

**Priority Climate Action Plan**  
**For the**  
**Pueblo of Sandia**  
**Climate Pollution Reduction Grant**  
**Grant Number: 5D-02F39901-0**



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## Definitions

AFOLU - Agriculture, Forestry, and Other Land Use

BAU - Business as Usual

BEA - U.S. Bureau of Economic Analysis

CAP - Criteria Air Pollutants

CAFE - Corporate Average Fuel Economy

CCAP - Comprehensive Climate Action Plan

CO<sub>2e</sub> - Carbon Dioxide Equivalents

EIA - Energy Information Administration

EJ - Environmental Justice

EPA - Environmental Protection Agency

EV - Electric Vehicles

GHG - Greenhouse Gasses

ICE - Internal Combustion Engine

ICLEI - International Council for Local Environmental Initiatives

NAAQs - National Ambient Air Quality Standards

NEI - National Emissions Inventory

PCAP - Priority Climate Action Plan

PV - Photovoltaic

USCP - U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions

VMT - Vehicle Miles Traveled

ZEV - Zero Emissions Vehicle

## Executive Summary

Calculating greenhouse gas emissions is essential to any climate action plan. The Pueblo of Sandia created this priority climate action plan in order to set a baseline understanding of the amount of GHG emissions, which sources and sectors they come from, and to best plan the mitigation measures that will have the greatest effect on their emissions and promote environmental stewardship. The GHG inventory represents a baseline year of 2020. The inventory is community-scale and follows the U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions (USCP). Each inventory was prepared using ICLEI's ClearPath software.

In 2020 there was an estimated 95,544 MT of CO<sub>2</sub>e emitted on the Pueblo of Sandia, with transportation and mobile sources the highest contributing sector. Consumption-based emissions were estimated at an additional 18,445 MT of CO<sub>2</sub>e. The findings of this inventory have informed the top three priority mitigation measures and can continue to inform future implementation measures.

The first priority mitigation measure, installing a commercial solar PV system, would lead to an estimated 1,125 MT of CO<sub>2</sub>e in reductions from 2025 to 2030 and an estimated 4,129 MT of CO<sub>2</sub>e in reductions from 2025 to 2050. The second priority mitigation measure, installing 16 EV charging points would lead to an estimated 944 MT of CO<sub>2</sub>e in reductions from 2025 to 2030 and an estimated 4,721 MT CO<sub>2</sub>e in reductions from 2025 to 2050. The third priority mitigation measure, implementing an electric transit bus service, would lead to an estimated 583 MT of CO<sub>2</sub>e in reductions from 2025 to 2030 and an estimated 2,127 MT of CO<sub>2</sub>e in reductions from 2025 to 2050.

Using the results of this priority climate action plan, the Pueblo of Sandia can apply for implementation funding through EPA's CPRG implementation grants, complete the comprehensive climate action plan, and conduct community outreach.

## 1. Introduction

The Pueblo of Sandia has partnered with Adelante Consulting, Inc. to produce this priority climate action plan (PCAP) to support investment in policies, practices, and technologies that reduce pollutant emissions, create high-quality jobs, spur economic growth, and enhance the quality of life for all tribal members.

Climate action planning is an important step towards stifling the negative effects of climate change. Climate change has caused an increasing number of days of extreme heat, intensified drought, air pollution, an extreme and extended fire season, post-fire flooding, ecosystem degradation, and more impacts in New Mexico. These effects disproportionately impact lower income communities and communities of color, including Pueblos.

Tribal nations are frequently some of the most vulnerable communities to the impacts of climate change despite contributing little to climate change. The Pueblo of Sandia, bordering

Albuquerque to the north, is within the greater Albuquerque Metropolitan area. Compared to the city of Albuquerque's 5,809,351 MT CO<sub>2</sub>e in 2017, the Pueblo of Sandia's 95,544 MT CO<sub>2</sub>e in 2020 is only approximately 1.6% of the city of Albuquerque's emissions<sup>1</sup>. The Pueblo of Sandia is committed to planning and implementing climate-pollution-reducing actions despite being one of the lower emitting communities in the region.

This project has been funded by the United States Environmental Protection Agency (EPA) under grant number 5D-02F39901-0 to the Pueblo of Sandia. The contents of this document do not necessarily reflect the views and policies of the EPA, nor does the EPA endorse trade names or recommend the use of commercial products mentioned in this document.

PCAP requirements are included under the four main sections of the report, below:

**1) GHG Inventory**

Developed a 2020 GHG inventory using data provided by the Pueblo of Sandia, national and regional databases, and the ICLEI software ClearPath.

**2) Quantified GHG Reduction Measures**

Produced and detailed specific GHG reduction measures for the Pueblo based on the established 2020 GHG inventory.

**3) Benefits Analysis**

Created an analysis for the potential co-benefits of the quantified GHG reduction measures.

**4) Review of Authority to Implement**

Addressed scope of authority, procedural requirements, and jurisdictional issues for the Pueblo.

## 1.1 Approach to Developing the PCAP

Developing this PCAP for the Pueblo of Sandia involved regular collaboration between the Pueblo of Sandia, their Project and QA Managers and the consultants at Adelante Consulting Inc. Monthly meetings were held that were focused on data collection and discussions, ClearPath GHG inventory methodology, proposed priority GHG reduction measures, and status of the GHG emissions inventory.

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<sup>1</sup>City of Albuquerque. (2020). *City of Albuquerque Greenhouse Gas Inventory 2020*. <https://www.google.com/url?q=http://www.cabq.gov/sustainability/documents/city-of-albuquerque-ghg-inventory-3.pdf&sa=D&source=docs&ust=1711561449509201&usg=AOvVaw1aL17xDPdXrGkzVgYZSms6>



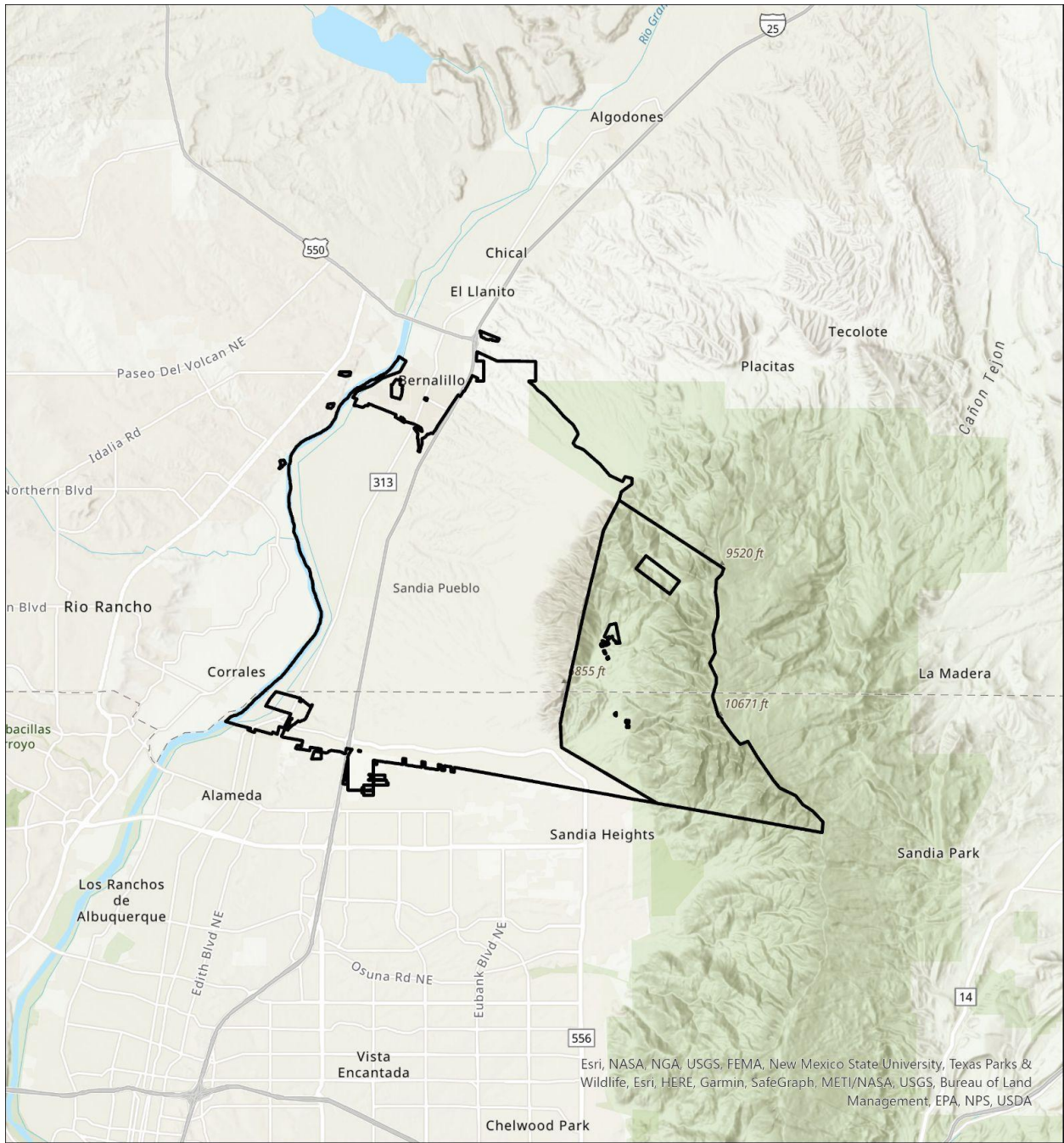
A series of meetings with the Pueblo of Sandia's Project and QA Managers to request and inquire about specific data for the Pueblo were hosted throughout the development of this PCAP. This series of meetings assisted in identifying Sandia Pueblo's priority GHG reduction measures and included a site visit to Sandia Casino to assess potential locations of solar PV systems.

Following the development of the three priority measures, along with their feasibility, projections for each measure were calculated using ClearPath. After projections for a business-as-usual scenario were produced for the Pueblo, the GHG-reducing impact of priority mitigation measures were modeled from 2025 to 2030 and 2025 to 2050. The reduction measures were then analyzed based on the impact they have within their respective sector(s).

## 1.2 Scope of the PCAP

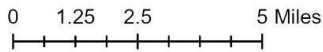
The trust land boundary for the Pueblo of Sandia determined the geographic territory included in the baseline inventory and this PCAP (Figure 1). The baseline inventory includes Scope 1, 2, and 3 emissions originating from the Pueblo of Sandia. Mitigation measures are projected to 2030 and 2050.

Figure 1: Pueblo of Sandia Trust Lands

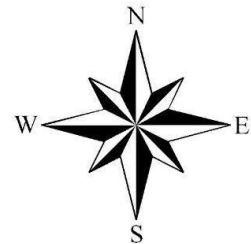


**Pueblo of Sandia**

**Legend**



Pueblo of Sandia Boundary



## 2. Tribal/Territorial Organization and Considerations

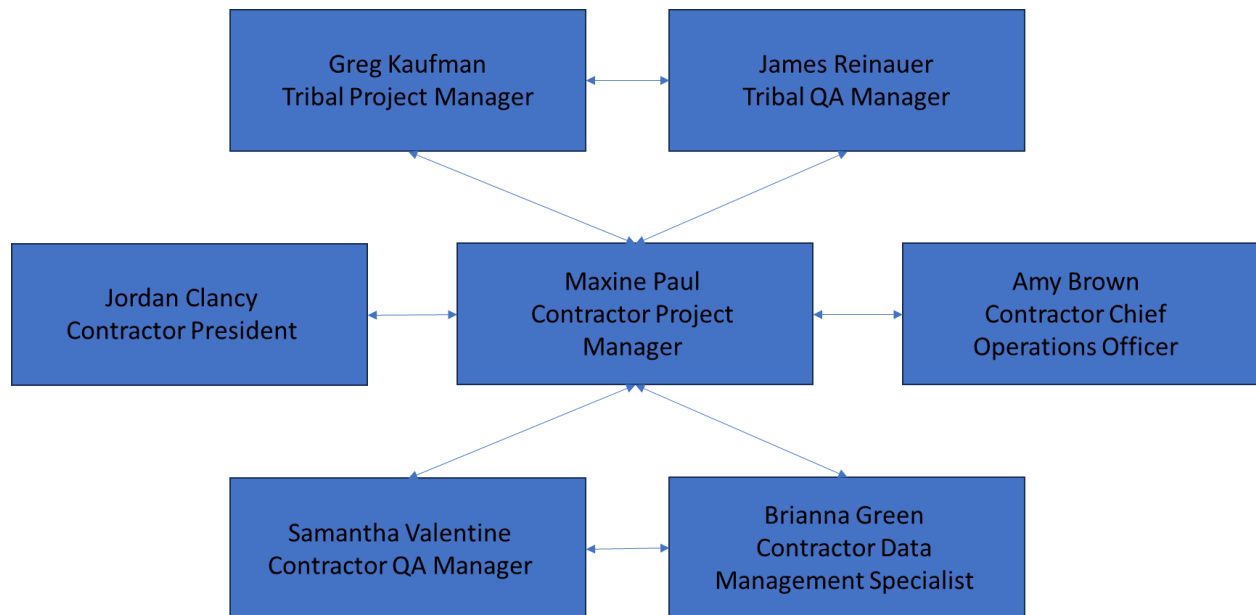
### 2.1 The Tribal/Territorial PCAP Management and Development Team

The organizations involved in drafting the PCAP include:

- Pueblo of Sandia
- Adelante Consulting, Inc.

This PCAP was developed by the Pueblo of Sandia, and the contractor, Adelante Consulting, Inc.

Figure 2: PCAP Management and Development Team



### 2.2 Special Considerations for Tribal/Territorial Entities

Much of decarbonization is related to electrification and avoiding the burning of fossil fuels for heat, energy, and transportation; for example, switching from ICE vehicles to Electric Vehicles, or using heat pumps instead of furnaces to heat buildings. Therefore, electrical line, grid capacity and utility authorities each can play a limiting role in the pace and scope of in-front-of-the-meter mitigation measures.

### 2.3 Collaborations

Greenhouse gas emissions and therefore mitigation actions span across government agencies and sectors. To collect data and discuss prioritization and practicability of mitigation measures, Sandia Pueblo interacted with:

- Tribal government
- Local, state government, and federal government such as the New Mexico Environment Department
- Tribal businesses
- Electrical Utilities (PNM)

### 3. PCAP elements

#### 3.1 Greenhouse Gas (GHG) Inventory

##### Relative Values of CO<sub>2e</sub>

Certain gasses in the atmosphere absorb energy, slowing or preventing the loss of heat to space. Those gasses are known as “greenhouse gasses.”<sup>2</sup> They act like a blanket, making the earth warmer than it would otherwise be. These gasses include carbon dioxide, methane, and nitrous oxide. Excess carbon dioxide in the atmosphere is largely a by-product of combustion of fossil fuels. Methane is the product known as natural gas and is also produced in agricultural activities, as well as naturally by wetlands. Nitrous oxide is produced mainly through agricultural activities and natural processes but is also produced in fossil fuel burning and industrial processes.<sup>3</sup> Fluorocarbons, or “F-Gasses”, such as chlorofluorocarbons, hydrochlorofluorocarbons, and others are another category of GHG. These compounds typically are emitted by coolants, foaming agents, fire extinguishers, solvents, pesticides, and aerosol propellants.

CO<sub>2e</sub> - “Carbon Dioxide Equivalent” is a metric used to compare across types of greenhouse gasses. MT CO<sub>2e</sub> means the number of metric tons of CO<sub>2</sub> emissions with the same global warming potential as one metric ton of another greenhouse gas.<sup>4</sup> Some example GHG sources and their annual emissions (in MT CO<sub>2e</sub>) are shown below in Table 1 for scale. .

Table 1: Example CO<sub>2e</sub> Values

Source <sup>5</sup>	Average Annual MT CO <sub>2e</sub>
Typical gasoline powered passenger vehicle	4.49

<sup>2</sup>US EPA, O. (2021, April 15). Basics of Climate Change [Data and Tools]. <https://www.epa.gov/climatechange-science/basics-climate-change>

<sup>3</sup>US EPA, O. (2021, April 15). Basics of Climate Change [Data and Tools]. <https://www.epa.gov/climatechange-science/basics-climate-change>

<sup>4</sup>CO<sub>2e</sub> is calculated using Equation A-1, 40 CFR Part 98

<sup>5</sup>US EPA, O. (2015, January 28). *Greenhouse Gas Equivalencies Calculator—Revision History* [Data and Tools]. <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator-revision-history>

Typical Individual Home electricity use	5.07
Typical Individual Home energy use (including gas)	7.67
Acre of forest preserved from development	-155.92
Acre of forest sequestering (left alone)	-0.857
Natural Gas Fired Power Plant	374,732
Coal Fired Power Plant	3,890,367

3.1.1 Scope

This GHG inventory includes emissions from the Pueblo of Sandia. This inventory is community-scale including Scopes 1, 2, and 3 emissions.

Scope 1 emissions are direct GHG emissions controlled by the Pueblo and originate from within their geographic boundaries. Scope 2 emissions are indirect GHG emissions associated with the purchase of electricity, heating and cooling. These emissions are the result of the Pueblo’s purchased energy use. Scope 3 emissions are the result of activities from assets not owned or controlled by the Pueblo, but that the Pueblo indirectly affects in its value chain<sup>6</sup>. Scope 3 emissions include all sources not included in Scope 1 and 2. Scope 3 emissions often represent the majority of a community’s total GHG emissions<sup>7</sup>.

Located within Sandoval and Bernalillo Counties, the Pueblo of Sandia’s population is 554 people living on 56,055 acres, mostly in a central village between two transportation corridors and one railway: NM 313, I-25, and the Rail Runner commuter line. Sandia Pueblo owns and operates multiple businesses including two gas stations and a casino resort. The Pueblo co-manages 36,924 acres of forest with the USFS on traditional lands in the Sandia Mountains. For further information on the scope of the baseline inventory, see *Appendix B: Inventory Scope*.

<sup>6</sup>US EPA, O. (2016, November 8). *Scope 3 Inventory Guidance* [Overviews and Factsheets]<https://www.epa.gov/climateleadership/scope-3-inventory-guidance>

<sup>7</sup>US EPA, O. (2016, November 8). *Scope 3 Inventory Guidance* [Overviews and Factsheets]. <https://www.epa.gov/climateleadership/scope-3-inventory-guidance>.

### 3.1.2 Methodology

The Pueblo of Sandia's community-wide GHG inventory utilized ClearPath software from ICLEI USA, adhering to the U.S. Community Protocol for Accounting and Reporting of GHG Emissions (USCP). This framework quantifies GHG emissions within the Pueblo of Sandia.

Per EPA recommendations,<sup>8</sup> the baseline year for the community-wide inventory was 2020. This year was selected primarily due to quality-assured data availability in nationwide databases such as the NEI, EIA, and BEA. Additionally, aligning with numerous other organizations and government agencies using a 2020 baseline year facilitates comparative analysis, providing context for the Pueblo of Sandia's relative and overall emissions. *Appendix C: Baseline Year, Data Limitations and Assumptions* provides a full justification for the use of 2020 as a baseline year.

Specific and local data produces the most accurate emissions inventories. Therefore, data was prioritized in this order: complete local 2020 emissions and process data, incomplete and/or proxy year local emissions and process data. Any data that could not be collected by the Pueblo themselves was then either scaled down from national or regional databases or a preexisting tool for estimation was used. Over 70% of the Pueblo of Sandia's land area is in Sandoval County therefore Sandoval County was considered the best available county-level approximation to supplement data provided by the Pueblo. For a comprehensive overview of the methodology employed, please refer to *Appendix A: Inventory Methodology*.

### 3.1.3 Emissions Sources

The Sectors and sources included in the inventory for the Pueblo are as follows:

Commercial Energy:

- Emissions from Grid Electricity
- Emissions from Stationary Fuel Combustion

Transportation & Mobile Sources:

- Emissions from Off Road Vehicles
- On Road Transportation
- Rail Transportation
- Emissions from Public Transit

Residential Energy:

- Emissions from Grid Electricity
- Emissions from Stationary Fuel Combustion

Industrial Energy:

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<sup>8</sup>US EPA, O. (2023, May 31). *2023 National Emissions Inventory (NEI) Documentation* [Other Policies and Guidance]. <https://www.epa.gov/air-emissions-inventories/2023-national-emissions-inventory-nei-documentation>

#### Solid Waste:

- Collection and Transportation Emissions
- Landfilled Waste
- Process Emissions Associated with Landfilling

#### Water & Wastewater:

- Emissions from Wastewater Treatment Energy Use
- Process N<sub>2</sub>O Emissions from Wastewater Treatment Plant
- Process N<sub>2</sub>O from Effluent Discharge to River, Ocean, or Deep Well Injection

#### Agriculture, Forestry, and Other Land Use (AFOLU):

- Emissions and Removals from Forests
- Emissions and Removals from Trees Outside of Forests
- Emissions from Agricultural Activities

#### Process & Fugitive Emissions:

- Fugitive Emissions from Natural Gas Distribution
- Hydrofluorocarbon & Refrigerant Emissions

#### Upstream Impacts of Activities:

- Emissions from Electric Power Transmission and Distribution Losses
- Upstream Impacts of Electricity Used by the Community
- Upstream Impacts of Fuels Used in Stationary Combustion by the Community

#### Consumption Based:

- Food Consumption
- Services Consumption
- Construction Consumption
- Goods Consumption

### 3.1.4 GHG Emissions Results by Sector and Gas

This section shows the results of the inventory by sector in CO<sub>2</sub> equivalents (CO<sub>2</sub>e) and by each individual greenhouse gas. Included in these results are Scope 3 emissions which are estimates of all the greenhouse gas emissions associated with the production, transportation, use and disposal of products and services consumed by a particular community or entity in a year. Local governments do not often include these emissions because they are difficult to account for or regulate. We have included them because they are part of the USCP but should not be included in comparisons between the Pueblos and local governments such as The City of Albuquerque.

The USCP consumption-based emissions provides a framework to determine the indirect emissions associated with food, goods, services, and construction. Understanding Scope 3 emissions is important in making decisions about reducing environmental impacts associated with GHG emissions. While consumption-based emissions can offer valuable information about consumption patterns, the methods for their calculation have limitations to consider. Some of the limitations associated with USCP consumption-based emissions for this specific emissions

inventory include data availability, and limited transparency. These limitations are further discussed in *Appendix C: Baseline Year, Data Limitations and Assumptions*.

Table 2: Pueblo of Sandia GHG Emissions by Sector

<b>Sector</b>	<b>CO<sub>2</sub>e (Metric Tons)</b>
Transportation & Mobile Sources	77,131
Solid Waste	437
Water & Wastewater	134
AFOLU	-3,568
Commercial Energy	12,577
Residential Energy	1,599
Process & Fugitive Emissions	314
Upstream Impacts of Activities	3,351
Consumption Based	18,445



Figure 3: GHG Emissions by Sector

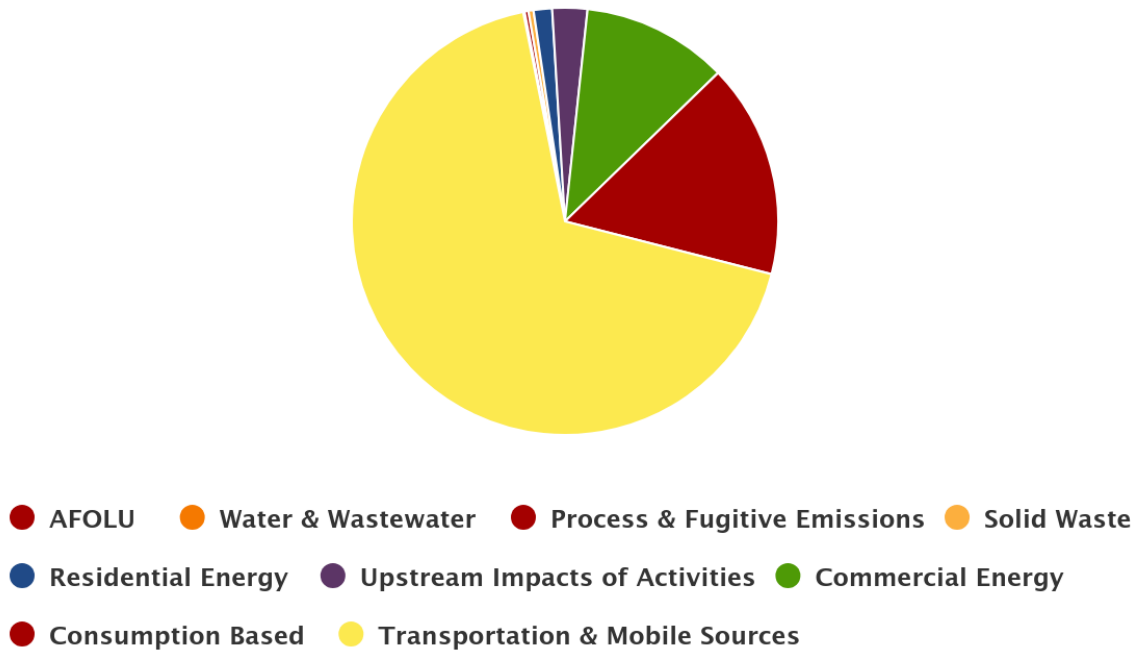


Table 3: GHG Emissions by Gas and Sector

Sector	CO <sub>2</sub> (MT)	CH <sub>4</sub> (MT)	N <sub>2</sub> O (MT)	HFCs (MT)	PFCs	SF <sub>6</sub>	NF <sub>3</sub>	CO <sub>2</sub> e (MT)
Residential Energy	1,584.57	0.41	0.01	0	0	0	0	1,598.77
Commercial Energy	12,529.7	0.91	0.083	0	0	0	0	12,577.04
Transportation & Mobile Sources	77,089.1	0.76	0.070	0	0	0	0	77,130.90
Solid Waste	0	15.08	0	0	0	0	0	437.6

Water and Wastewater	129.24	0.008	0.019	0	0	0	0	134.58
AFOLU	0	10.34	0	0	0	0	0	-3,567.84
Process and Fugitive Emissions	0.053	4.97	0	0.082	0	0	0	314.28
Upstream Impacts of Activities	430.15	0.027	0.004	0	0	0	0	3,351.01
Consumption Based	16,218.7	62.63	1.91	0	0	0	0	18,445.14

The largest emitter for the Pueblo of Sandia is from transportation and mobile sources at 77,131 Metric Tons (MT) of CO<sub>2</sub>e. Transportation and Mobile emissions come from sources such as passenger vehicles, freight vehicles, mobile construction equipment and mobile recreational equipment. All transportation and mobile sources are Scope 1 sources. Despite this, 82% of the VMT contributing to these transportation emissions are from trips through the Pueblo on Interstate 25, which is not directly under the control of the Pueblo.

The second highest emission source is consumption based emissions at 18,445 MT CO<sub>2</sub>e. Consumption based emissions are those derived from the use of goods, services, and food. These are Scope 3 sources.

The third largest source is commercial energy at 12,577 MT CO<sub>2</sub>e. Commercial energy includes commercial electricity, diesel, and natural gas use. Stationary fuel consumption like diesel and natural gas is a Scope 1 source, while purchased electricity is a Scope 2 source.

The overall positive emissions for the Pueblo of Sandia in 2020 were 95,544 MT CO<sub>2</sub>e. By including emissions sinks as well as sources, the net emissions were 91,976 MT CO<sub>2</sub>e. Consumption based emissions, reported separately from the total were 18,445 MT CO<sub>2</sub>e.

### 3.2 GHG Emissions Projections

A business as usual GHG emissions projection was created through 2030 and 2050 in ICLEI’s ClearPath. This projection used a population based growth rate derived from available growth rates in recent years. The National Highway Traffic Safety’s Corporate Average Fuel Economy

carbon intensity growth rates and local utility carbon intensity growth rates were used for transportation and electricity projections in addition to the population based growth rate. The CAFE carbon intensity change rate is conservative based on recent legislation that was passed in New Mexico (Clean Cars 2 Standard and the Clean Fuels Standard). The CAFE carbon intensity change rate was still used due to a lack of data on the impact of this legislation on the carbon intensity change rate specifically. For more detailed information on data limitations and assumptions see *Appendix C: Baseline Year, Data Limitations, and Assumptions*.

Specifically, this projection assumes an 8.9% population growth rate from 2020 to 2050 based on the US Census population change from 2016 to 2020<sup>9</sup>. For PNM Electric, a carbon intensity change rate of -1.8% was used based on PNM's system wide emissions decreasing by 31% from 2005 to 2022<sup>10</sup>. The default transportation carbon intensity change rate was set at -1.8% based on national corporate average fuel economy (CAFE) standards. Both the electric and transportation carbon intensity change rates were assumed to remain the same from 2020 to 2050.

The population based growth rate was applied to each sector and fuel type. This is based on the assumption that the rate of emissions in each sector increases at the same rate of population growth. The PNM Electric carbon intensity change rate was applied to electricity inputs, while the transportation carbon intensity change rate was applied to transportation inputs.

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<sup>9</sup>US Census Bureau. (2022). *Pueblo of Sandia Village—Place Explorer—Data Commons*. Retrieved March 13, 2024, from

[https://datacommons.org/place/geoId/3559950?utm\\_medium=explore&mprop=count&popt=Person&hl=en](https://datacommons.org/place/geoId/3559950?utm_medium=explore&mprop=count&popt=Person&hl=en)

<sup>10</sup>PNM Resources (2022). *Climate Change Report*. Retrieved March 4, 2024, from

[https://www.pnmresources.com/esg-commitment/environment/climate\\_change\\_report.aspx](https://www.pnmresources.com/esg-commitment/environment/climate_change_report.aspx)

Figure 4: Business as Usual GHG Emissions Projections through 2030

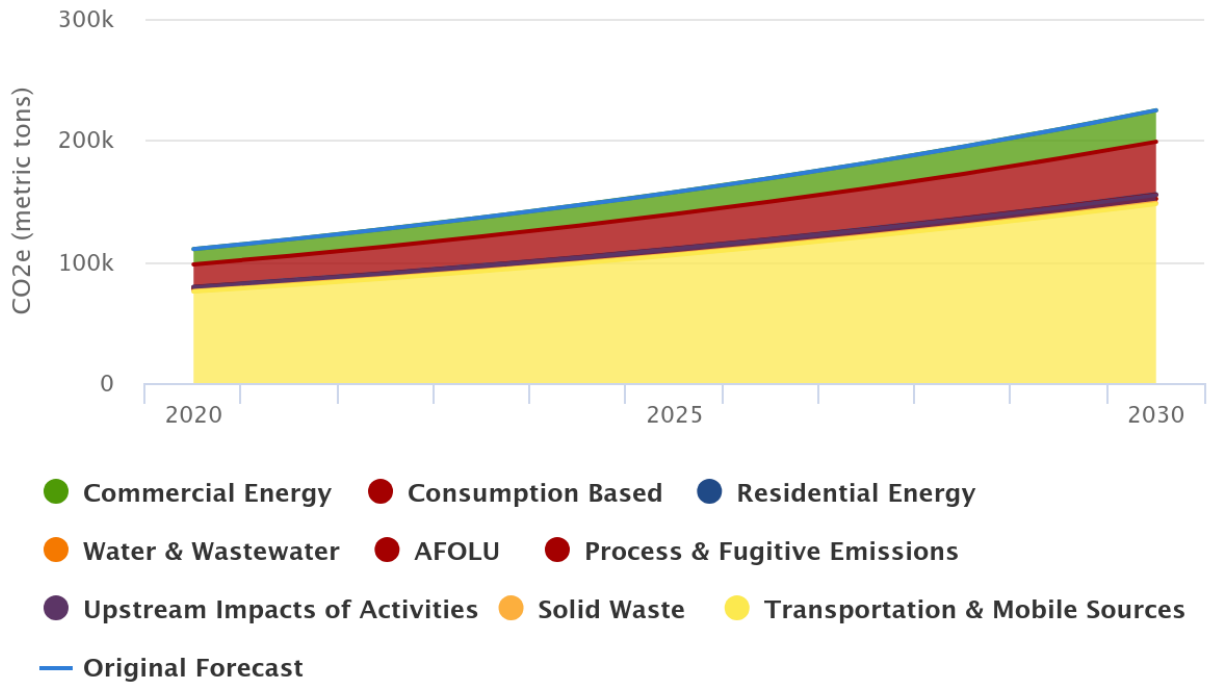
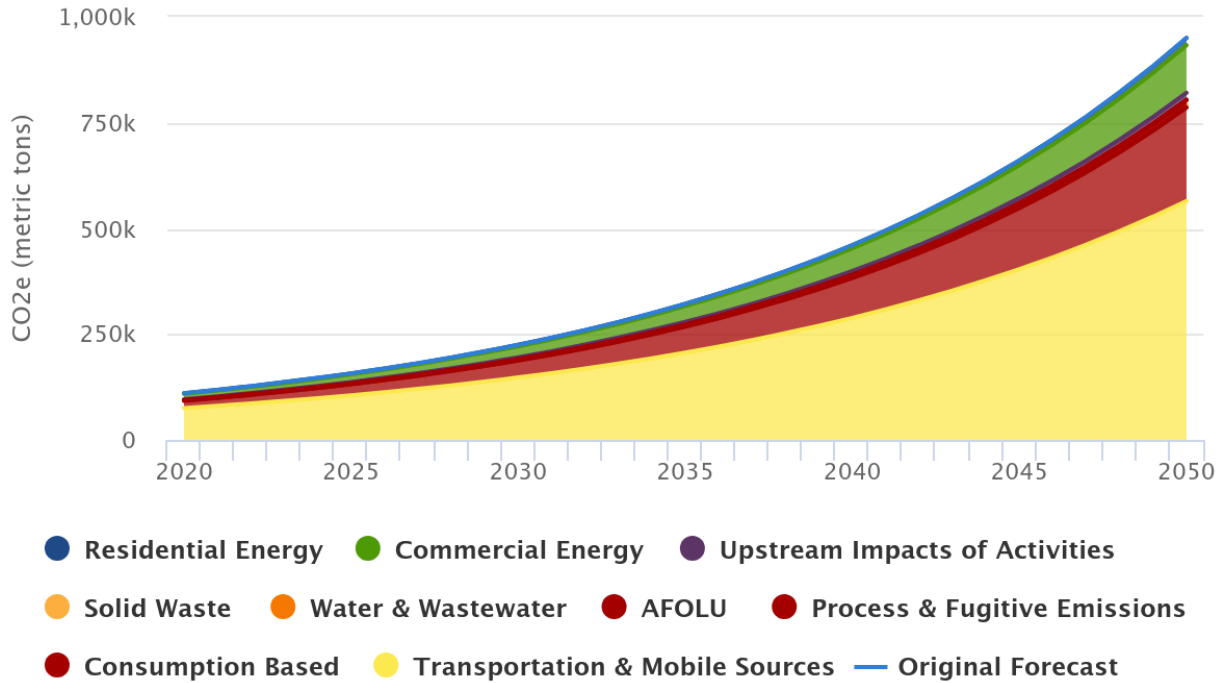


Figure 5: Business as Usual GHG Emissions Projections through 2050



### 3.3 GHG Reduction Measures

The following priority GHG reduction measures are based on the Pueblo of Sandia’s priorities and the baseline inventory. These priority GHG reduction measures are focused on achieving the most significant GHG reductions possible considering feasibility and desired projects. For the mitigation measures that were calculated in ClearPath, the reductions are based on the projections in Figures 4 and 5.

Table 4: Mitigation Measure 1

<b>Measure 1: Install a Commercial Solar PV System</b>	
Implementing agency	Pueblo of Sandia
Estimated Cumulative GHG Reductions	2025-2030: 1,125 MT CO <sub>2</sub> e 2025-2050: 4,129 MT CO <sub>2</sub> e

Implementation Schedule	Implementation begins with a pre-feasibility study and a pre-feasibility report. Following the report, preparation of site plans which include a land survey, geotechnical study, environmental assessment, and the development of the conceptual design is established within the 1st year.
Geographic Location	Sandia Resort and Casino parking garage rooftop
Milestones for obtaining implementing authority	Pueblo of Sandia plan approval, interconnection agreement signed
Funding Sources	US EPA CPRG Implementation Grant or DOE Deployment Grant
Metrics for Tracking Progress	Published project design, competitive procurement, construction milestones, permitting
Applicable Sector	Commercial Energy

The GHG reductions for this measure were calculated in ClearPath. The solar capacity and generation potential of the solar PV system were calculated by a qualified commercial solar contractor and included in a project proposal received in April 2024. The proposed system is a 356kW system capable of producing 557MWh annually.

Table 5: Mitigation Measure 2

<b>Measure 2: Install 16 EV Charging Points</b>	
Implementing agency	Pueblo of Sandia
Estimated Cumulative GHG Reductions	2025-2030: 944.2 MT CO <sub>2e</sub> 2025-2050: 4721.0 MT CO <sub>2e</sub>
Implementation Schedule	Implementation begins in 2025 or when funding is received. Implementation includes installing 16 total charging points (8 dual pedestal charging units). These will be a mix of three level-3 fast chargers (six points) and five level-2 chargers (ten additional points)

Geographic Location	Sandia Resort and Casino
Milestones for obtaining implementing authority	Pueblo of Sandia plan approval
Funding Sources	US EPA CPRG Implementation Grant
Metrics for Tracking Progress	Published project overview, 2 status updates, and final report tracking installation progress. Quantified electricity use from charging ports every year after installation completion.
Applicable Sector	Transportation & Mobile Sources

The assumptions for this mitigation measure include:

- Average Albuquerque commute distance is used as a proxy for average commute distance to Sandia Resort and Casino (10.81 miles)
- 3,945.5 VMT per charging point per year
- Total VMT reduced is 63,128
- 22.90 MT CO<sub>2e</sub> reduced per year

The method for this calculation was the AFLEET CFI Emissions Tool V1.1<sup>11</sup>. Because this mitigation measure was not calculated in ClearPath, the assumptions included in the population-based projections were not taken into account as they were for mitigation measures 1 and 3.

Table 6: Mitigation Measure 3

<b>Measure 3: Implement Electric Bus Transit Service</b>	
Implementing agency	Pueblo of Sandia
Estimated Cumulative GHG Reductions	2025-2030: 583 MT CO <sub>2e</sub> 2025-2050: 2,127 MT CO <sub>2e</sub>

<sup>11</sup>AFLEET CFI Tool V1.1. Afleet CFI Tool. (n.d.). <https://afleet.es.anl.gov/infrastructure-emissions/>

Implementation Schedule	Implementation begins in 2025 or when funding is received. Implementation includes acquiring and putting into service new electric busses, adapting transit route to current needs
Geographic Location	Pueblo of Sandia Bus Transit
Milestones for obtaining implementing authority	Pueblo of Sandia plan approval
Funding Sources	US EPA CPRG Implementation Grant
Metrics for Tracking Progress	Published project overview, quarterly status updates regarding project progress, purchasing and installation of vehicles and chargers
Applicable Sector	Transportation & Mobile Sources

The GHG reductions for this measure were calculated in ClearPath. The assumptions for this mitigation measure include:

- 100% of the existing transit network is affected
- 0.97% of trips are currently made by transit
- 28% increase in ridership with the new transit system
- 67% of the increase in transit ridership takes away from passenger VMT
- 0.84 ratio of the average private vehicle commute trip length to the average transit commute trip length
- Diesel buses are replaced with electric buses
- The miles traveled by transit buses remains the same

Of these three priority mitigation measures, the greatest GHG emissions reductions are achieved by installing a commercial solar PV system. Both installing EV chargers and implementing an electric bus transit service also achieve GHG emissions reductions. These mitigation measures address the two sectors with the greatest Scope 1 and 2 emissions according to the baseline inventory: Transportation and Mobile Sources and Commercial Energy.

See *Review of Authority to Implement* below for further discussion.

### 3.4 Benefits Analysis

This benefits analysis uses the 2020 NEI county data for criteria air pollutants (CAPs), scales down the CAPs attributable to the Pueblo based on land area, and assumes that CAP emissions



are reduced by the same relative amount as the GHG emissions reductions<sup>12</sup>. This broad assumption is an adaptation of the “basic” method for quantifying air quality changes in the US EPA’s *Quantifying the Emissions and Health Benefits of Energy Efficiency and Renewable Energy*<sup>13</sup>. The CAPs included in this analysis include Ammonia, Sulfur Dioxide, Volatile Organic Compounds, Particulate Matter-10, Particulate Matter-2.5, Nitrogen Oxides, and Carbon Monoxide.

The Clean Air Act mandates the Environmental Protection Agency (EPA) to establish national air quality benchmarks known as National Ambient Air Quality Standards (NAAQS)<sup>14</sup>. These standards focus on limiting public exposure to six key pollutants: carbon monoxide, lead, nitrogen dioxide, ozone, particulate matter, and sulfur dioxide.

NAAQS encompasses two distinct categories of standards:

**Primary standards:** These are designed to safeguard public health, particularly for vulnerable populations like those with compromised immune systems.

**Secondary standards:** These focus on protecting public welfare by addressing environmental harms caused by air pollutants, such as damage to ecosystems (animals, crops, vegetation), and buildings.

According to the CDC, human health effects from air pollution are known to do significant damage to lung function and trigger asthmatic symptoms.<sup>15</sup> Historically, Tribal Reservations and Indigenous communities have faced a disproportionate burden of air pollution, despite their long standing role as environmental stewards. This disparity persists, with the increasing presence of air pollution continuing to have a greater impact on these communities.<sup>16</sup>

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<sup>12</sup>US EPA. (2023). Quantifying the Emissions and Health Benefits of Energy Efficiency and Renewable Energy. In *Quantifying the Benefits: Framework, Methods, and Tools: Vol. Chapter 4*.

[https://www.epa.gov/sites/default/files/2018-07/documents/mbg\\_2-4\\_emissionshealthbenefits.pdf](https://www.epa.gov/sites/default/files/2018-07/documents/mbg_2-4_emissionshealthbenefits.pdf)

<sup>13</sup>US EPA. (2023). Quantifying the Emissions and Health Benefits of Energy Efficiency and Renewable Energy. In *Quantifying the Benefits: Framework, Methods, and Tools: Vol. Chapter 4*.

[https://www.epa.gov/sites/default/files/2018-07/documents/mbg\\_2-4\\_emissionshealthbenefits.pdf](https://www.epa.gov/sites/default/files/2018-07/documents/mbg_2-4_emissionshealthbenefits.pdf)

<sup>14</sup>US EPA, O. (2014, April 10). NAAQS Table [Other Policies and Guidance]. <https://www.epa.gov/criteria-air-pollutants/naaqs-table>

<sup>15</sup>Centers for Disease Control and Prevention. (2020, December 21). Air Pollution | CDC.

[https://www.cdc.gov/climateandhealth/effects/air\\_pollution.htm](https://www.cdc.gov/climateandhealth/effects/air_pollution.htm)

<sup>16</sup>Hilpert, M., Shearston, J., Goldsmith, J., & Brooks, J. (2022, March 23). Study Examines Disparities in Air Pollution Affecting Native American Communities. Columbia University Mailman School of Public Health.

<https://www.publichealth.columbia.edu/news/study-examines-disparities-air-pollution-affecting-native-american-communities>

Table 7: Total Co-pollutant Reductions for Mitigation Measure 1

<b>Co-pollutant reductions</b>	<b>Reduced Emissions (tons)</b>
2025-2030	0.017
2025-2050	0.039

Table 8: Total Co-pollutant Reductions for Mitigation Measure 2

<b>Co-pollutant reductions</b>	<b>Reduced Emissions (tons)</b>
2025-2030	0.093
2025-2050	0.13

Table 9: Total Co-pollutant Reductions for Mitigation Measure 3

<b>Co-pollutant reductions</b>	<b>Reduced Emissions (tons)</b>
2025-2030	5.03E-5
2025-2050	7.67E-5

There are limitations to this method of estimation. For example, the CAP emissions attributed to both commercial energy and transit in the 2020 NEI are orders of magnitude lower than those for passenger vehicles. Therefore, even with a similar percentage reduction, the reduced CAP emissions for passenger vehicles will be much higher than those for commercial energy and transit. Additionally, the percentage of CAP emissions reductions may not always scale with GHG emissions reductions.

### 3.5 Review of Authority to Implement

The climate pollution reduction measures suggested in this PCAP include:

#### **Rooftop solar: Businesses**

The authority to implement rooftop solar for businesses lies with multiple entities: the tribal business and or corporation and the tribal government. A tribal council resolution may be necessary. Suggested milestones to obtaining utility authority include early outreach and coordination with the utility’s tribal liaison. Interconnection permits will need to be obtained through the Authority Having Jurisdiction (AHJ) and state licensing. The authority having jurisdiction (AHJs) are usually the electric utility in this case, PNM. Tribes with tribal utilities are their own AHJs. AHJs approve applications for interconnection.

### **Installation of EV charging stations**

The authority to install EV charging stations in public areas of the Pueblo lies with the Pueblo's government. A tribal council resolution may be necessary. Permits may need to be obtained by the electrical utility for interconnection.

### **Improved public transportation programs to decrease VMT**

The authority to implement public transportation programs lies with the Pueblo's government. A resolution may need to be obtained by tribal council and a permit with the electric utility may be required to install charging equipment.

### **Non-Pueblo Authorities and Impacts**

The Pueblo's authority does not include the control of all emissions sources on the Pueblo. For example, mobile emissions from I-25, the major interstate highway, saw 170,208,748 VMT in 2020, and makes up 82% percent of mobile emissions within the trust land boundary. The most effective regulatory vehicle is the State Environmental Improvement Board and Albuquerque-Bernalillo County Air Quality Control board, which passed the most recent ZEV standards promulgated by California, requiring 83% of new vehicles sold in New Mexico to be ZEVs by 2040. This policy change translates into a gradual change in the deployed automobile fleet so a decline in these emissions is expected over time.<sup>17</sup>

## **3.6 Identification of Other Funding Mechanisms**

The EPA Climate Pollution Reduction Program has set aside funding for tribes to implement PCAP measures as part of a competitive process, with applications due **May 1st, 2024**.

However, there are many alternative funding mechanisms for priority projects, of three general types:

**Competitive Grants:** This funding approach awards grants through a rigorous application process, prioritizing projects that demonstrate exceptional merit and potential impact. Competitive grants support clean energy infrastructure projects like carbon capture and storage as well as the deployment of renewable energy technologies like solar and wind power generation.

**Formula Grants:** These programs distribute pre-determined funding allocations based on a set formula, ensuring consistent support for essential clean energy initiatives. Examples include the Energy Efficiency and Conservation Block Grant Program and the Grid Resilience State and Tribal Formula Grants Program.

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<sup>17</sup>N.M.S.A. 20.2.91 New Motor Vehicle Emission Standards 12/31/2023  
[https://cloud.env.nm.gov/air/resources/\\_translator.php/NoP4Wd1EyorPC~sl~BWz~sl~H2+PXdCQEKefUZ7Ou8Vgq~sl~x2ZYzqa1zexRjWPJMKpMtY7aK2mnJ9Ao0IZEOEbuZDv5gjdZ5ZLJvJUhgZUY7TTUUnFGi~sl~XBzQ4GPo+3bjoke7jG9.pdf](https://cloud.env.nm.gov/air/resources/_translator.php/NoP4Wd1EyorPC~sl~BWz~sl~H2+PXdCQEKefUZ7Ou8Vgq~sl~x2ZYzqa1zexRjWPJMKpMtY7aK2mnJ9Ao0IZEOEbuZDv5gjdZ5ZLJvJUhgZUY7TTUUnFGi~sl~XBzQ4GPo+3bjoke7jG9.pdf)

**Loan Programs:** These programs offer financial assistance for clean energy projects such as electricity generation and energy storage facilities. Loan recipients repay the borrowed funds with interest, allowing for continuous reinvestment in clean energy advancements.

In addition, the Inflation Reduction Act (IRA) changed the tax code to provide incentives for renewable energy. Tribal communities can utilize these tax incentives more readily due to “direct pay” also known as “elective pay”. This provision allows tax-exempt and governmental entities such as Tribes, to use the tax credits while building clean energy projects such as solar, wind, battery storage, community solar, and EV charging infrastructure or purchasing EVs for government fleets and receive a payment equal to the full value of tax credits for building qualifying clean energy projects. You can learn more about using elective pay on pages 14-17 of the U.S. Department of Energy Tribal Resource Guide.<sup>18</sup>

A short list of relevant funding mechanisms for the priority measures in this PCAP include:

Department of Energy - Clean Energy Technology Deployment on Tribal Lands - 2024 (DE-FOA-0003298) (Competitive Grant)

*DOE announced \$50 million in funding to support clean energy technology deployment on Tribal lands. This investment will strengthen Tribal energy sovereignty through local clean energy generation, while increasing energy access, reliability, and security.*

*Under this Funding Opportunity Announcement (FOA), the Office of Indian Energy is soliciting applications from Indian Tribes, which include Alaska Native Regional Corporations and Village Corporations, Intertribal Organizations, and Tribal Energy Development Organizations, to:*

*Install clean energy generating system(s) and/or energy efficiency measure(s) for Tribal building(s) (Topic Area 1); or, Deploy community-scale clean energy generating system(s) or community energy storage on Tribal lands (Topic Area 2); or, Install integrated energy system(s) for autonomous operation (independent of the traditional centralized electric power grid) to power a single or multiple essential Tribal buildings during emergency situations or for tribal community resilience (Topic Area 3); or, Provide electric power to Tribal Building(s), which otherwise would be unelectrified (Topic Area 4).*

*Download the full Funding Opportunity Announcement for Clean Energy Technology Deployment on Tribal Lands – 2024 (DE-FOA-0003298) to learn more and apply.*

*Register for the informational webinar March 14, 2024. The Office of Indian Energy will provide interested applicants with more information on the FOA and how to apply.*

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<sup>18</sup>U.S. Department of Energy (DOE). (2024, February). Tribal Nations and Native Communities Resource Guide 2024. [PDF]. Retrieved from <https://www.energy.gov/sites/default/files/2024-02/DOE-Tribal-Resource-Guide-2024-web.pdf>

## EPA Clean School Bus Program<sup>19</sup>

*A grant OR rebate program. The program solicited applications nationwide for a grant competition to fund the replacement of existing school buses with clean and zero-emission (ZE) school buses. In the previous round, applications were due in August 2023. Tribes are eligible entities. New replacement buses must be battery electric, CNG, or propane and EPA model year 2021 and newer. Eligible replacement buses must be 2010 or older diesel powered and over 10,001lbs, operable and in use at least 3 days a week.*

## Energy Efficiency and Conservation Block Grant (EECBG) Program

*Approximately \$10,000 allocations are available under the EECBG Program for financial assistance to eligible Tribes, including Alaska Native Regional and Village Corporations to implement strategies to reduce energy use, to reduce fossil fuel emissions, and to improve energy efficiency. Tribes may opt to receive their allocation under this program in the form of a formula grant or voucher for technical assistance or equipment rebate. Tribes may team up with other Tribes or EECBG-eligible local governments to pool their funds and streamline the application process. These flexible funds may be used across 14 eligible areas, including energy planning, energy efficiency upgrades to public or private infrastructure, and workforce development.<sup>20</sup>*

## Grid Resilience State and Tribal Formula Grants<sup>21</sup>

*DOE's Grid Deployment Office (GDO) funds this block program, which is distributed to states, territories, and federally recognized Indian tribes, over five years to strengthen and modernize America's power grid against wildfires, extreme weather, and other natural disasters that are exacerbated by the climate crisis. Indian tribes may apply together as a tribal consortium and may accumulate funds from multiple allocations years to develop larger projects. Sandia Pueblo's allocation is \$219,023. <sup>22</sup> **Allocation requests due April 17th, 2024.***

## Tribal Home Electrification and Appliance Rebates Program

*Under the Inflation Reduction Act, the Tribal Home Electrification and Appliance Rebates program provides \$225 million to Indian Tribes and Alaska Native Corporations to develop, implement, and subsidize residential electrification and appliance upgrade projects. A "rebate" is a buying discount that can go to households, building owners,*

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<sup>19</sup>EPA, Environmental Protection Agency, [www.epa.gov/cleanschoolbus/clean-school-bus-program-grants](http://www.epa.gov/cleanschoolbus/clean-school-bus-program-grants). Accessed 12 Mar. 2024.

<sup>20</sup>"Energy Efficiency and Conservation Block Grant Program Comprehensive Guide for Indian Tribes." Energy.Gov, [www.energy.gov/scep/energy-efficiency-and-conservation-block-grant-program-comprehensive-guide-indian-tribes](http://www.energy.gov/scep/energy-efficiency-and-conservation-block-grant-program-comprehensive-guide-indian-tribes). Accessed 12 Mar. 2024.

<sup>21</sup>"Biden-Harris Administration Announces \$562 Million for States and Tribes to Strengthen and Modernize America's Power Grid." Energy.Gov, [www.energy.gov/gdo/articles/biden-harris-administration-announces-562-million-states-and-tribes-strengthen-and](http://www.energy.gov/gdo/articles/biden-harris-administration-announces-562-million-states-and-tribes-strengthen-and). Accessed 12 Mar. 2024.

<sup>22</sup>U.S. Department of Energy. (2023, December). FY 24 Acquisition Guide: FY 2024 v.4 [PDF]. Retrieved from <https://www.energy.gov/management/articles/department-energy-acquisition-guide>. Accessed 12 Mar. 2024.

*and contractors to 1) decrease the cost of residential energy improvements and, in turn, 2) help low- and moderate income Tribal households enjoy lower energy bills and more comfortable homes. This program will provide up to \$14,000 per eligible household for energy efficiency and electrification home upgrades, which can include HVAC systems, electric appliances like stove or oven, electric clothes dryers, electric circuit paneling and wiring upgrades, and/or insulation products. Tribes can restrict rebates to certain technologies for local needs, such as only using rebates for wiring of non-electrified tribal households. Tribes first apply to DOE for a grant (above), then administer the program to their members. **Letters of Intent are due May 15th, 2024.***

More funding opportunities for tribes can be found in the White House Inflation Reduction Act Tribal Guidebook<sup>23</sup> and the US Department of Energy’s Tribal Nations and Native Communities Resource Guide,<sup>24</sup> and the EPA’s Inflation Reduction Act Climate Action Funding Resource Guide<sup>25</sup> and USDA Programs in the Local Food Supply Chain guide Fact Sheet.<sup>26</sup> Other sources of assistance include technical and decision support, with federal entities such as the National Renewable Laboratory<sup>27</sup> and the DOE Office of Indian Energy.

### 3.7 Workforce Planning Analysis

A workforce planning analysis was conducted in association with this PCAP to understand the impact that the priority GHG mitigation measures would have on the workforce opportunities, shortages, and existing resources. Identifying the effect of Sandia Pueblo’s GHG mitigation measures on the workforce demonstrates a comprehensive approach to addressing the environmental and economic aspects to these climate actions.

#### Sandia Pueblo Workforce

Sandia Pueblo, with a population of roughly 515 in 2022, has a median age of 51.8 years. The community leans slightly younger, with 46% of residents falling under the age of 50, while 31% are over 59. The median per capita income in Sandia Pueblo sits at \$27,285, which is about 80%

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<sup>23</sup>The White House. (2023, April). Guidebook to the Inflation Reduction Act's Clean Energy and Climate Investments in Indian Country [PDF] <https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/04/biden-harris-administration-releases-inflation-reduction-act-guidebook-for-tribes/>. Accessed 12 Mar. 2024.

<sup>24</sup>U.S. Department of Energy (DOE). (2024, February). Tribal Nations and Native Communities Resource Guide 2024. <https://www.energy.gov/sites/default/files/2024-02/DOE-Tribal-Resource-Guide-2024-web.pdf> Accessed 12 Mar. 2024.

<sup>25</sup>“Investing in America: Climate Action Funding Resource Guide.” EPA, Environmental Protection Agency, [www.epa.gov/inflation-reduction-act/investing-america-climate-action-funding-resource-guide](http://www.epa.gov/inflation-reduction-act/investing-america-climate-action-funding-resource-guide). Accessed 12 Mar. 2024.

<sup>26</sup>“Food Supply Chain Guaranteed Loan Program.” Rural Development, 26 June 2023, [www.rd.usda.gov/food-supply-chain-guaranteed-loans](http://www.rd.usda.gov/food-supply-chain-guaranteed-loans).

<sup>27</sup>“Decision Support for Tribes.” NREL, [www.nrel.gov/state-local-tribal/decision-support-tribes.html](http://www.nrel.gov/state-local-tribal/decision-support-tribes.html). Accessed 12 Mar. 2024.

of the New Mexico state average. An estimated 31.7% of Sandia Pueblo residents live below the poverty line<sup>28</sup>.

In terms of education, over 80% of residents have completed high school, and a quarter (26%) have pursued some college education. Additionally, 13% hold a bachelor's degree, and a small percentage (1%) have achieved a postgraduate degree.

Sandia Pueblo Government is estimated to have a commercial workforce of 1,252 employees and a government workforce of 266 government employees. The average commute time for these workers is a relatively short 22.5 minutes. When it comes to commuting methods, the majority (77%) drive alone. However, carpooling (11%), walking (3%), and working from home (10%) are also utilized options within the community.<sup>29</sup>

### **Mitigation Measure 1: Install a Commercial Solar PV System**

This measure proposes installing a commercial solar photovoltaic (PV) system within Sandia Pueblo. By generating clean electricity, the system aims to significantly reduce greenhouse gas (GHG) emissions associated with commercial energy consumption.

#### Potential Economic Effects

The economic benefits of the commercial solar PV system are likely to reduce energy cost<sup>30</sup>. Additionally, the creation of new jobs in clean energy can provide opportunities for displaced workers with appropriate training programs.

#### Job Creation Potential

The installation and ongoing maintenance of the commercial solar PV system present opportunities for new job creation in several areas, including:

*Solar Photovoltaic (PV) Installers:* These skilled workers handle the physical installation of solar panels, electrical wiring, and mounting structures. They typically require experience and certifications in electrical work and rooftop safety.

*Electricians:* Licensed electricians are needed to connect the solar PV system to the electrical grid and ensure all electrical components comply with safety regulations.

*Project Managers:* Experienced project managers oversee the entire installation process, coordinating with engineers, installers, and other stakeholders to ensure timely completion within budget.

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<sup>28</sup>“Census Profile: Pueblo of Sandia Village, NM.” *Census Reporter*, [censusreporter.org/profiles/16000US3559950-pueblo-of-sandia-village-nm/](https://censusreporter.org/profiles/16000US3559950-pueblo-of-sandia-village-nm/). Accessed 12 Mar. 2024.

<sup>29</sup>U.S. Census Bureau. (2022). B08006: Means of Transportation [Data table]. Retrieved from [https://censusreporter.org/data/table/?table=B08006&primary\\_geo\\_id=16000US3559950&geo\\_ids=16000US3559950,05000US35043,31000US10740,04000US35,01000US](https://censusreporter.org/data/table/?table=B08006&primary_geo_id=16000US3559950&geo_ids=16000US3559950,05000US35043,31000US10740,04000US35,01000US)

<sup>30</sup> Irizarry, Paola. “Top 6 Benefits of Solar Energy for Commercial Buildings .” CIC Construction Group, 23 May 2023, [www.cicconstruction.com/blog/top-benefits-of-solar-energy-for-commercial-buildings/](https://www.cicconstruction.com/blog/top-benefits-of-solar-energy-for-commercial-buildings/).



*Engineers:* Depending on the project's complexity, engineers might be involved in designing the system layout, specifying equipment, and ensuring structural integrity of the roof to support the panels.

*Roofing Inspectors:* Certified roof inspectors will likely be required to assess the condition of the roof before installation and ensure it can handle the additional weight of the solar panels.

*Laborers:* General laborers may be needed to assist with tasks like transporting materials, cleaning the installation site, and performing basic maintenance duties.

This measure proposes installing local EV charging ports within Sandia Pueblo to encourage the use of EV vehicles and EV forms of transportation within the Pueblo. This initiative aims to reduce GHG emissions associated with the transportation sector in Sandia Pueblo.

## **Mitigation Measure 2: EV Charging Stations**

### Potential Economic Impact

The economic impact of installing EV charging ports within Sandia Pueblo is the effect this will have on gasoline and diesel sales from gas stations within Sandia Pueblo.

### Job Creation Potential

*Charging Station Installers:* Skilled workers are needed to install and maintain the charging infrastructure for the EVs.

*Charging Station Maintenance Manager:* These managers maintain the EV charging ports and ensure they are operating properly and respond to issues associated with the charging ports.

*Data Analysts:* Data analysts may be needed for EV charging port usage data, charging patterns, and overall system performance to optimize efficiency and identify improvement opportunities.

## **Mitigation Measure 3: Implement Electric Bus Transit Service**

This measure proposes implementing an EV bus transit system within Sandia Pueblo. By utilizing electric buses, the initiative aims to significantly reduce GHG emissions associated with transportation within the Pueblo.

### Potential Economic Effects

While the EV bus system offers environmental benefits, there's a possibility of a decrease in gas station sales due to reduced reliance on personal vehicles.

### Job Creation Potential

The implementation and operation of the EV bus system present opportunities for new job creation in several areas, including:

*EV Bus Drivers:* Qualified drivers are needed to operate the electric buses safely and efficiently.



*EV Bus Mechanics:* These technicians maintain and repair electric buses, requiring specialized knowledge of electric vehicle systems and high-voltage batteries.

*Charging Station Installers:* Skilled workers are needed to install and maintain the charging infrastructure for the electric buses.

*Fleet Managers:* Experienced fleet managers oversee the operation and maintenance of the electric bus fleet, ensuring efficient scheduling, dispatching, and vehicle maintenance.

*Dispatchers:* Dispatchers manage bus schedules, monitor real-time traffic conditions, and communicate with drivers to ensure smooth operations and on-time arrivals.

*Data Analysts:* Data analysts may be needed to track bus usage data, charging patterns, and overall system performance to optimize efficiency and identify improvement opportunities.

## 4. Next Steps

### Summarized Findings

The analysis conducted for this PCAP identified transportation and commercial energy sectors as the highest emitters of CO<sub>2e</sub> within Sandia Pueblo from Scopes 1 and 2 emissions.

*Transportation:* This sector contributes the most significant emissions, with 77,131 MT of CO<sub>2e</sub>. This is likely due to factors such as traffic on I-25, a major interstate highway. The Pueblo does not have authority to change the majority of these emissions but can decrease the emissions and VMTs of their own vehicles by switching to ZEVs, supporting public transportation, and installing EV infrastructure such as EV charging stations.

*Commercial Energy:* The commercial sector, including businesses like the Sandia Resort and Casino, emits 12,577 MT of CO<sub>2e</sub>.

In contrast, emissions from solid waste, wastewater, process and fugitive sources, and residential energy were identified as relatively low.

Building on the identified high-emitting sectors, three priority mitigation measures have been developed to reduce greenhouse gas (GHG) emissions:

**Solar PV System Installation at Sandia Resort and Casino:** Installing a solar photovoltaic (PV) system on top of the Sandia Resort and Casino parking lot garage will generate clean electricity, reducing the facility's carbon footprint.

**Installing 16 EV Charging Points:** Encouraging and promoting the increased use of electric vehicles within Sandia Pueblo will significantly reduce transportation-related emissions within the Pueblo's authority.

**Implementation of an EV Transit Bus Service:** The establishment of an EV transit bus service will provide a clean and sustainable transportation option for residents, further reducing reliance on personal vehicles and associated emissions.

## Next Steps

Under the Pueblo of Sandia PCAP, funded by the EPA Climate Pollution Reduction Planning grant next steps towards a Comprehensive Climate Action Plan (CCAP) and implementation of priority measures may include:

- Applying for implementation funding through the CPRG program or various other funding sources listed in this PCAP.
- Decarbonization Planning Community Workshop
  - Output: Climate action plan mitigation methods and decarbonization goal(s)
- Draft CCAP including educational materials
- CCAP review
- Final CCAP

A Decarbonization Planning Workshop focuses on turning established mitigation measures into a comprehensive action plan for Sandia Pueblo. An interactive workshop could address key aspects of implementation:

**Implementation Methods:** Collaboratively develop specific steps and timelines for putting each mitigation measure into action.

**Training & Onboarding:** Exploring potential training programs to equip new hires with the knowledge and skills needed to support the successful implementation of these measures.

**Decarbonization Goals:** Facilitating the establishment of clear and measurable decarbonization goals for Sandia Pueblo.

**Holistic Planning:** A workshop where community input is sought out can provide an interface between various related values such as economic development, environmental stewardship, language preservation, education, and senior services.

In addition to the Decarbonization Planning Workshop, sections from this PCAP will be expanded to include information about performance measures and usage of funds will be explained. These expanded sections will be included in the draft CCAP and ultimately the final CCAP for the Pueblo of Sandia by December 2024.

## Timeline

April 1, 2024

- *PCAP Due:* Sandia Pueblo submits its Priority Climate Action Plan (PCAP) to the EPA.

May - July, 2024

- *Data Collection and Analysis:* Gathering of additional information on GHG emissions, transportation patterns, and energy usage.
- *Stakeholder engagement:* Communication to educate stakeholders about CCAP progress and receive input on priority reduction goals in a workshop or other format directed by the Sandia Pueblo Environment Department.

August - September, 2024

- *Develop implementation strategies for mitigation measures:* outline specific actions for mitigation measures, timelines, and establish responsible parties for implementing each mitigation measure.
- *Draft CCAP Development:* Expand on PCAP sections, GHG inventory, and GHG Reduction Measures to include in CCAP. Establish specific near and long-term GHG Emission Reduction Goals for the Pueblo of Sandia, and detail a monitoring and reporting plan.

October 2024 - June 2025

- *CCAP Implementation (when funding is received):* Begin implementing mitigation measures according to established plan and timeline, coordination with stakeholders, and monitor progress of mitigation measures.
- *Submittal of Sandia Pueblo CCAP:* Submit the final CCAP to the EPA by December, 2024.