energy independence, reduced utility costs	Commercial
Phase 3: Solar Integration (Shared)	Site analysis, rooftop solar for homes and facilities, workforce training	Solar capacity installed, Tribal technicians trained	Lower energy costs, skilled workforce, clean power adoption	Shared
Phase 4: Community Education	Host workshops, distribute toolkits, peer outreach	Resident participation in energy programs	Improved energy literacy, behavior change	Residential
Phase 5: Weatherization & Resilience	Insulation, windows, battery backups for homes	Homes weatherized and equipped for outages	Greater home safety and resilience	Residential

6.3.3.6 Authority to Implement- Residential & Commercial (RACI Model)

This plan uses the RACI Framework (Responsible, Accountable, Consulted, Informed) to define leadership, accountability, and collaboration across departments for each implementation phase.

Phase / Activity	Sector	Responsible	Accountable	Consulted	Informed
0. Workforce Training & Certification	Shared	TERO/ Environmental Protection Dept.	Environmental Protection Dept.	Housing Department, Training Providers (e.g., Home Energy Connection)	Tribal Administrator, FBC TERO
1. Energy Audits & Upgrades	Residential	Housing Department	Housing Department	EPD, Facilities, Grants Dept.	Residents
2. Heat Pump Deployment	Residential	Housing Department	Housing Department	EPD., Housing Dept.	Residents
3a. Facility Solar Install	Commercial	Planning	Planning	EPD, Energy Vendor, Grants Dept.	Facilities/ Public Works Dept.
3b. Home/Facility Solar	Shared	Environmental Dept.	Environmental Dept.	Project Management; Housing Dept., Grants Dept.	Residents, Facilities
4. Community Outreach	Residential	EPD	EPD	CLC, DOE, Training	Residents, Communications
5. Weatherization	Residential	Housing Department	Housing Department	EPD, Facilities, Grants Dept.	Residents
6. Monitoring & Expansion	Shared	Tribal Administrator	Tribal Administrator	Project Management, Housing Dept., EPD	Residents, Housing Dept.
7. Climate Adaptation Actions	Shared	Environmental Protection Dept.	Environmental Protection Dept.	HD, NRD, THPO, HCD, EMD	Community, Residents, FBC
8. Water Resource Monitoring	Residential	Public Works Department	Public Works Department	Environmental Dept., USGS	Residents
9. Cultural & Wetland Protection	Shared	THPO, Natural Resources Dept.	THPO	BIA, BLM, EPD	Residents

Activities are categorized as Residential (household-level), Commercial (Tribal Facilities), or Shared (cross-cutting strategies like solar and monitoring) to ensure clear oversight and streamlined coordination. This structure promotes transparency and effective decision-making as the Tribe begins with 30 pilot homes and scales the program community-wide.

6.3.3.7 Monitoring & Evaluation - Energy Audits & Retrofits

The Monitoring & Evaluation (M&E) Framework for GHG Reduction Measure #3 – Energy Audits and Retrofits establishes a structured process to track the effectiveness and impact of retrofitting efforts across Tribal buildings. It uses performance indicators such as energy use reduction, cost savings, emissions avoided, and workforce development to assess outcomes on a quarterly, biannual, or annual basis. By assigning clear responsibilities across departments and distinguishing between residential and commercial targets, the framework ensures accountability, data-driven adjustments, and alignment with broader climate resilience goals.

Evaluation Focus	Performance Indicators	Monitoring Method	Frequency	Responsible Entity	Residential / Commercial
Workforce Training	# of Tribal members certified through in-person energy audit or retrofit training	Training rosters, certification records, TERO reports	Annually	TERO/EPD)	Shared
Audit Implementation	# of buildings/homes audited	Audit records, scheduling logs	Quarterly	EPD, Facilities	Both
Retrofit Completion	# and type of retrofits installed	Contractor reports, inspection logs	Quarterly	Housing Dept., Facilities	Both
Energy Use Reduction	% decrease in energy usage (kWh)	Utility bills, post-retrofit surveys	Biannually	EPD	Both
Cost Savings	Average energy cost reduction per site	Utility cost comparison	Biannually	EPD, Accounting	Both
Emissions Reduction	Tons of GHG emissions avoided	Emissions calculator, audit reports	Annually	EPD	Both
Community Feedback	Resident satisfaction and comfort levels	Post-retrofit survey	After each retrofit round	Housing Dept.	Residential
Program Reach	% of community buildings/homes served	Participation tracking sheet	Quarterly	EPD, Housing Dept.	Both
Workforce Development	# of staff/contractors trained	Training records	Annually	Human Resources (HR), TERO	Both

6.3.4 GHG Reduction Measure #4 – Solarize Tribal Homes

This measure aims to reduce greenhouse gas (GHG) emissions and increase household energy resilience by installing rooftop solar systems on 30 homes with net metering capabilities. Through net metering, residents can earn credits for surplus electricity fed back into the grid, lowering utility bills and improving long-term energy affordability. The initiative is guided by the Priority Climate Action Plan (PCAP) and Comprehensive Climate Action Plan (CCAP), and supports clean energy transition, energy equity, and decentralized power resilience. Estimated GHG savings total 686 MT CO_2e, while participants gain cost savings, property value increases, and greater independence from utility-based power.

Reduction Measure #4: Solarize Tribal Homes	
Description	Provide fully-funded solar panel installation for 30 Tribal homes.
Estimate of the GHG Emissions Reduction	686 MT CO2e
Implementing Agency	FPST Environmental Department, Housing Department
Milestones for Obtaining Implementing Authority	Tribal Council Approval
Implementation Schedule and Milestones	Year 1: Install solar panels in 15 homes. Year 2: Install solar panels in 15 homes.
Geographical location	FPST
Metrics for Tracking Progress	Number solar panels installed, average annual energy savings per home, Tribal member satisfaction surveys
Applicable Sector	Electricity use

Key Components
- Objective: Reduce household emissions through residential solar installations
- Target Focus: 30 homes on the Reservation with high energy burdens
- Timeline: Phased rollout—15 homes per year over 2 years
- Funding: EPA CPRG, U.S. Department of Energy (DOE)
- Departments: Environmental, Housing, Planning
- Coordination: Utility provider (NV Energy), permitting agencies, solar contractors
- Expected Outcomes: 686 MT CO_2e reduced; co-benefits: energy savings, resilience, improved air quality

Overview of Solarize Tribal Homes

Component	Summary
Program Objective	Install rooftop solar on 30 homes to reduce emissions and boost resilience
Target Criteria	Prioritize by energy burden, structural readiness, and homeowner opt-in
Departments Involved	Environmental, Housing, Planning
Coordination Needs	NV Energy, Tribal permitting, licensed solar installers
Timeline	2-year rollout: 15 homes per year
Funding Sources	EPA CPRG, DOE
GHG Reduction & Benefits	686 MT CO_2e; plus utility savings, equity, and cleaner air

6.3.4.1 Stakeholder Engagement- Solar Installation

Stakeholder engagement for the Solarize Tribal Homes initiative ensures that solar installations reflect the needs, priorities, and values of the Fallon Paiute-Shoshone community. This plan outlines how the Tribe will involve residents, departments, and contractors in every phase—from household surveys and educational outreach to installation and follow-up. Through inclusive methods, culturally appropriate communication, and transparent feedback loops, the Tribe aims to expand solar access equitably, promote homeowner readiness, and build long-term support for clean energy adoption.

Section	Purpose	Detailed Engagement Approach
Engagement Goals	Define what the engagement process aims to achieve.	Educate homeowners on solar system benefits, costs, and maintenance. Promote equitable access for high-need households and build community support for energy sovereignty.
Key Stakeholders	Identify who should be involved and why their role matters.	Include homeowners and renters, especially elders, low-income families, and high energy burden households. Coordinate with Housing, Environmental, Planning, THPO, and solar contractors.
Engagement Methods	Outline how engagement will occur to ensure inclusive and effective participation.	Use sign-up forms and readiness surveys, host sessions on net metering and fire safety, offer contractor Q&A, and provide TERO/WIOA-based training opportunities.
Timing & Frequency	Coordinate engagement activities with each project phase.	Planning Phase: Intake surveys and education. Installation Phase: Pre- and post-install visits. Maintenance Phase: Follow-ups and homeowner training.
Feedback Loop	Show how input will be collected, used, and communicated back.	Use survey data to guide home selection and design. Gather installer feedback from residents. Provide annual updates on system performance and program expansion.

6.3.4.2 Vulnerability Assessment- Current Energy Resilience Snapshot (SWOT Analysis)

This initiative focuses on installing rooftop solar systems on homes within the Colony and Reservation to reduce greenhouse gas emissions, lower utility costs, and boost energy independence. Many homes face aging infrastructure, high bills, and extreme heat exposure conditions that strain budgets and threaten health. Prioritizing low-income and high-risk households, the program seeks to improve housing, build long-term resilience, and reduce reliance on external utilities. It also advances energy sovereignty and aligns with climate adaptation and mitigation goals in the CCAP.

Category	Focus Area	Vulnerability Identified	Summary Description
Strength	Community Support	Tribal interest in energy sovereignty	Strong support for renewable energy and climate adaptation
Strength	Infrastructure	Existing audits and retrofit data	Builds on energy audit findings to prioritize homes
Strength	Funding	Access to DOE, BIA, CPRG support	Multiple funding pathways identified
Strength	Workforce	Local economic opportunity needed	Creates jobs and training for Tribal members
Weakness	Infrastructure	Aging housing stock, outdated roofs	Structural barriers may limit install feasibility
Weakness	Admin Capacity	Limited permitting/inspection process	Gaps in coordination and staffing for rollouts
Weakness	Community Awareness	Limited understanding of system maintenance	Potential confusion over solar systems and warranties
Opportunity	Pilot Projects	Need for scalable deployment	Pilot homes can model success and guide broader rollout
Opportunity	Training & Jobs	High unemployment/youth workforce potential	Develop training programs through WIOA or IREC
Opportunity	Outreach & Education	Need for household energy education	Educate community on net metering, battery storage, and energy savings
Threat	Equity & Access	Structural limitations may exclude vulnerable households	Homes most in need may not qualify without upgrades
Threat	Policy Uncertainty	Changing utility or net-metering rules	Regulatory shifts could affect long-term cost savings
Threat	Supply Chain	Delays in panels, batteries, or contractors	Project timelines may be affected by procurement or availability issues

6.3.4.3 Mitigation Strategy- Clean Energy for Homes (GROW Model)

To reduce greenhouse gas emissions and address energy vulnerabilities, the Tribe is installing rooftop solar systems on 30 homes, aiming to cut 120–150 metric tons of CO_2e annually. This initiative expands renewable energy use, lowers electricity costs, and supports energy sovereignty. Additional benefits include net metering, long-term affordability, and equitable access to clean energy. The strategy aligns with broader climate resilience and sustainability goals.

Strategy Area	Goal (G)	Reality (R)	Options (O)	Will (W)
Wildfire & Air Quality Resilience	Improve indoor air quality and protect homes from wildfire smoke	Solarized homes may still be vulnerable to wildfire smoke and poor ventilation	Integrate HEPA filters, weatherization, and ventilation upgrades with solar installs	Include air quality resilience in home retrofit standards; pursue EPA Air Grants & BIA support
Heat Resilience & Cooling	Protect vulnerable populations from extreme heat	Homes lack adequate cooling and experience high indoor temperatures	Add solar-powered cooling systems (e.g. AC units, cooling roofs)	Partner with HUD/HHS to expand cooling assistance programs for solarized homes
Mosquito & Invasive Species	Reduce heat-driven mosquito outbreaks and plant invasions	Extended seasons increase mosquito and invasive species risks	Add native landscaping, solar-powered fans, or repellents near homes	Fund landscaping and mitigation through EPA or NRCS; create year-round vector management role
Cultural Landscape Protection	Ensure solar development respects cultural values and land use	Solar sites may conflict with traditional or sensitive resource areas	Involve THPO in siting; create solar siting criteria that protect cultural landscapes	Coordinate with THPO on project siting; integrate cultural protections into solar planning
Water Conservation	Reduce drought impacts tied to increased cooling and irrigation	More energy use may increase demand on water systems	Pair solar with efficient appliances, drip irrigation, and rainwater catchment	Integrate drought-saving features in solar housing retrofits; apply for EPA/DOE drought-energy grants
Emergency Preparedness & Resilience Hubs	Build energy security and climate resilience during outages	Solar homes lack backup power or emergency response roles	Equip homes with battery storage, emergency kits, and designate resilience hubs	Work with Emergency Management to fund and designate solar resilience hubs; seek FEMA/DOE support

6.3.4.4 Adaptation Strategy – Energy Resilience During Disruptions (SOAR Analysis)

Adaptation strategies for solarizing homes focus on strengthening community resilience to extreme heat, energy demand, and grid instability. By combining rooftop solar with home retrofits, these efforts improve indoor comfort, stabilize energy access, and shield vulnerable households from rising costs. They also reduce reliance on external utilities and help prepare homes for future climate impacts.

Strategy Area	Strengths	Opportunities	Aspirations	Results
Residential Energy Resilience	Solar + batteries reduce grid reliance and improve home energy security.	Expand to vulnerable homes, integrate with shelters.	Ensure energy access during outages or extreme heat.	Fewer outages, safer homes, greater resilience.
Workforce & Maintenance Capacity	Tribal O&M team builds local skills and self-reliance.	Train staff for solar upkeep and inspections.	Grow a workforce to manage future energy projects.	Faster repairs, longer system life, program consistency.
Equitable Solar Access	Focus on low-income and high-risk homes.	Use energy burden and health data to guide outreach.	Provide access to all households, regardless of status.	Lower energy stress, broader community participation.
Policy & Housing Integration	Solar-ready codes reduce future costs.	Require solar-readiness in new homes.	Align housing development with energy planning.	Lower infrastructure costs, streamlined solar expansion.
Wildfire Resilience	HEPA filters and air monitoring protect health.	Expand outreach, fire-harden homes, defensible space.	Build fire-adapted communities.	Improved air quality, lower fire risk, better preparedness.
Water Security & Conservation	Existing wells allow for groundwater monitoring.	Install meters, detect leaks, educate residents.	Secure long-term access via conservation.	Better supply planning, increased conservation awareness.
Cultural Resource Preservation	Native plants vital for tradition and identity.	Create resilience gardens and restore gathering areas.	Sustain cultural practices and landscapes.	Restored access, stronger cultural continuity.

6.3.4.5 Implementation Plan – Solar Installation on Tribal Homes (Logic Model)

This implementation plan uses a Logic Model framework to guide the phased installation of rooftop solar systems on at least 30 homes, aiming to cut emissions, reduce energy costs, and boost resilience for vulnerable households. Through three phases—planning and assessments, installation with workforce development, and education with monitoring—the plan promotes community engagement, strategic funding use, and future scalability. It supports energy sovereignty and strengthens long-term climate resilience.

Phase & Goal	Inputs	Key Activities	Outputs	Outcomes
Phase 1 – Planning & Assessment *Prepare homes, engage residents, and assess readiness*	EPA CPRG, DOE, BIA HIP, IRA funds, Housing staff	- Identify & prioritize vulnerable homes- Conduct energy/roof/cooling assessments- Finalize solar system design- Coordinate with THPO	- Homes selected & assessed- Site plans completed- Risk/vulnerability data collected	- Prioritized installations- Informed design- Strong foundation for climate resilience
Phase 2 – Installation & Workforce *Install solar systems and develop workforce*	DOE, CPRG, utility programs, contractors, TERO	- Contract qualified installers- Train & hire Tribal members- Install rooftop systems- Add cooling/fire-resilient upgrades	- Solar systems installed- Workforce data tracked- Cooling & fire upgrades added	- Increased clean energy use- Local job creation- Safer, climate-ready homes
Phase 3 – Education & Expansion *Educate homeowners and prepare to scale*	Monitoring tools, DOE/CPRG funds, Housing staff	- Train residents- Track performance/savings- Launch dashboard & alerts- Develop expansion plan	- Residents trained- Performance tracked- Feedback & expansion plan complete	- Empowered community- Improved system use- Ready for broader rollout
Phase 4 – Maintenance & Policy *Ensure system upkeep and policy alignment*	Housing/Environmental staff, monitoring tools	- Create maintenance schedules- Conduct inspections/repairs- Integrate solar into codes- Share success stories	- Maintenance program in place- Service issues tracked- Policy recommendations made	- Sustained performance- Informed Tribal codes- Long-term resilience & funding support

6.3.4.6 Authority to Implement – Solarize Tribal Homes (RACI Model)

This section uses a RACI Model to define departmental roles—Responsible, Accountable, Consulted, and Informed—across each phase of the Solar Energy and Home Efficiency Plan. Leadership, oversight, and interdepartmental coordination are structured to ensure effective implementation. The Fallon Business Council (FBC) holds final approval authority, while departments like Project Management, Housing Department, Public Works Department, and Environmental Protection Department collaborate through reporting and coordination meetings.

Phase / Activity	Sector	Responsible	Accountable	Consulted	Informed
1. Planning & Assessment	Residential	Housing Department, Project Management	Project Management	Environmental Protection Department, THPO	Tribal Administrator (TA), FBC
2. Solar Installation & Workforce	Residential	Housing Department, TERO	Housing Department	Contractors, Project Management, EPD	Tribal Administrator, FBC
3. Cooling & Fire-Resilient Upgrades	Residential	Housing Department	Housing Department	Environmental, Public Works	Tribal Administrator, FBC
4. Education & Expansion	Shared	Environmental Protection Department, Housing Department	Environmental Protection Department	Project Management, DOE, Training, Tribal Administrator	FBC, Community
5. Maintenance Program	Shared	Housing Department, Environmental Protection Department	Housing Department	Public Works Department, Monitoring Leads	Tribal Administrator, FBC
6. Monitoring & Feedback Loop	Shared	Environmental Protection Department	Environmental Protection Department	Project Management, Housing Department, Tribal Administrator	FBC, Funders
7. Policy & Code Integration	Shared	Project Management	Project Management	Environmental Protection Department, Housing Department, Tribal Attorney	Tribal Administrator, FBC

6.3.4.7 Monitoring & Evaluation Framework- Solar Installation

To ensure measurable progress and accountability, the FPST will implement a structured monitoring and evaluation framework for the *Solarize Tribal Homes* initiative. This framework supports federal reporting requirements (e.g., EPA CPRG, DOE Tribal Energy Program) while enabling the Tribe to track emissions reductions, energy affordability improvements, and community resilience outcomes. Monitoring activities will occur throughout the three phases of implementation and will inform ongoing program management and future solar expansion planning.

Implementation Phase	Evaluation Focus	Performance Metrics	Data Collection Method	Responsible Entity
Phase 1: Planning & Assessments	Home readiness and equitable outreach	- Number of homes assessed - % passing solar readiness criteria - Number of priority households enrolled	Energy audit reports Outreach and intake logs	Housing Department (Lead), EPD, Project Management
Phase 2: Installation & Workforce Engagement	Deployment progress and local workforce inclusion	- Number of systems installed - Total kW installed and average per home - Tribal workforce participation rate - Installation compliance reports	Contractor reports Site inspections Training program logs	Public Works Department (Lead), Housing Department, TERO, Project Management
Phase 3: Monitoring, Education & Expansion	System performance and long-term planning	- % of homeowners trained - Average energy savings per household - Annual GHG emissions reduced - Completion of expansion readiness assessment	Utility billing data Solar monitoring software Resident feedback surveys	Housing Department (Lead), NV Energy, Communications, EPD

GHG Reduction Tracking Metrics

Metric	Target	Calculation Method
Annual CO_2e Reduction	120–150 MT/year	PV output × EPA eGRID factor
Electricity Offset per Home	≥ 60%	Post vs. pre-installation utility usage
Net Metering Participation	100% of installed homes	Utility interconnection verification
Average Energy Cost Reduction	≥ 30%	Monthly bill comparisons

Reporting Schedule and Oversight

Monitoring Activity	Frequency	Recipients
Performance Dashboard Updates	Monthly	Housing, Environmental, Implementation Team
GHG Reduction & Savings Summary	Quarterly	Fallon Business Council, EPA CPRG Program Office
Grant Compliance Reports	Per grant cycle	DOE, EPA, HUD, BIA
Tribal Council Updates	Quarterly	Fallon Business Council
Resident Feedback Survey	Annually (post-installation)	Housing, Communications, Environmental

Monitoring Tools and Technology

- Solar Monitoring Platforms: Tools such as Enphase or Solar Edge will track real-time system output and energy performance.
- Utility Data Analysis: NV Energy billing data will be collected (with homeowner consent) to assess cost savings and net metering outcomes.
- GHG Calculators: Emission reductions will be estimated using regional conversion factors from EPA's eGRID database.
- Resident Engagement Logs: Sign-in sheets, surveys, and training records will document education outcomes and maintenance readiness.

Adaptive Management Approach
Quarterly cross-department meetings will assess progress, resolve challenges, and update the implementation plan as needed. Key metrics will inform improvements in outreach targeting, household eligibility, workforce training, and installation coordination. Findings will also guide future expansion opportunities—such as battery integration or community solar—and support new grant proposals and infrastructure planning.

6.3.5 Energy Sovereignty & Resilience

6.3.5.1 Monitoring & Evaluation

To ensure the effectiveness and accountability of transportation-related GHG reduction measures, the FPST will implement a structured monitoring and evaluation process using performance indicators, interdepartmental coordination, and community input.

Monitoring Methods

Each transportation initiative will be tracked using project-specific indicators and assigned departmental leads:

- EV Fleet Pilot Project (Lead: Transportation Dept.)
  - o Track mileage, fuel cost savings, and downtime via telematics
  - o Monitor charging frequency, battery range, and maintenance issues
  - o Key Metric: ≥25% reduction in fuel costs by Year 1

- EV Charging Stations (Lead: Environmental Protection Dept. + IT/Data)
  - o Use smart charger analytics to monitor usage, energy draw, uptime
  - o Log community feedback on site safety, access, and performance
  - o Key Metric: Maintain ≥85% charger uptime across all units

- Off-Road Equipment & Agricultural Tools (Lead: Environmental Protection Dept. + Agriculture)
  - o Track fuel usage reductions after replacing diesel tools
  - o Collect user feedback on functionality and operability in the field
  - o Key Metric: Achieve ≥15% GHG reduction in off-road operations

- Transit & CHR Services (Lead: Health Center/CHR + Transportation Department)
  - o Monitor ridership trends, route efficiency, and coverage
  - o Evaluate service reliability and community satisfaction
  - o Key Metric: Increase elder/healthcare ridership by ≥10% annually

7 Equity Integration and Justice40 Framework

The Fallon Paiute Shoshone Tribe's Comprehensive Climate Action Plan (CCAP) upholds the principles of equity, self-determination, and environmental justice. Consistent with Justice40 guidance, the Tribe commits to ensuring that at least 65% of climate-related program benefits serve Low-Income and Disadvantaged Communities (LIDACs), exceeding the federal minimum threshold of 40%.

7.1 Framework Objectives

Advance Equity Across All GHG Measures
Each of the four GHG reduction strategies—fleet electrification, EV charging infrastructure, home energy retrofits, and residential solar—was designed to center benefits for LIDAC households. These include:

- Cost savings through reduced fuel and utility bills
- Improved health outcomes by reducing exposure to wildfire smoke, heat, and poor air quality
- Workforce opportunities for Tribal members through WIOA/TERO-driven training
- Increased mobility and energy resilience for elders, families, and Tribal programs

Embed Community Co-Design
All projects incorporate inclusive planning practices, such as:
- Focus groups and surveys with CHR users and low-income households
- Education and outreach on EVs, solar benefits, and retrofit options
- Contractor Q&A and THPO consultations to ensure cultural alignment

Monitor Equity Outcomes
A Justice40-aligned equity tracking framework will:
- Map benefit delivery by geography and demographic
- Track LIDAC participation rates in programs
- Ensure equitable hiring and training practices
- Gather community feedback annually to guide course corrections

7.2 Implementation Considerations

Workforce Equity:
Each initiative includes equity metrics such as "≥5 Tribal members trained," "70% of solar installs in LIDAC homes," or "25% EV charging benefits to non-fleet EV users." WIOA and TERO are key partners for job access and tracking.

Cost & Readiness Adjustments:
Implementation costs were evaluated in relation to:
- Local housing conditions (e.g., solar readiness and roof age)
- Regional availability of trained technicians and contractors
- Barriers to participation for renters and unserved households
  Retrofit and solar programs include pre-assessment and readiness upgrades to expand eligibility for LIDAC households.

Clean energy siting considers both physical risk (flood, wildfire, heat) and cultural risk (sacred sites, ceremonial zones).

- The Tribe will engage THPO and elders early in each siting and design phase
- Public charging and solar programs prioritize community buildings in underserved zones

Link to Broader Goal- The equity and Justice40 framework reinforces FPST's commitment to:

Net-zero emissions by 2050, with a 50% reduction by 2035
Climate resilience, especially in heat-prone, low-resource homes
Environmental sovereignty, ensuring energy and mobility are rooted in Tribal governance and TEK
Federal funding alignment, including with DOE, BIA, HUD, EPA, and FEMA equity guidelines

Metrics and Accountability

Equity Focus Area	Target Metric	Data Source	Frequency
LIDAC benefit delivery	≥65% of program impacts	M&E dashboards	Quarterly
Workforce participation	5–10 Tribal hires/year	TERO/WIOA Reports	Semi-annually
Community satisfaction	≥75% positive LIDAC feedback	Surveys & workshops	Annually
CHR/elder mobility	≥10% ridership increase	CHR Records	Quarterly
Outreach equity	100% of LIDAC homes contacted	Engagement logs	Annually

7.3 Monitoring, Reporting, and Evaluation Framework

Benefits analysis includes monetized air quality co-benefits using EPA COBRA estimates for reductions in PM2.5 exposure and respiratory illness. The FPST will implement a structured monitoring and evaluation (M&E) framework to ensure transparency, track progress, and adaptively manage climate strategies. The Tribe will establish an annual reporting system to track GHG reductions, implementation, and community outcomes. Inventory updates will occur every 3–5 years, using utility records, vehicle registrations, waste data, and surveys. Progress reports will be shared with Tribal leadership and the community to support transparency and continuous improvement.

Performance Tracking and Metrics

Focus Area	Key Metrics	Frequency	Lead Departments
Emissions Reduction	CO_2e reductions, % goals met	Quarterly	EPD, PM
Workforce Readiness	# Trained/certified Tribal members	Biannually	TERO/WIOA, EPD
Infrastructure Resilience	Uptime %, response to heat/smoke events	Annually	Public Works Department, PM
Community Impact	Satisfaction, CHR ridership increase	Annually	Housing Department, CHR, Health Center
Cost Efficiency	Energy/fuel cost savings, budget tracking	Semi-annually	Finance Department, EPD

7.4 Equity & Adaptive Management

The M&E framework ensures ≥40% of benefits go to LIDAC households. Equity tracking will include outreach logs and survey feedback. Quarterly check-ins, annual CCAP reports, and community engagement will guide data-driven improvements.

Workforce Integration
The plan leverages TERO/WIOA to train and track Tribal hires, monitor certifications, and coordinate with training partners to close skill gaps.

Tools and Technology
Evaluation will use smart charger analytics, utility data, GHG calculators, solar monitoring platforms, and project dashboards to track usage, emissions, and impact.

The Fallon Paiute Shoshone Tribe is committed to ensuring that at least 65% of Comprehensive Climate Action Plan (CCAP)-related benefits accrue to Low-Income and Disadvantaged Communities (LIDACs), in alignment with the federal Justice40 Initiative. This includes efforts across all major GHG Reduction Measures—fleet electrification, EV infrastructure, energy audits, retrofits, and rooftop solar installations.

The Tribe prioritizes equitable access by:

- Targeting energy efficiency upgrades and solar installations for households with high energy burdens.
- Expanding mobility services and EV access for CHR users, elders, and underserved areas.
- Delivering public health benefits through improved air quality and reduced exposure to wildfire smoke and extreme heat.
- Hiring and training Tribal members—particularly those from LIDACs—through WIOA and TERO-supported green job pathways.
- Embedding equity metrics into performance tracking (e.g., ≥40% of program benefits reaching LIDACs; ≥10% increase in CHR ridership among vulnerable households).

All CCAP measures include clear Monitoring & Evaluation frameworks with LIDAC-focused indicators, such as:

- GHG and cost reductions by sector,
- Accessibility of clean energy and mobility options,
- Health outcomes (e.g., reduced respiratory issues or ER visits),
- Workforce inclusion and training milestones.

FPST will use the EPA's CEJST (Climate and Economic Justice Screening Tool) to monitor geographic benefit distribution and refine outreach, siting, and service strategies. This data-driven approach ensures that community voices shape implementation and that Tribal sovereignty, cultural protection, and environmental justice remain central to climate resilience.

8 Benefits Analysis

The Comprehensive Climate Action Plan delivers multiple co-benefits alongside greenhouse gas (GHG) reductions, contributing to cleaner air, healthier homes, economic savings, and stronger community resilience. These benefits align with the Tribe's long-term goals for environmental justice, energy sovereignty, and public health.

8.1 Benefits Analysis – Fleet Electrification (Matrix Table)

This Benefits Analysis evaluates the environmental, economic, health, and equity impacts of piloting fleet electrification. The matrix framework outlines measurable benefits such as reduced emissions, improved air quality, enhanced public health, and equitable access for low-income and disadvantaged communities (LIDACs). Insights from the Climate Change Adaptation Plan help ensure alignment with Tribal values, Justice40 principles, and long-term resilience strategies. This approach ensures that benefits are distributed fairly while addressing both mitigation and adaptation priorities.

Category	Benefit	Who Benefits	LIDAC Relevance	LIDAC Impact	Year 1 Target
Environmental	Reduce fleet GHG emissions	All Tribal departments, community	High – dense-use areas	Indirect – Improves air quality in LIDAC areas	≥60.8 metric tons CO_2e reduced
Environmental	Improve air quality	Elders, CHR clients, youth	High	Direct – Targets sensitive groups in LIDAC zones	Fewer pollution-related complaints
Economic	Lower fuel & maintenance costs	Tribal departments, admin	Medium	Indirect – Frees up funds for community investment	≥25% fleet cost reduction
Economic	Create clean vehicle jobs	Tribal workforce	High – job access	Direct – Prioritizes hiring from LIDAC areas	≥5 Tribal members trained
Health	Reduce respiratory illness risks	CHR users, elders	High	Direct – Reduces exposure to wildfire smoke and heat stress for vulnerable groups	Fewer respiratory related visits to health providers
Equity	Improve CHR/elder ridership	Elders, low-income households	High	Direct – Enhances mobility for underserved groups	≥10% increase in CHR ridership
Equity	Justice40 benefit delivery	LIDAC areas near transit routes	Core metric	Direct – Meets ≥40% LIDAC benefit delivery target	≥40% benefits to LIDACs

8.2 Benefits Analysis – EV Charging Infrastructure (Matrix Table)

The deployment of EV charging stations supports the FPST's clean transportation goals by enabling electric fleet use, clean rideshare services, and broader community EV adoption. Informed by the Tribe's Climate Change Adaptation Plan, this LIDAC-based benefits analysis outlines local impacts across Environmental, Economic, Health, and Equity categories—advancing energy resilience, public health, and mobility access for disadvantaged residents while reinforcing Tribal climate leadership and aligning with federal funding priorities.

Category	Benefit	Who Benefits	LIDAC Impact	Year 1 Target
Environmental	Promotes clean vehicle use and reduces emissions	Fleet, commuters, facility visitors	20–30% GHG cut; 25–40 metric tons CO_2e reduced	2 public chargers; 1 facility charger
Economic	Cuts fuel costs, attracts grants, boosts energy security	Drivers, fleet managers, Tribe	$0.10–$0.25/mile savings; $500K–$1M in funding	5+ EVs added; 1 funding app; 1 renewable source
Health	Improves air quality, reduces exposure near services	Elders, youth, residents	Reduced PM2.5, NOx; 100+ people benefit	Chargers near 1 high-traffic and 1 elder site
Equity	Expands access, supports rideshare/NEMT	Low-income households, seniors	5+ chargers; 25% of non-fleet EVs supported	1 accessible site; rideshare plan drafted
Resilience	Supports energy independence and disaster readiness	Tribal departments, emergency services	Improves fleet reliability and off-grid readiness with EVSE	Include EVSE in emergency ops plan
Workforce	Creates job training and green workforce opportunities	Local workforce, Tribal youth	Builds capacity in clean tech and EV maintenance	Partner with 1 training org for EV curriculum

8.3 Benefits Analysis – Energy Audits and Retrofits - Matrix Table

This initiative delivers targeted benefits to low-income and disadvantaged Tribal households by lowering energy costs, improving indoor air quality, and increasing resilience to extreme heat and wildfire smoke. Using the LIDAC (Low Income Disadvantaged Communities) Matrix table, the Tribe evaluated benefits across economic, health, climate, and workforce dimensions to ensure equitable outcomes. The effort also supports job creation and skill-building in energy efficiency fields, aligning with Tribal goals for long-term sustainability and self-determination. Collectively, these actions reflect the Tribe's commitment to climate adaptation, equity, and community well-being.

Category	Benefit	Who Benefits	LIDAC Relevance	LIDAC Impact	Year 1 Target
Energy Efficiency	Lower energy bills and improved indoor comfort	Elders, low-income households, renters	High utility costs and extreme temps harm vulnerable groups	Increases affordability, reduces heat exposure	Complete 30 residential audits/retrofits
Public Health	Reduced exposure to PM2.5, heat, and poor air quality	Households with children, elders, health-sensitive members	Wildfire smoke and heatwaves hit LIDAC households hardest	Enhances indoor air quality and resilience	Install HVAC/filtration in 15 priority homes
Resilience to Hazards	Buildings shielded from heat and smoke infiltration	Community members in high-risk homes/facilities	Adaptation requires tighter buildings and HEPA filtration	Cuts health risks during wildfires and heatwaves	Upgrade air filtration in 3 tribal facilities
Economic Stability	Utility savings free up funds for food, meds, fuel	Low-income renters, homeowners, seniors	Heat/drought raise utility burdens, hurt already-strained families	Builds energy independence and economic resilience	Launch assistance program for 20 households
Workforce Development	Green jobs for retrofitting, training, career growth	Tribal members, youth, contractors	Limited local jobs in technical fields	Builds sustainable workforce, expands Tribal capacity	Train 5 staff, onboard 2 contractors/trainees

8.4 Benefits Analysis- Solarize Tribal Homes - Matrix Table

The benefits analysis highlights how rooftop solar installations will deliver environmental, economic, and health advantages, especially for low-income and high-risk households. By lowering utility bills, reducing greenhouse gas emissions, and improving indoor conditions during extreme heat events, the initiative directly supports energy resilience and Tribal self-determination. The focus on LIDAC communities ensures equitable access to clean energy and long-term cost savings. In Year 1, 30 homes will be prioritized, with at least 70% located in disadvantaged areas.

Category	Benefit	Who Benefits	LIDAC Relevance	LIDAC Impact	Year 1 Target
Environmental	Reduced greenhouse gas emissions	All community members	Improves air quality and reduces climate-related vulnerabilities	Directly lowers CO_2e through renewable energy use	Install rooftop solar on 30 homes
Economic	Lower monthly utility bills	Low-income households, elders, large families	Reduces financial strain in disadvantaged communities	Improves affordability and financial stability for vulnerable populations	Reduce energy costs by 25–40% per home
Energy Resilience	Increased energy independence and reliability	Reservation and Colony residents	Supports preparedness for grid outages and extreme heat	Enhances safety and comfort, especially during climate events	Provide battery-ready systems on 10 homes
Health & Safety	Safer indoor temperatures during heatwaves	Seniors, young children, medically sensitive people	Reduces heat-related health risks in under-resourced households	Decreases ER visits and health impacts tied to extreme heat	Reach 100% of at-risk households enrolled
Equity & Sovereignty	Increased Tribal energy sovereignty and equitable access to renewables	Entire Tribal community	Ensures LIDAC households have fair access to sustainability gains	Empowers self-determination and equitable climate mitigation	Prioritize 70% of installs for LIDAC homes

Key benefits from implementing the CCAP include:

- Improved Air Quality: Reductions in harmful pollutants such as NO_x, SO_2, PM2.5, and VOCs are expected due to decreased fossil fuel use from transportation electrification, building retrofits, and residential solar installations. This supports respiratory health—particularly for elders, CHR clients, and youth in vulnerable areas.
- Lower Household Energy Costs: Energy audits, retrofits, and solar power reduce utility bills, fuel expenses, and maintenance costs. These savings provide direct financial relief for low-income households, enabling reallocation of funds toward food, medicine, and fuel.
- Enhanced Climate Resilience: Resilient infrastructure—such as EV chargers with solar + battery backup, home weatherization, and cooling systems—protects residents from extreme heat, wildfire smoke, and energy outages. Clean energy investments also reduce grid dependence and support emergency preparedness.
- Health and Safety Benefits: Upgrades like air-source heat pumps, HEPA filters, and improved indoor ventilation systems mitigate health risks tied to smoke exposure, high temperatures, and poor air quality—especially during climate-driven emergencies.
- Workforce Development: Each GHG measure builds local job pathways in EV maintenance, energy efficiency, solar installation, and environmental monitoring. The plan prioritizes workforce inclusion through TERO and WIOA, targeting youth, underserved communities, and Tribal members for training and hiring.
- Equity for LIDAC Households: All CCAP initiatives prioritize Low-Income and Disadvantaged Communities (LIDACs) to ensure equitable distribution of clean energy benefits. At least 40% of program benefits target LIDAC zones, consistent with Justice40 principles.
- Cultural and Environmental Stewardship: The integration of Traditional Ecological Knowledge (TEK) ensures clean energy development respects sacred sites, supports native plant protection, and reflects cultural values in land-use planning and infrastructure siting.

Together, these benefits reinforce the Tribe's sovereignty, reduce reliance on fossil fuels, and support a healthier, more self-reliant community.

9 Workforce Planning

Workforce development is central to implementing CCAP strategies. High-demand roles include electricians, HVAC and solar technicians, EV fleet mechanics, energy auditors, and environmental monitoring staff. Workforce assessments show 50–60% of these positions require local upskilling.

9.1 Workforce Analysis – Fleet Electrification (Gap Assessment)

Workforce readiness is critical to implementing GHG Reduction Measure #1: Electrify Tribal Fleet Vehicles. Successful transition to EVs requires internal capacity in EV maintenance, emissions tracking, and fleet operations. Using insights from the Climate Change Adaptation Plan, this gap assessment identifies current roles, workforce needs, and key actions to build capacity. Coordination with the Tribal Employment Rights Office (TERO), which manages WIOA and training programs, will support a skilled workforce and ensure long-term project success.

Position/Function	Current Workforce	Needed for Implementation	Gap Identified	Recommended Actions
EV Maintenance Mechanics	No general mechanics (no EV experience)	2 mechanics trained in EV systems	No certified EV mechanic expertise	Enroll in vendor or TERO-led EV certification programs.
Fleet Managers	Department directors/supervisors manage fleet	1 dedicated EV-savvy fleet manager	No full-time EV fleet lead	Reassign or hire to oversee EV ops, reporting, and charging coordination.
Data Tracking Staff	No formal tracking in place	1 emissions and fleet data analyst	No system or staff for GHG data collection	Train/hire part-time analyst; implement basic fleet data tools aligned with CCAP.
Fleet Drivers	All licensed and insured Tribal employees	No new hires; EV training needed	No EV-specific safety or usage training	Provide EV operation and charger use training via Clean Cities or vendors.
Environmental Monitoring Support	No dedicated staff; limited sensor use	1 part-time monitoring technician	Not enough support for tracking heat/air risks	Cross-train staff or hire seasonal tech to support air, heat, and emissions monitoring tied to adaptation priorities.

9.2 Workforce Planning Analysis – EV Charging- Gap Assessment

A skilled, well-supported workforce is critical to implementing the GHG Reduction Measures, which require technical expertise, maintenance capacity, and interdepartmental coordination. Using the Climate Change Adaptation Plan to help form this section, a Workforce Gap Assessment identifies staffing needs, evaluates existing capacity, and recommends actions to close gaps in technical roles, data management, and project oversight. These findings support investment in workforce development programs like WIOA, certifications, and cross-department training to strengthen long-term green sector capacity.

Position/Function	Current Workforce	Needed for Implementation	Gap Identified	Recommended Actions
EV Infrastructure Technician	0	2–3 certified technicians	Technical skill gap	Partner with EV charging vendors for on-site training; fund certification via TERO/WIOA
Electricians (with EVSE experience)	Limited general electrical staff; no EVSE specialization	1–2 with EVSE installation training	Skill-specific shortage	Coordinate with local unions or training centers for EVSE certifications
Project Manager (Construction/EV)	1 (shared role across projects)	1 dedicated for phased rollout	Time/role overload	Reassign internal staff or contract temporary EV project support during rollout
Data Analyst/Tracking Staff	0	1–2 for emissions data tracking and reporting	No current coverage	Train existing admin staff or hire interns via workforce development funding
EV Education & Community Engagement Lead	1 Environmental Specialist & 1 Environmental Assistant	1 with EV familiarity	Limited staff with EV outreach experience	Cross-train staff on EV benefits, incentives, and infrastructure use

9.3 Workforce Analysis – Energy Audits and Retrofits – Gap Assessment

The Workforce Analysis, guided by the GAP Assessment table, identifies key staffing and training needs essential for successful implementation of energy audits and retrofits. It highlights gaps in technical expertise, project management, outreach coordination, and contractor capacity, particularly within Tribal departments. Addressing these gaps through targeted training, internal staffing, and local contractor development will build long-term Tribal capacity and reduce dependence on external labor. This approach ensures that climate action efforts also generate economic and workforce benefits for the community.

Workforce Role	Capacity & Gaps	Action Needed	Timeline	Lead Dept.(s)
Energy Auditors	No certified Tribal staff; audits outsourced. Limits control and slows program rollout.	Certify Tribal members or Coordinate with Home Energy Connection to deliver BPI Training in Fallon .	Yr. 1–2	Environmental Protection Dept., TERO
Retrofit Technicians	Limited skilled labor for insulation, HVAC, and weatherization.	Partner with trades/vocational programs to train Tribal hires. Use mobile/in person training through regional providers for HVAC and heat pump installation	Yr. 1	Housing Department, TERO
Project Management	Staff have general grant experience but lack retrofit-specific planning/reporting skills.	Offer targeted energy retrofit PM training; designate lead PM.	Yr. 1–3	Environmental Protection Dept., TA
Outreach & Intake	No dedicated intake coordinators for resident scheduling, eligibility, or follow-up.	Train or cross-train staff to support retrofit intake pipeline.	Yr. 1	Housing Department, Environmental. Protection Dept.
Contractor Pool	Few local contractors understand Tribal standards or HUD compliance.	Build a vetted roster and require orientation on Tribal policies.	Yr. 2	Housing Department, TERO
Monitoring & Evaluation	No staff trained in tracking retrofit impacts or managing M&E systems.	Invest in tools and staff training for energy data tracking.	Yr. 2–3	Environmental Protection Dept., IT
Administrative Support	Admins support grants but not trained in workflow/data tracking for audits.	Develop internal SOPs and tools to support program coordination.	Yr. 1–2	TA, Project Management

9.4 Workforce Analysis – Solarized Tribal Homes - Gap Assessment

The solarize tribal homes initiative will require a skilled, cross-functional workforce to manage planning, installation, and long-term maintenance of rooftop solar systems. The gap assessment highlights current limitations in specialized solar technicians, certified electricians, and community-based outreach coordinators. To address these gaps, the Tribe will focus on workforce development through targeted training programs, partnerships with technical schools, and apprenticeships that prioritize Tribal members. Building internal capacity will ensure project sustainability, create local jobs, and align with long-term energy resilience goals.

Category	Workforce Need	Who Benefits	LIDAC Relevance	LIDAC Impact	Year 1 Target
Solar Installation	Licensed solar installers, electricians, general laborers	Local job seekers, Tribal workforce	High – job creation within disadvantaged households on the Reservation/Colony	Upskilling residents and increasing employment within LIDAC-designated areas	Train and certify 6 Tribal members
Community Outreach	Outreach coordinators with cultural competency	Elders, low-income households	High – ensures engagement and inclusion of disadvantaged groups	Builds trust, improves program participation, and empowers informed decision-making	Hire 2 part-time Tribal outreach coordinators
Project Management	Site assessors, program coordinator, compliance monitors	Tribal departments, project partners	Medium – indirect support for LIDAC through improved service delivery	Ensures program integrity and smooth coordination with workforce development	Hire or assign 1 FTE program coordinator
Education & Training	Technical trainers, apprenticeship partners	Tribal youth, vocational learners	High – builds a pipeline of skilled workers from disadvantaged communities	Long-term sustainability through workforce retention and capacity building	Launch 1 apprenticeship pathway with local CTE

To address these gaps, FPST proposes to partner with Western Nevada College, TERO/WIOA, solar/EV vendors, and regional unions to create clean energy training programs, apprenticeships, and certifications. This will support Tribal job access and long-term capacity in EV operations, energy retrofits, and data tracking.

Key Training Priorities	Identified Gaps
EV fleet and charger maintenance	No certified EV or HVAC technicians
HVAC and retrofit installation	Lack of data tracking specialists and retrofit project managers
Solar and battery storage deployment	Limited culturally competent outreach staff for resident engagement
GHG and air quality monitoring	

These will be addressed by cross-training existing staff, onboarding part-time technical roles, and prioritizing youth and LIDAC residents in training pathways.

Co-Benefits:

- Tribal job creation and workforce resilience
- Reduced project delays and reliance on external vendors
- Internal capacity for long-term maintenance and monitoring

Environmental Benefits:

- 2% PM2.5, 3% NO_x, and 1.5% VOC reductions, based on AVERT-scaled estimates

Equity Tracking Tools:

- EPA CEJST overlays to assess LIDAC benefit delivery
- TERO/WIOA workforce reports and CCAP implementation metrics

FPST's workforce plan ensures clean energy investments build both community resilience and economic self-determination.

10 Implementation Timeline

This section outlines a cross-sector implementation roadmap for the Fallon Paiute Shoshone Tribe's key climate actions. It ensures transparency, aligns with CPRG requirements, and supports coordination across Tribal departments and funding cycles. The implementation timeline builds on the Priority Climate Action Plan (PCAP) and Climate Change Adaptation Plan (CCAP), using phased logic models and RACI governance to organize responsibilities and track progress.

Implementation is divided into short-term (2025–2030), medium-term (2030–2040), and long-term (2040–2050) goals, corresponding to federal funding timelines, infrastructure lifespans, and emissions reduction targets. Sector-specific rollout plans have been developed for transportation, electricity use, and solar energy, with built-in evaluation mechanisms to ensure accountability and adaptability. Each GHG Reduction Measure includes detailed Logic Models (Sections 6.3.1.5, 6.3.2.5, 6.3.3.5, and 6.3.4.5), workforce development timelines (Sections 9.1, 9.2, 9.3, and 9.4). These plans guide the development of fleet electrification, EV charger siting, home retrofits, and rooftop solar installations. Project timelines are reinforced by implementation scorecards, quarterly reporting schedules, and adaptive management tools.

Governance is supported through RACI models (Sections 6.3.1.6, 6.3.2.6, 6.3.3.6, and 6.3.4.6), which define lead and supporting departments, ensure interdepartmental coordination, and promote Tribal Council oversight. Community feedback loops and TEK integration ensure implementation remains inclusive, culturally grounded, and community-informed.

Short-term actions (2025–2030) prioritize pilot projects, workforce training, infrastructure deployment, and data system development. These align with CPRG objectives and serve as foundational investments to catalyze long-term emissions reductions through 2050.

Phase-Based Implementation Overview

Timeline	Primary Focus Areas	Key Deliverables
2025–2030	Pilot programs, infrastructure deployment, workforce	EV fleet rollout, charger install, home audits & solar
2030–2040	Scaling, integration, policy updates	Expanded clean mobility, updated Tribal energy policies
2040–2050	Maintenance, resilience, long-term emissions reductions	Full electrification, net-zero operations, TEK-aligned reviews

11 Interaction with Other Funding Availability

The Fallon Tribe's current relevant funding opportunities could align with components of the CCAP climate strategy.

Key funding opportunities and potential alignment include:

1. EPA Climate and Environmental Resilience Grants
- In August 2023, the Tribe received $169,749 via the EPA to reduce greenhouse gas emissions and pollution—directly supporting climate action goals.
- Additional EPA programs, like the Climate Pollution Reduction Grants (CPRG), offer planning and implementation grants that could help expand emissions reduction and resilience work.

2. Department of Energy (DOE) Home Electrification & Appliance Rebates
- In June 2025, the Tribe joined a consortium of seven Nevada tribes to access approximately $3 million from the DOE HEAR Program. These funds are earmarked for home energy upgrades—insulation, appliances, heating systems—that reduce energy use, improve resilience, and lower carbon emissions.

3. Infrastructure & Water Systems (Inflation Reduction Act + USDA)
- A prior USDA grant (2019) for $1.283 million was used to expand wastewater treatment infrastructure, enhancing resilience to environmental impacts.
- In 2024, under the Inflation Reduction Act, the Tribe received approximately $3.8 million to upgrade its water distribution and treatment system—enhancements that likely support climate adaptation and public health.

4. Affordable Housing Development
- In June 2024, the Tribe was allocated around $2.3 million from the Department of Housing and Urban Development and Federal Home Loan Bank funds to build and renovate housing, efforts that can integrate energy-efficient, climate-resilient design.

5. Cultural and Tribal Site Preservation
- In May 2024, the Tribe received $98,101 from a National Park Service grant to support cultural and tribal site preservation—an opportunity to include climate-informed preservation strategies.

6. Tribal Climate Resilience Funds (BIA - Interior Dept.)
- A broader federal program announced in March 2024 committed $120 million to fund 146 tribal climate resilience projects across the U.S., combining IRA, Bipartisan Infrastructure Law, and annual appropriations funds. Although the specific recipients were not listed, this remains a key pool for funding climate adaptation.

7. Existing Tribal Environmental Programs
- Going back to 2010, the Tribe's Environmental Protection Department used an EPA hazardous waste grant to launch a used oil-recycling program—demonstrating an established capacity and history of leveraging EPA funding.

The CCAP could leverage these funding opportunities for:

Strategic Mapping
Map plan components—like energy efficiency, water infrastructure, housing resiliency, and cultural preservation—to these funding sources.
- Energy efficiency → DOE HEAR funding
- Emissions reduction → EPA climate grants
- Water resilience → IRA-funded infrastructure

Consortium Approaches
The consortium model used with NCEF helped pool capacities and funding access (DOE program). This approach could be replicated for EPA or Interior Dept. grant opportunities.

Embedding Resilience in Existing Projects
Housing renovations and water projects currently funded could be upgraded to include climate-smart design elements (e.g. solar, green infrastructure).

Planning to Implementation Pipeline
Funded planning or pilot actions—like waste oil recycling or energy audits—can serve as stepping stones toward larger, implementation-focused grants via programs like CPRG.

Cultural & Climate Synergy
Projects funded for cultural preservation can integrate climate safeguard measures—helping protect heritage from climate risks like erosion or extreme weather.

Summary Table

Funding Source & Year	Purpose	Climate Action Intersection
EPA grant ($169,749 in 2023)	Emissions & pollution reduction	Directly supports mitigation efforts
DOE HEAR Program (~$3M, 2025)	Home energy upgrades	Supports efficiency, resilience in residential sectors
IRA / USDA Water Infrastructure (~$3.8M)	Water treatment/distribution	Enhances climate-adaptive infrastructure
Affordable Housing ($2.3M; 2024)	Housing construction & renovation	Opportunity for resilient, energy-efficient housing design
NPS Cultural Preservation ($98k; 2024)	Preservation studies and surveys	Can integrate climate risk mitigation
Interior Dept. Resilience Funds ($120M total pool; 2024)	Diverse resilience/climate adaptation	Potential funding pool for new strategic projects
EPA Hazardous Waste Program (2010-era)	Recycling infrastructure & education	Demonstrates past success in environmental program deliver

12 Appendices

Appendix 1 Everyday Terms for Climate Planning

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Appendix 4 Cultural and Community Terms

Appendix 1 Everyday Terms for Climate Planning

GHG (Greenhouse Gas)
Gases like carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) that trap heat in the atmosphere. These gases come from cars, trucks, homes, and other sources and are the main cause of climate change.

CO_2e (Carbon Dioxide Equivalent)
A standard way to compare different greenhouse gases by showing how much CO_2 would have the same warming effect. Helps us measure and track all types of climate pollution using one unit.

EV / EVSE
EV stands for Electric Vehicle, which runs on electricity instead of gas. EVSE means Electric Vehicle Supply Equipment – the charging stations used to power EVs at home or in public places.

Telematics
A system that uses GPS and sensors to collect vehicle data such as speed, routes, fuel use, and maintenance needs. Helps Tribal departments reduce costs, improve safety, and track emissions.

Heat Pumps
Heating and cooling systems that work like refrigerators but for your home. They move heat in or out to keep you warm in winter and cool in summer. They are safer and more efficient than gas heaters.

Net Metering
A program where homeowners with solar panels can earn credit on their utility bill for extra electricity they send back to the grid. This helps lower energy costs.

Micro grid
A small, local energy system that can keep electricity on during power outages. It can run on solar and batteries and is good for emergency shelters or clinics.

Appendix 2 Simple Planning Tools

SWOT
Stands for Strengths, Weaknesses, Opportunities, and Threats. It helps Tribal teams figure out what's working well, what needs improvement, and where to focus resources.

SOAR
Stands for Strengths, Opportunities, Aspirations, and Results. It's used to plan in a positive way by focusing on what the community does well and hopes to achieve.

GROW
A goal-setting method: G is for Goal, R is for Reality (where you are now), O is for Options (what you could do), and W is for Will (what you will commit to doing).

RACI
A chart that shows who is Responsible (does the work), Accountable (makes decisions), Consulted (gives advice), and Informed (gets updates) in a project.

Logic Model
A planning tool that shows how a project will work, including resources, activities, and the changes we hope to see. It helps explain how goals will be reached.

Appendix 3 Funding and Government Programs

CPRG

Climate Pollution Reduction Grant – funding from the EPA to help Tribes plan and carry out actions that lower emissions and protect health.

DOE Tribal Energy Program

Funding and technical help from the U.S. Department of Energy to support solar panels, battery storage, energy audits, and training in Tribal communities.

BIA

Bureau of Indian Affairs – a federal agency that helps Tribes with housing, infrastructure, roads, and other services.

HUD ICDBG

Housing and Urban Development Indian Community Development Block Grant – funding for improving housing, energy efficiency, and community facilities.

EPA EJ

Environmental Protection Agency's Environmental Justice Program – helps ensure Tribal and underserved communities get fair treatment and environmental protection.

Appendix 4 Cultural and Community Terms

TEK

Traditional Ecological Knowledge – the understanding Tribal people have developed over generations about the land, water, animals, and how to care for the environment.

THPO

Tribal Historic Preservation Officer – a person who protects sacred places, burial sites, and other cultural resources during construction or planning.

LIDAC

Low-Income and Disadvantaged Communities – areas that face more pollution and less access to clean energy, healthcare, or reliable transportation. These communities are prioritized for funding and support.

CHR

Community Health Representative – Tribal staff who help elders and others get to medical appointments, deliver health education, and support wellness.

WIOA / TERO

Workforce Innovation and Opportunity Act / Tribal Employment Rights Office – programs that help Tribal members get trained and hired for jobs in construction, clean energy, and more.