

CLIMATE CRISIS ADVISORY COMMITTEE FRAMEWORK



August 2023



CONGRESSWOMAN
**VERONICA
ESCOBAR**
Texas' 16th Congressional District



The adaptation strategies provided in this framework are intended to inform and assist the identified stakeholders to implement the actions for the betterment of our regional environment.

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I. Foreword

In February of 2021, I launched the Climate Crisis Advisory Committee (CCAC), bringing together diverse stakeholders whose initial goal was to create a framework of recommendations and necessary resources that needed to be considered in a regional climate action plan. My office convened regular meetings of these stakeholders, invited subject matter experts to share ideas and answer questions, and put the CCAC's recommendations together for the public and local governments.

While climate change impacts everyone, everywhere, it disproportionately impacts economically disadvantaged communities like El Paso. For far too long, our region's most vulnerable people have been politically, socially, and economically left out, making it harder for them to secure decent livelihoods. Implementing some of the climate change recommendations listed in this framework can be the first step our region takes to help reduce emissions in half by 2030, create good-paying jobs, achieve justice, and ensure that El Paso is a leading city on climate action.

For over a year, local government entities, educational institutions, local advocates, the private sector, and stakeholders met to share, highlight, and collaborate to develop innovative solutions to prevent the advance of the climate crisis. The group met and learned about climate solutions from national and local organizations, which included Smart Growth America, Environmental Protection Agency, Texas Farm and City, County of El Paso, El Paso Electric, Texas One Gas, Earthworks, National Association for City Transportation Officials, Regional Renewable Energy Advisory Committee, and El Paso Water. They shared their expertise on how to best address and implement green and sustainable solutions in the El Paso region.

In August, I reintroduced the Climate Adaptation Plan (CAP) Act of 2023. My bill directs the Environmental Protection Agency (EPA) to establish a grant program to facilitate the development of climate adaptation plans for local and tribal governments. My bill was inspired by this committee and the recommendations for El Paso to mitigate the harmful impacts of climate change. Additionally, In November 2021, the city passed Proposition C which will invest \$5 million to

fund and develop a climate action plan. It is really moving to see a whole-of-government approach starting to take place to help our resilient community fight climate change.

I am grateful to the members of the CCAC who worked collaboratively to shape the recommendations and especially to one of my former District Representatives Jazmine Venegas, who crafted this document. I hope it serves as an initial roadmap and starting point for our community. Tackling the climate crisis will take all of us, but we have to be committed to solutions that require sacrifice and intention. I hope these recommendations inspire everyone in our community to take action so that we can mitigate as much damage as possible and preserve our beautiful community in a sustainable way for future generations.

Sincerely,



Veronica Escobar
Member of Congress

II. Introduction

El Paso is nestled at the crossroads of three states and two countries, bordered to the east by Hudspeth County, Texas, and to the west by Otero County and Doña Ana County, New Mexico. El Paso also represents the largest binational metroplex in the western hemisphere through its shared border with Ciudad Juárez, Chihuahua, Mexico to the south. Because the impacts of the climate crisis are not limited to any jurisdiction, leaders of the Paso Del Norte region must navigate inter-jurisdictional complexities when planning and combatting the effects of climate change.

It is important to take into consideration the region's shared vulnerabilities and economic inequities. According to the [2020 Census](#), El Paso County's median household income is \$51,044, almost \$20,000 lower than the national average. The county's poverty rate is 20.1%, far above the national average of 11.6%.

These socio-economic factors significantly impact any community's ability to be resilient to the climate crisis. It has been demonstrated in multiple climate disaster events across the nation and throughout recent history that impoverished and vulnerable communities suffer disproportionately compared to more affluent populated cities.

Environmental shocks and stressors impacting the El Paso region include air pollution, extreme heat, drought, and flash flooding. As an urban desert environment, water is the primary natural resource presenting the most risk. Flash flooding seriously threatens the safety and welfare of communities in its path. While much investment has been made in recent decades to address the stormwater flow, stormwater control infrastructure continues to be stressed beyond its capacity more regularly than in years past. Investment in that infrastructure is challenging in a community that lacks the financial resources to be more proactive.

In 2006, a major storm caused city-wide flooding when El Paso received a year's worth of rain in two days. [The storm caused more than \\$200 million in damages to businesses and homes and \\$115 million in damage to the city's stormwater system.](#) Stormwater improvements had been deferred for years because of a lack of dedicated funding, and many facilities were undersized or in need of maintenance. During that storm, the neighborhood of Lincoln Park in central El Paso was one of the worst hit with around 59 lots of about 900 square feet needing to get razed for a total of \$3 million according to El Paso Water. On top of that, the City of El Paso spent about \$2 million in relocation costs. The Lincoln Park community has a [median household income of \\$29,418 only about three-fifths of the amount in El Paso County: \\$51,044.](#)

In early 2021, just before another deadly storm hit the region during monsoon season, El Paso County adopted a comprehensive update to the original County Stormwater Master Plan (SMP)

developed nearly 15 years earlier. The revised SMP updates proposed projects included in the original SMP to account for changes in cost estimates and concept designs due to a) increases in average construction costs, b) new development that has occurred in the County since the original SMP was published, and c) [new precipitation frequency estimates published in 2018 by the National Oceanic and Atmospheric Administration \(NOAA\) called Atlas-14](#). It also includes study of a new area of the County, the Montana Sector, which had not been included in the original SMP.

Through this comprehensive process, the County identified a total of 69 proposed projects totaling \$258,880,000 to address flooding issues throughout the unincorporated and rural areas, again, some of the poorest in our region. This planning initiative also identified several concerns related to stormwater and flood-risk management practices throughout the community, including the fact that drainage issues often cross jurisdictional boundaries, making it challenging to develop systemic level solutions as flow paths may begin in an unincorporated community and pass from one city or village into another. In addition to the infrastructure planning identified in the SMP, it also recommends countywide clarification and, perhaps, additional regulation, to enhance coordination and possibly develop uniform standards, regulations and design criteria for all local governments in the community.

A critical component of stormwater management affecting all local governments is the precipitation frequency estimates published in 2018 by NOAA, which showed significant increases in rainfall estimates over a 24-hour period. This is a reflection of more extreme weather events over sustained periods of time, which directly affect the ability of local governments to minimize risks against life and property due to flooding, including in arid climates such as El Paso.

Conversely, during most of the year, El Paso experiences drought conditions. These conditions are exacerbated by a growth in demand for water by residential and commercial use, which ultimately drives up cost and drives down affordability and most significantly impacts impoverished portions of our community. Our region shares water from the Rio Grande with Mexico and New Mexico and this natural resource has been depleted in recent decades. There is a long-standing water rights [dispute underway between Texas and New Mexico over the management of Rio Grande water](#). According to the NASA Earth Observatory, [more than 40 percent of the Rio Grande watershed experienced exceptional drought in early summer 2022](#). Recent heat waves and continued water demands are taxing the river, which provides water for 6 million people and irrigates 2 million acres of land. The impact is felt most significantly by industries like the agricultural community with nearly 75 percent of the river's water being used for agriculture. [The Rio Grande is the lifeline of farmers in our region and farmers must maintain irrigation and plan for how much water they will be allocated to ensure they have enough for their crops](#).

In 2021, El Paso was classified as a nonattainment area by the Environmental Protection Agency (EPA) for not meeting the National Ambient Air Quality Standards (NAAQS). Most recently, a DC Circuit Court ruled to overturn the EPA's nonattainment status for the El Paso region. Although El Paso is in attainment, air pollution has a disproportionate impact on communities with a lack of access to health insurance and primary healthcare. Several of these communities, like the Chamizal area, are located immediately north of the US/Mexico border making them vulnerable

to high concentrations of ozone-pollution coming from Mexico and stalled traffic at international ports of entry. The complexity of controlling the quality of the air in the shared air basin and ensuring binational and multi-state collaboration to regulate emissions have greatly contributed to the impacts of this environmental hazard.

Extreme heat days in our region have been on a consistent upward trend [for over 100 years](#) with triple-digit temperature days becoming more frequent and occurring earlier in the year. This summer, El Paso hit a record of 44 consecutive days in triple-digit temperatures, as a stagnant heat wave hovered over much of the United States. Though the record-setting streak is over, the 100-degree days for our community are not. The dangerous heat wave of 2023 has caused a rise in heat-related emergencies, migrant desert deaths, and unprecedented electricity usage as residents tried to stay cool. Extreme heat occurrences can affect everyone, but it is vulnerable populations like the homeless, seniors, people with disabilities, children, and infants who are at higher risk of suffering from dehydration or heat illness. Refrigerated air conditioning helps alleviate this for some residents, but not everyone can afford it and it increases local energy demand. Despite our community's best efforts to provide access to cooling centers and education for residents on how to keep their homes cool, we continue to see people severely impacted. Since 2004, local stakeholders created the [Extreme Weather Task Force](#) to respond to the number of heat-related deaths in our community by distributing fans to the elderly and most vulnerable. In El Paso, [19 people died due to heat exposure between 2014 and 2019](#) and since June of this year, 63 people were taken to the hospital due to heat-related illnesses.

A transition from today's energy system to a zero-emissions energy system is complex but critically important. Some of this transition can be centralized and driven by legislative action and regulatory tools at the federal and state levels. However, local action is needed to ensure organizations, companies, and even individuals to make daily decisions that move us toward achieving a zero-emissions energy status. It will take a whole-of-government and private-sector approach to address this crisis. Every entity in every sector, public and private – municipal and county governments, school districts, utilities, manufacturing industry, etc. – should have climate action plans or policies in place. Climate action should be incorporated into every aspect of government, and every portfolio and department should have a climate lens: procurement, incentives, building, and hiring of staff to implement and drive these policies. And the federal government should appropriate funding as needed to help this mission, especially for economically disadvantaged regions like ours.

The municipal government has ordinance-making authority and can write local laws. The county government, which does not have ordinance-making authority can still implement internal policies to move a climate agenda. Both governments can create policies around their purchasing

power, for example. They lease space to vendors at their facilities, and could implement climate goals into their contracts and leases (e.g., limiting plastics, sale of alternative proteins, etc.).

Municipal governments along with utilities should implement more comprehensive bilingual outreach and education programs and services to educate consumers about sustainability, energy efficiency and solar distributed generation, reducing and recycling waste, and how to be overall better stewards of the environment.

The State Board of Education, state legislators and educators should ensure that climate-conscious curriculum is included in the Texas Education Agency's (TEA) Texas Essential Knowledge and Skills for K-12 public education systems and in other non-traditional education programs and settings. Younger students could learn behaviors and habits for responsible energy consumption and understand the climate impacts of using products with high energy demand. At the high school level, school districts should expand Career and Technical Education partnerships with college and career readiness school models under TEA to create an educated citizenry and climate-ready workforce.

In November 2022, 50.6% of City of El Paso voters supported Proposition C of the City's Community Progress Bond, which includes \$5 million for a Climate Action Plan to help address several major environmental problems exacerbated by climate change. While this initiative is groundbreaking, it is important to encourage *all* governments – not just municipalities -- to (1) adopt resolutions that lay out their commitment to climate and solutions, and (2) to fund climate action plans.

The overall goal of this document is to provide an initial framework for the eventual development of a formalized Climate Action Plan (CAP) in the Paso Del Norte region. A CAP is a comprehensive roadmap developed by a municipality and community stakeholders – public and private - that outline steps a city can take to measure and reduce its greenhouse gas (GHG) emissions while enhancing climate resilience. A CAP also includes an implementation strategy that identifies required resources and funding mechanisms.

General Recommendations

Formalizing a community-wide climate action plan (CAP)

It is the CCAC's principal recommendation that, by next fiscal year, regional municipalities and other public entities should adopt and codify a plan to protect our communities from the impacts of climate change by budgeting for and adopting a CAP by resolution, charter, ordinance, or any appropriate mechanism.

Local governments and community leaders must ensure all residents are aware of the effects of climate change, the dangers it poses to their health and well-being, and the impact it has on their pocketbooks. This should include transparency around how the climate crisis will impact policy and budgetary changes, ensuring the community can participate in solutions-focused discussions and decision-making, and prioritizing collaboration that is inclusive of advocates.

Collective Impact Model

Many regional entities and diverse communities will have a part to play. It is the recommendation of this group *that each jurisdiction in the region* come together bringing their collective resources and community interests to the table to comprehensively tackle these focus areas. A collective impact model in the form of a regional climate action collaborative that is supported by key public stakeholders, local subject matter experts, and community leaders should be formally deployed to ensure comprehensive action that transcends jurisdictional boundaries. Those entities should leverage existing planning documents to identify synergy in terms of policy, funding, and implementation timelines. The role of academic institutions and research entities will be critical in providing objective analysis and correlation of both existing plans and future studies to assure that climate action initiatives remain aligned, and results-oriented. To start, the City and County of El Paso and public entities like school districts and colleges and universities, along with every major private industry should ask each of its departments to identify achievable climate goals in the next 12 months, 24 months, and 48 months.

The process should be data-driven and science-based and should include a GHG emissions baseline inventory report and a climate risk profile to achieve a comprehensive plan for the region that aims to do four key things: reduce GHG emissions, reduce air pollution, ensure community resilience, and deliver a positive economic impact.

Creating a community wide GHG emissions inventory report

It is a scientifically established fact that gases that trap heat in the atmosphere are the biggest drivers of global warming and climate change. To understand how far we must go in our reduction plans toward zero-emissions energy, it will be critical to fund and create a baseline report documenting current emissions. This report should be used as a benchmark to first measure our baseline current emissions and then be updated periodically to track our future reductions.

A community-wide emissions inventory should be led by the region's municipal governments, namely the City of El Paso. This report would include the carbon emissions of city operations, organizations, companies, and even individuals. This means that individual entities must track their own emissions so that municipal entities can collect and aggregate the necessary data to create an inventory.

World Resources Institute, C40 Cities Climate Leadership Group and ICLEI created a GHG Protocol standard for cities formally known as [Global Protocol for Community-Scale Greenhouse Gas Emission Inventories \(GPC\)](#). The GPC provides a robust framework, used by many cities globally, for accounting and reporting city-wide greenhouse gas emissions for different scopes or types of emissions. The CCAC recommends using this methodology for El Paso. It seeks to:

- Help cities develop a comprehensive and robust greenhouse gas inventory to support climate action planning;
- Help cities establish a base year emissions inventory, set reduction targets, and track their performance;
- Ensure consistent and transparent measurement and reporting of greenhouse gas emissions between cities, following internationally recognized greenhouse gas accounting and reporting principles;
- Demonstrate the important role that cities play in tackling climate change and facilitate insight through benchmarking – and aggregation – of comparable data.

Additionally, Municipal and County governments should explore the inclusion of [ecological footprint](#) accounting for regional development plans to measure a population's demand for and ecosystems' supply of ecological assets to understand if the region's ecological assets meet the demand of its residents now and over the course of time.

Emissions Dashboard – Additionally, Municipalities should fund the creation of an overall dashboard or scorecard system – interactive software where users can find data – that provides metrics for benchmarking baseline emissions footprints and tracks related public and private

projects and development plans that improve energy emissions mitigation. A similar effort can be seen within the City of San Antonio, whose sustainability website offers an online hub for visitors to view their climate action plan, greenhouse gas inventory, and [dashboard](#) among other things.

When it comes to implementing programs that will accelerate an energy transition, any changes made to the distribution, transmission, and/or storage of alternative energy will require a long-range cost-benefit analysis for the consumer. Post-pandemic, this will be of particular concern for all ratepayers who continue to face economic hardship. Recommended actions must also be reevaluated based on outcomes of cost-analysis and GHG emissions inventory.

III. Values

The following are a set of rules or guiding principles by which we as a community should proceed with climate action. The CCAC recommends that all local entities should adopt and incorporate these or similar values in their climate action policies:

- Resilience
- Equity, Empowerment, and Environmental Justice
- Economic Prosperity
- Community-Driven Collaboration

Resilience

As defined in the [Resilient El Paso](#) strategic plan, “City Resilience is the capacity of individuals, communities, institutions, businesses, and systems within a [region] to survive, adapt and thrive no matter what kind of chronic stresses and acute shocks they experience.”

The FEMA risk index indicates that El Paso has high social vulnerability and low resiliency levels. A reactionary or response-based approach to disasters such as extreme heat and debilitating storms does not build resilience. To minimize the costly impact that the climate crisis will have on the region’s residents and taxpayers, strategies for resilience must invest in infrastructure that can remain sustainable in the long term and can withstand short-term climate shocks. Funding must be dedicated to solutions that produce wide-ranging, beneficial and multi-layered impacts across categories, so the entire community can thrive and not simply survive.

Equity, Empowerment, and Environmental Justice

The EPA defines equitable development as the “...approach for meeting the needs of underserved communities through policies and programs that reduce disparities while fostering places that are healthy and vibrant.”

A future CAP must prioritize groups and individuals who have disparately suffered the negative impacts of the climate crisis. Strategies and actions that empower, uplift, and protect Low and Medium Income (LMI) communities, like access to resources, education, jobs, and wrap-around services, are included in this framework to ensure that entities and stakeholders listen to and respect disadvantaged groups during the decision-making and implementation phases.

Economic Prosperity

A comprehensive CAP will implement economic development strategies that capitalize on the industrial growth and employment opportunities present in the renewable energy sector while considering affordability for socio-economically vulnerable populations.

Cost-benefit analyses performed by the public and private sectors must consider that high upfront costs have the potential to yield long-term net gains. Moreover, economic prosperity stands to be gained from an equitable and just transition towards a green workforce that benefits the whole population and is inclusive of the most socio-economically disadvantaged.

Community-Driven Collaboration

Not one entity alone can mitigate or prepare for the impact of the climate emergency. It will take every person to make a difference, and that means creating a process that seeks to include and empower every resident. A high level of transparency and accountability will be required across multiple collaborative entities to achieve meaningful change that is reflective of the need across the entire community. Participation on the part of elected leaders, community stakeholders, and cross-sector public and private entities is necessary to reach critical mass in terms of public engagement. The participation of Community Based Organization (CBOs) will be essential in driving the development of a CAP and bringing actual concerns and input from the community to the table while bridging trust issues from the community to decision-makers.

Education and outreach campaigns should be designed not just to inform the public but to empower them to be a part of the decision-making process ensuring equitable access to participate in the creation of a healthy environment in which to live, learn and work.

IV. Focus Sectors and their Recommended Actions

All residents of the Paso Del Norte region deserve a healthy and prosperous community that is truly resilient to the impacts of climate change. In cities around the world, the most impactful climate action efforts are inclusive of comprehensive solutions providing transit options, affordable housing, recreational green space, and safe, sustainable infrastructure. To achieve this for our community, the CCAC determined key priorities for regional climate action termed “focus sectors” and recommends that any effort to produce a regional CAP include actions based on the following focus sectors:

- Land Use and Resource Management,
- Air Quality,
- Transportation,
- Energy Sustainability, and
- Water Resiliency and Adaptation.

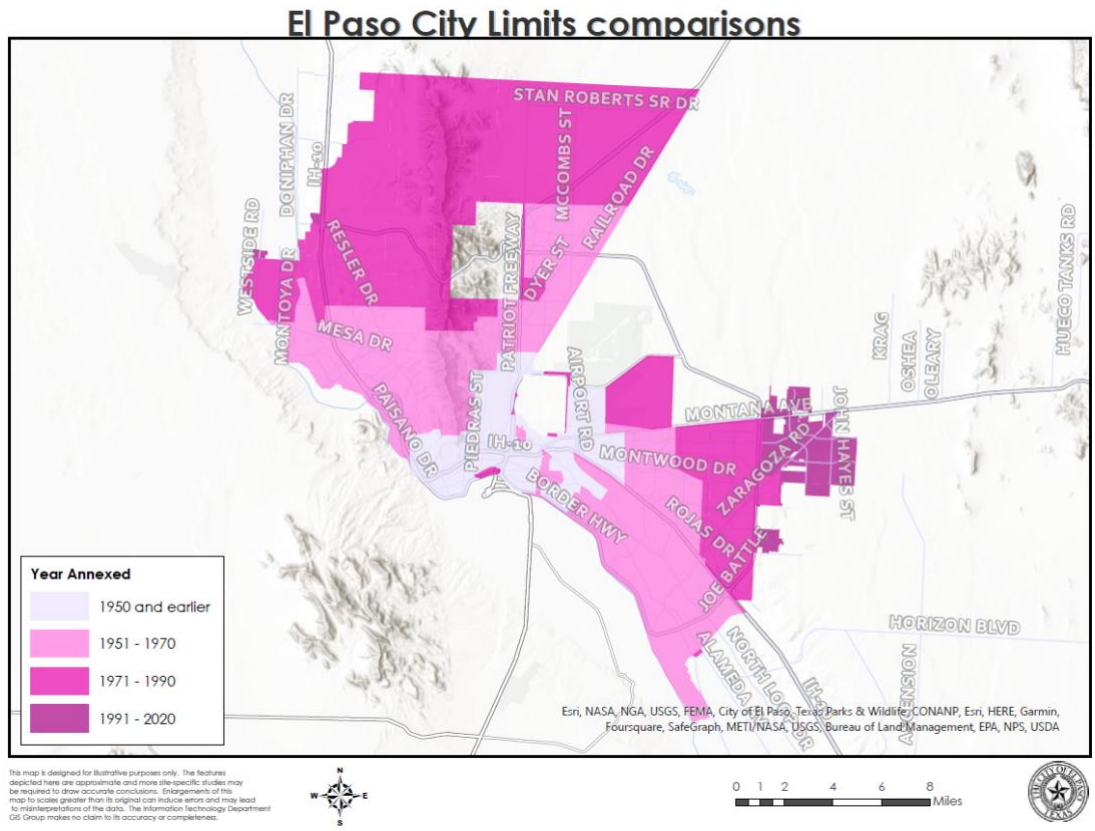
Recommendations for key entities and stakeholders to implement are laid out on defined timeframes: short-term (0-3 years), mid-term (3-10 years), and long-term (by 2050). The recommendations are meant to be ambitious, but achievable. We should set our sights as high as possible and hold each other accountable for achieving those goals.

1. Land Use and Resource Management

There are environmental, economic, and health benefits to protecting our natural landscapes. Natural landscapes are utilitarian and provide air and water purification and protection of wildlife and plant biodiversity that is lost, sometimes completely because of land degradation. Though we typically consider the role of forests and deforestation when discussing climate, many may not realize that the warm desert landscape of our region functions as carbon sink as well. A [USGS study](#) found that the net carbon flux (carbon emitted vs. carbon kept) of the United States warm deserts was -6.8 teragrams per year. It's not just desert plants but also desert soil that sequesters a surprising amount of CO2 as well.

Unmitigated urban sprawl is causing the natural desert landscape in El Paso to be significantly developed to the east and west of the city limits. As shown in the figure below, we can see that El Paso has gone through extensive urban sprawling over time and that people are moving farther out beyond the city limits.

Figure 1



Source: City of El Paso

People have abandoned the urban center to move to the edges of the community at an increasingly accelerated rate. The rapid and unrestricted development, especially in unincorporated areas of the county, shows little concern for urban planning and puts a strain on infrastructure and natural resources making it physically and economically unsustainable for our region and its residents over time.

Low-density development also separates people and their destinations and stresses mass-transit systems, thus increasing residents' reliance on roads and vehicles that raise carbon emissions. Examples of current city zoning regulations that contribute to sprawl include, but are not limited to:

1. Dimensional standards:
 - a. Minimum lot sizes – this means fewer lots can fit into the same space and buildings must be further apart. This can have negative implications for transit and walkability and should be carefully enacted.
 - b. Setback requirements (i.e., how far buildings must be apart from the property line or from other buildings) - can also play a role when they require buildings to be farther apart than is needed for safety and the public interest.
 - c. Apartment district open space requirements for apartment uses – can require as much as 50% of the lot remain as open space and required parking doesn't count. This can preclude many historically useful and attractive models of apartment use (think Sunset Heights or San Francisco Street) from being replicated today.
2. Maximum density (e.g., single-family-only zoning districts, minimum lot sizes per apartment, or minimum apartment size in districts where allowed) – this standard requires more land to house more people, and, if not exercised with proper care, can make it incredibly difficult to ensure neighborhoods have multiple types of housing options to accommodate multiple life stages and income levels. El Paso's adopted comprehensive plan has a lot of language dedicated to its policy goals of creating complete neighborhoods where people can satisfy all of their daily needs and age in place, but like many or most United States cities in 2022, approximately 70 percent of El Paso is currently zoned for single-family homes.
3. Minimum parking requirements – one standard parking space will require 180 – 200 square feet in most jurisdictions and a 20-25 feet aisle needed behind the parking space to allow for turning movements. Specific parking requirements will vary by use. For residential uses, it's usually determined by the number and type of dwellings (one or two spaces per house, how many bedrooms per apartment dictating apartment parking requirements). For businesses, it's usually dependent on square feet per type of use (more intense uses require more parking). Parking requirements necessitate large lots and low density, which contribute to sprawl and make transit service difficult to provide.

That all being said, the City of El Paso does deserve some credit for allowing mixed-use by right in all commercial districts and allowing 0' setbacks from the property line for most commercial

uses in most commercial districts. [Plan El Paso](#) is largely devoted to getting away from sprawl and makes future policy recommendations to that end. The city offers incentives and special permits that are intended to make it easy to create dense, walkable, transit-supportive development in both new and established parts of town. It is currently possible and encouraged to do things close to best practices now, but there is little appetite among the development community to take advantage of that. Developers tend to have a strong sense of what is and is not marketable, both in terms of local preferences, in what commercial businesses want and need in a site, and in what they can get financed. It is much easier to get banks to support something like what is already and has been successful than for something that is unproven. Unfortunately, best practices still tend to fall into the latter category locally, as they do in many places in the country.

It should also be noted that certain types of requests that exist to make denser development possible and limit sprawl tend to be unpopular: parking reduction requests tend to be opposed by surrounding neighbors and are often denied, and rezoning requests to allow for greater residential density have been similarly unpopular in recent years. This is true in El Paso and is very common at the local level nationwide. It is a large part of why some states have now considered taking on these types of reform at the state level instead. Cities often mind that type of pre-emption less. It helps institute best practices that result in less infrastructure costs and greater sustainability that they would have trouble enacting locally due to unpopularity.

Municipal planning policies should try to tackle the immediate climate challenges we face by focusing on limiting sprawl and incentivizing high density development to the farthest extent possible. Regional municipalities should collaborate to create uniform zoning standards that avoid selective development in areas with lax zoning requirements. The County should continue past efforts to change state law that prohibits it from utilizing zoning and other planning tools to better shape development. In sum, to achieve equitable and sustainable land use and resource management that curbs the impact of climate change on our region, a true regional and statewide coordination effort across public and private sectors must be leveraged to ensure that future land development decisions are supportive of preserving a vibrant and healthy ecosystem.

Recommended Actions

Short-term

- Municipalities need policies to spur infill development, and that includes incentivizing the rehabilitation of aging homes, buildings, and amenities in core neighborhoods built prior to 1970 to promote infill to bring the population back to the urban core.

- Municipal entities should increase investment in [complete streets](#) policies inclusive of green infrastructure, expanded urban tree canopy, and green spaces that incorporate native plants and vegetation. A focus on green spaces is essential to helping with carbon sequestration and mitigating climate change.
 - Additionally, Municipal, and private entities need to improve and reclaim urban spaces in the region for green spaces and introduce nature-based solutions such as green roofs, rain gardens, or any other feasible solutions to improve their land use.

Mid-term

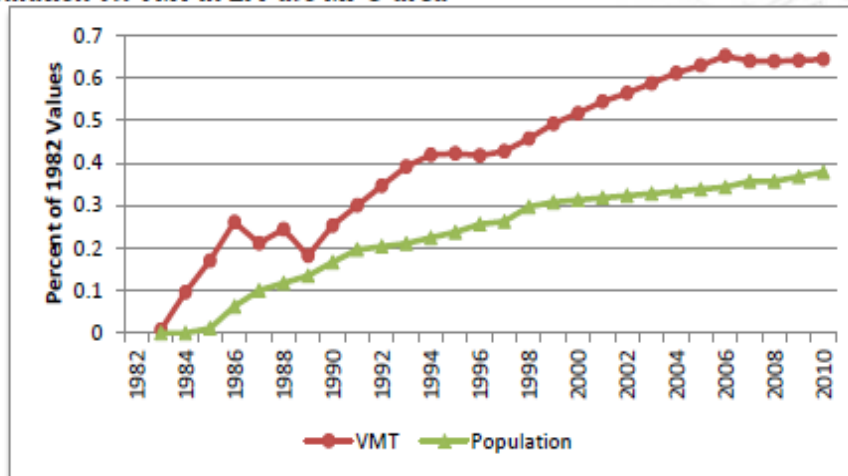
- Future land use and economic growth policy should be measured against the triple bottom line (profit, societal benefit, and environmental impact) as a measurable guideline for decision-making.
- Municipal and County governments could fund programs that offset costs and incentivize buyers and developers to invest in and revitalize older structures located in the urban core, promoting infill development and density. This takes significant investment.
- The County is looking to significantly expand its floodplain program and update and adopt a new floodplain damage prevention order. In doing so, the County should consider the following recommendations:
 - Identify strategic land acquisitions of hazardous floodplain areas that could be repurposed with flood control projects that preserve open public space and help the land serve its natural purpose.
 - Grant the ability to consider land use planning requirements when deciding to issue floodplain development permits. A recommendation could be to prevent construction in arroyos and require open space in development plans. Rather than filling in arroyos with concrete, which could put neighborhoods in peril, this could force developers to build water retention landscaping projects that also serve the purpose of creating open space and beautification. To this end, the County would have to define, to the greatest extent possible, what constitutes an arroyo to prevent or try to limit the amount of development in those areas.
- Federal, State, Municipal and County governments should expand their stewardship of publicly owned assets like buildings and land by including minimum requirements for renewable energy, building performance standards, and land development practices that encourage water conservation and harvesting and mitigation of heat island effect.

2. Transportation

While El Paso continues to sprawl, the number of vehicle miles traveled (VMT) is increasing at a faster rate than population growth as referenced by the El Paso Metropolitan Planning Organization (MPO) in their [Metropolitan Transportation Plan](#). This means that El Pasoans are riding longer distances in their vehicles per capita and spending more time on roads than ever before.

Figure 2

Population vs. VMT in El Paso MPO area



Source: TTI's 2012 Urban Mobility Report Powered by INRIX Traffic Data

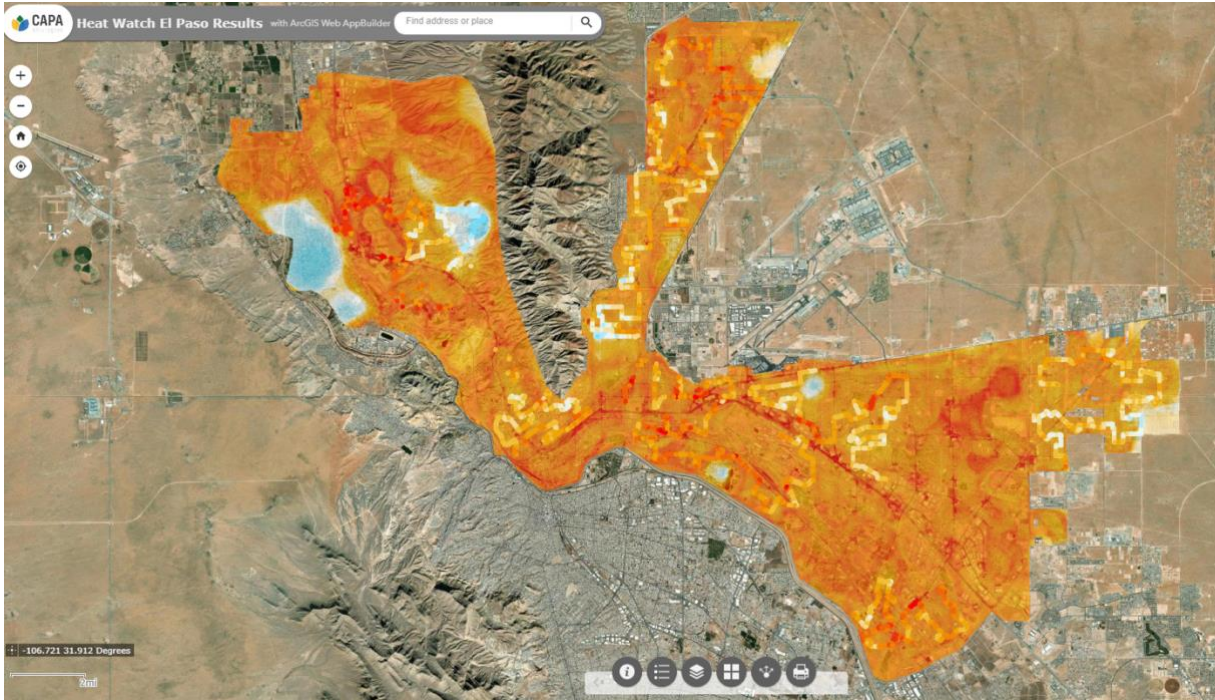
Source: El Paso MPO, <https://www.elpasompo.org/media/MTP/Horizon2040Plan/Section2.pdf>

Road planning is inextricably linked to land use development, and decades of sprawl have led transportation planners in El Paso to build more roads to try to provide an efficient regional transportation network that stimulates economic activity and connects the city to outlying communities. The focus should be redirected toward maintaining existing roadway and street systems and creating transportation alternatives. New technologies such as electric vehicles and “smart vehicles” can reduce emissions and potentially increase the efficient use of existing road capacity.

Building more roads without investing significantly in other modes of transportation lowers the quality-of-life standards for El Pasoans in more ways than one. For example, carbon pollutants from vehicular emissions are identified with health concerns such as [increased heart disease](#) and [asthma, and other respiratory issues](#). Proximity to highways has been linked to [increased stress levels from noise](#) pollution, and [lower property value for adjacent residential homeowners](#). The

term “urban heat island” refers to the fact that cities tend to get much warmer than their surrounding rural landscapes, and highways, especially, are considered “hot spots,” posing an increasing concern for El Paso, which already has a high concentration of concrete surfaces. The map below indicates that the I-10 corridor running through El Paso is a linear “heat island.”

Figure 3



Source: [CAPA Strategies, Heat Watch El Paso Results](#)

Congestion points have developed in high-growth areas along various sections of I-10, including in the Northwest, Far East, Mission Valley, and downtown. Concentrating traffic in these areas negatively impacts quality of life throughout the urban core and adds to environmental injustice. This must be addressed with a concerted effort to reduce the intensity of roads and vehicles in that location through holistic planning strategies.

Overall, our transportation infrastructure goal must be twofold: reducing VMT and changing transportation modes and behaviors via enhanced mass-transit and a technology shift such as electrification. Increasing coordination of transportation investment with land use patterns, employing efficient use of road capacity and maintenance, and investing in mass-transit and multi-modal transportation to reduce our region’s GHG and carbon-polluting emissions will encourage healthy communities and be vital to ensuring a sustainable future.

Recommended Actions

Short-term

- Incentivize projects that address the heat island by requiring a minimum number of desert-friendly shade trees required of all new commercial development and all street resurfacing and water harvesting projects.
- El Paso should lead in Electric Vehicle (EV) adoption by the general population.
 - City of El Paso (Sun Metro), El Paso County (rural transit service), and school districts (school buses) should ensure that large fleet public transit is shifted to only zero-emission vehicles over time.
 - MPO should play a role to encourage this, and federal grants should be sought out to fund transition programs, especially through opportunities in the Bipartisan Infrastructure Law.
 - The City and County of El Paso, along with local entities like the El Paso Chamber and El Paso Electric, should pursue federal funding grants to execute their solar projects, like their plan to install EV charging stations in key locations based on proprietary data from private entities by 2023-2024. Specific grant opportunities are listed in the Appendix.
 - Investment in EV charging infrastructure should be implemented with equity in mind and there should be federal and state-level advocacy to fund programs that assist LMI families with EV adoption. For example, the Inflation Reduction Act incentivizes the adoption of EV's particularly for LMI populations by providing cost incentives to offset the burden of high EV up-front costs. Further, federal and state governments should invest in utility assistance programs like those available during the pandemic in order to help subsidize increased electricity costs to charge vehicles at home
 - Additionally, the City and County should pursue federal funding from the Bipartisan Infrastructure Bill to implement charging stations following equity considerations.
- The City and County should work together to consolidate resources and continue pushing to meet the goal of having a regional transit entity. Having a centralized agency would allow for cost-sharing of expanded services and routes and would yield a streamlined fare and a more reliable public transit system across the region. Existing transportation funding is mostly for roadways, so leveraging local, state, and federal grant dollars and resources to increase investment in this agency and its projects will be needed.
- Overall increased investments in public transit to promote a change in transportation modes and practices to include public transit, bike lanes, and walkable neighborhoods to reduce vehicle miles traveled.
- The City has implemented Compressed Natural Gas (CNG) fueled buses and is pursuing opportunities to electrify their vehicle fleet. Other entities with significant vehicle should follow suit and pursue grants whenever possible to increase emission-reducing vehicles (including electric and CNG).

- The MPO should incentivize project sponsors/managers requestors for funding from them to include sufficient funds for green infrastructure (creating natural contours for water flow and ground absorption, planting trees that reduce air pollution and heat by providing shade) landscaping on existing road systems (highways and public roads) to reduce concrete surfaces.
- The MPO must verify that projects meet the eligibility criteria for individual funding categories (e.g., [Congestion Mitigation and Air Quality Improvement Program](#)) but not prescribe specific design elements for projects.
- El Paso Electric should consider implementing solar array installations in areas adjacent to byways and highways that are close enough to existing energy generation infrastructure to provide shade cover over pedestrian/bicycle paths and help combat urban heat island effect.
- Municipalities, the MPO, and non-profits should coordinate to implement comprehensive community education programs that provide resources and inform the public on how greener transportation options are a more sustainable way of living.
- Businesses and governments should continue to enhance and expand their customer service via online and phone-based applications that reduce consumers requirement to travel to resolve their needs or issues.
- The City and County of El Paso and TXDOT should all collaborate for a cycling infrastructure that could make El Paso a safer bike-friendly city.
 - Support and grow the regional transit network being developed by El Paso County.
 - Continue to support existing bike-share programs like the Camino Real Regional Mobility Authority-sponsored bike share and explore ways to expand and market to the larger community.

Mid-term

- Government entities – with the cooperation from railroad companies – should intervene to reduce or remove rail hubs where trucks pick up cargo in Downtown and in the Mission Valley and redirect commercial truck traffic to the outskirts.
 - Moving freight rail terminals out of downtown should address air quality and truck congestion. Specifically, the BNSF Railway yard in the Chihuahuita neighborhood is a problem because trucks must go through local streets to get to it. The [freight rail relocation study completed in 2016](#) proposed a bypass to the west of Ciudad Juárez and Santa Teresa that would move the BNSF Chihuahuita rail yard out close to the existing Union Pacific intermodal terminal in Santa Teresa. Though the project did not move forward beyond the feasibility study, this concept would potentially get vehicles off the road, eliminate rail-vehicles conflicts (safety) in downtown, would keep trucks outside of downtown, and would also open the door to use the existing rail bridges to implement passenger service to Ciudad Juárez.
- The City, the County, TXDOT, and MPO should improve public transit that is efficient and easily accessible such as allocating street-level mass transit options by dedicated corridors and lanes for bus rapid transit (BRT).
- Congress must continue to work with the Department of Defense to ensure the department enacts its climate adaptation plan released in September 2021 to install microgrids in every

installation like Ft. Bliss by 2030 and electrify all light-duty non-tactical vehicle fleets by 2027.

Long-term

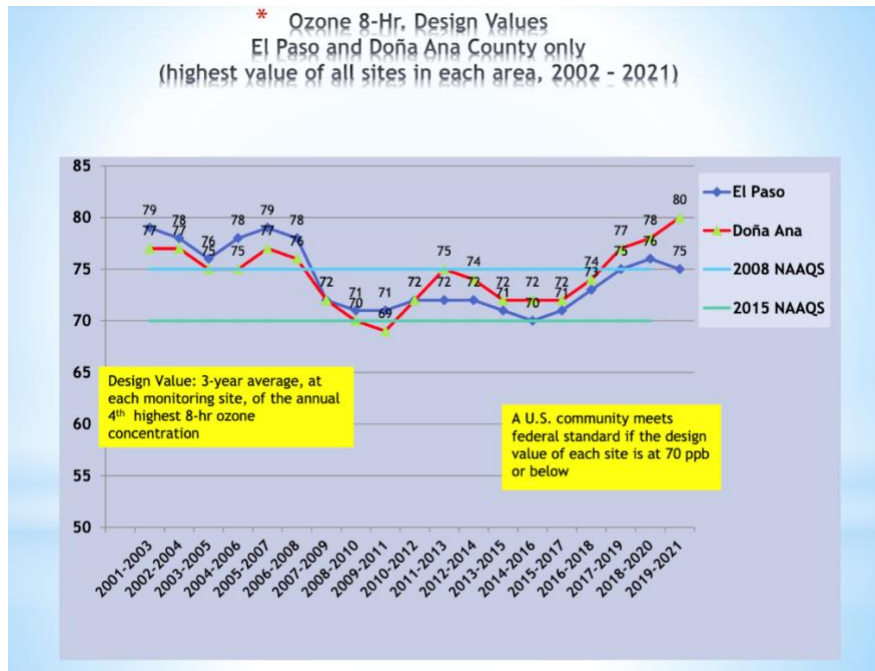
- General Services Administration (GSA) and TXDOT must incorporate funding for more “locals only” international bridges and/or lanes to move personal vehicles, transit connections, and cyclists and pedestrians in their design plans. One specific suggestion would be to include a light rail or trolley across the Paso del Norte Bridge.
 - GSA and TXDOT should work with Mexican counterparts and the private sector to ensure that future structural investments in our bridges incentivize trucks to drive to Santa Teresa and Tornillo ports of entry to reduce commercial truck traffic in the middle the city.
- The City should continue pursuing federal funding to expand pedestrian and multi-modal transportation access at city-owned bridges.
- During the feasibility study process at BOTA, TXDOT and the GSA should seek to implement pedestrian and multi-modal transportation options at international bridges that are tailored to the needs of residents and make for more accessible and safer ways to pick up pedestrians near the bridge.

3. Air Quality

In 2021, El Paso County was ruled a “marginal” nonattainment area for ground-level ozone by the Environmental Protection Agency (EPA) based on air quality data showing that the El Paso area is experiencing unsafe levels of ozone pollution – that is, ozone levels exceeding the national ambient air quality standards (NAAQS) of 70 parts per billion. The EPA determined El Paso County is experiencing unsafe levels of ozone pollution and must reduce its contribution to make sure that we do not fall further into nonattainment. Most recently, a DC Circuit Court ruled to overturn the nonattainment designation for El Paso, and as of today, El Paso is in attainment status. Although the DC Circuit Court overturned the nonattainment designation, El Paso experienced a weighted average of twelve high ozone days per year in 2020 alone and had a total of 126 elevated air pollution days, the second-most in Texas. High ozone levels negatively impact the health and quality of life of El Paso residents. Individuals exposed to ozone are at higher risk of suffering respiratory problems, such as asthma attacks, shortness of breath, and respiratory infections, as well as cardiovascular problems such as heart attacks, strokes, and congestive heart failure. In its 2020 State of the Air Report, the American Lung Association ranked El Paso-Las Cruces at number thirteen on a list of the most ozone-polluted metropolitan areas in the United States, worse than New York, Chicago, and Dallas-Fort Worth.

It is important to note that the problems of ozone pollution and the climate crisis are not the same, but they are closely related. Both carbon dioxide and nitrogen oxides (NOx) are a byproduct of fossil fuel combustion. Volatile organic compounds (VOCs) and methane are both released in the production, processing, and transport of oil and gas. Thus, many of the control strategies that will reduce ozone pollution will also help us address the climate crisis.

Figure 4



Source: [EPA](#)

Because El Paso shares an air basin with our neighbors in New Mexico and Chihuahua, regional pollution sources contribute to El Paso’s ozone problem. To illustrate, the graph above shows just how similar ozone-polluting trends between El Paso and Doña Ana counties are, with both failing to meet NAAQS for ozone pollution most years since 2002. Based on this data, it can be determined that the El Paso area experiences unsafe levels of ozone, i.e., levels of excess in 70 parts per billion (ppb).

Overall, El Paso is responsible for about 32,000 tons of ozone-forming pollution each year. Neighboring areas of New Mexico emit another 17,000 tons of ozone-precursor pollution. Ciudad Juárez emits 73,000 tons of pollution each year. However, modeling shows that Texas bears more responsibility for the local, El Paso-specific, ozone problem than Ciudad Juárez. About 9 to 12% of ozone reaching the El Paso area can be attributable to a source in Texas (whether in El Paso or in the Permian Basin), compared to 8 to 10% that is attributable to north-central Mexico.

Reducing ozone pollution in our air basin will require concerted multilateral collaboration among all regional and international partners. However, GHG emissions within El Paso County are certainly a meaningful contributor to regional ozone levels. Wherever possible, we should strive to implement technologically feasible, cost-effective emission controls for local sources to improve local air quality and help us address the climate crisis (by measuring and reducing GHGs that are emitted alongside ozone precursors).

As shown in Figure 5, within El Paso County, cars and trucks are the biggest contributor to regional ozone levels. Accordingly, reducing transportation emissions is an important strategy for tackling the ozone problem. In addition, Figure 6 illustrates, local industrial sources - including Marathon Refinery and El Paso Electric's Newman and Montana Vista plants in Texas and Rio Grande Gas plant in New Mexico – and smaller businesses such as gas stations and dry cleaners- are significant emission contributors. Creating binding state and federal regulations to lower their emissions must be part of any strategy to improve air quality.

Figure 5

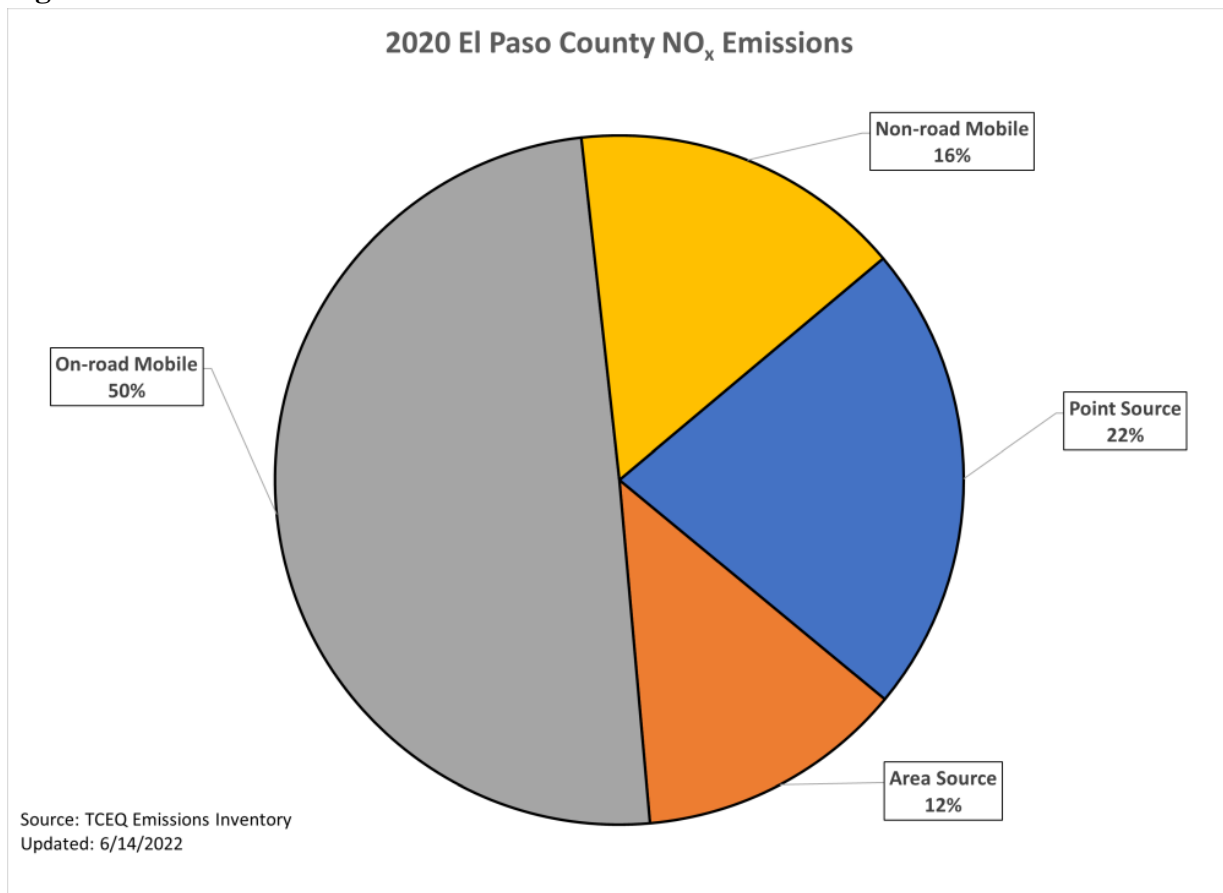
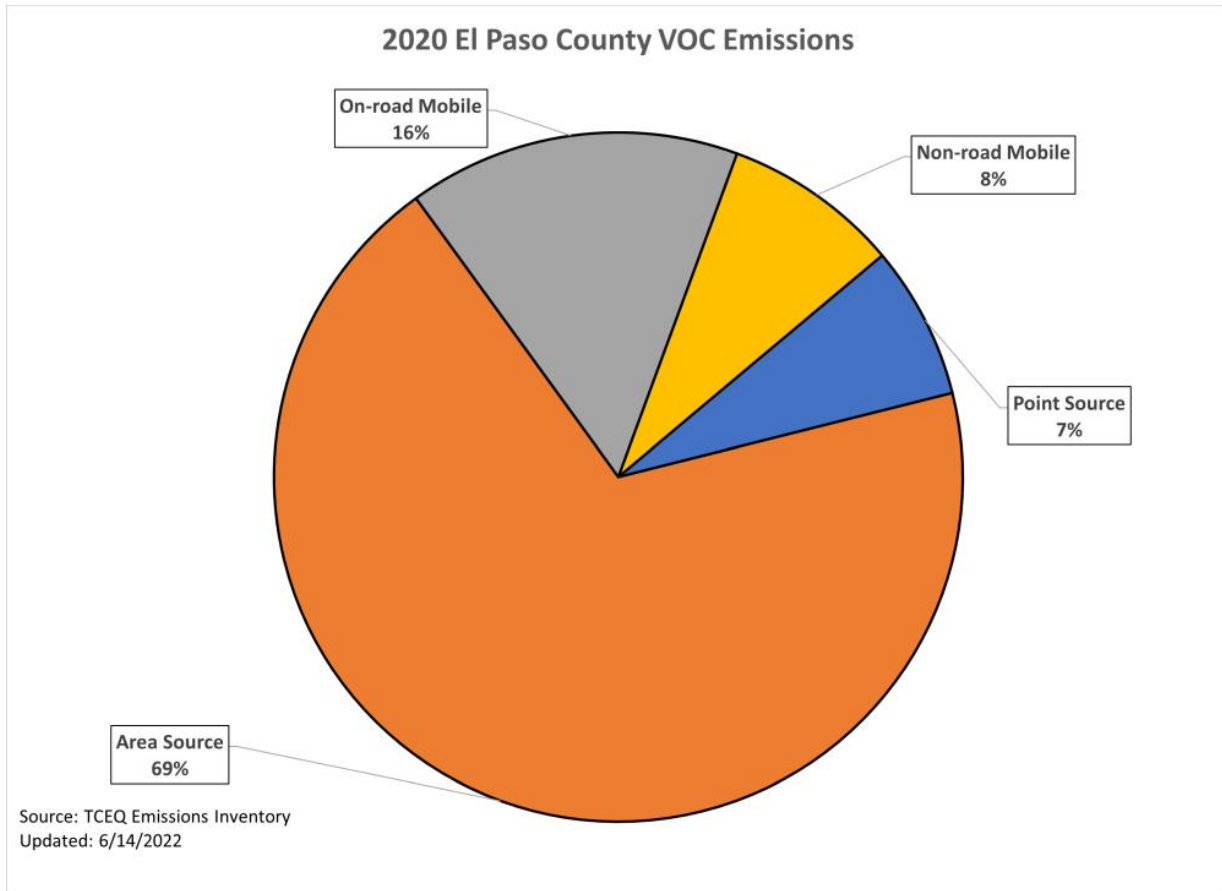


Figure 6



Furthermore, it is important to distinguish that the problems of ozone and the climate crisis are closely related, but not the same. Ozone pollution is not emitted directly from human activities, but rather it is produced when nitrogen oxides (NOx) and volatile organic compounds (VOCs) react in the presence of sunlight. Ozone is a direct threat to human health contributing to asthma attacks, heart attacks, and premature death.

This table draws from EPA's database to show emissions from local industrial sources. According to the EPA's 2017 National Emissions Inventory, the largest NOx emitters in El Paso County are as follows:

Figure 7

Facility	Facility Type	Tons per Year (2017)
Newman Station	Gas-Fired Power Plant	1997.14
Marathon El Paso Refinery	Petroleum Refinery	421.58
El Paso International	Airport	344.52
El Paso Compressor Station	Compressor Station	292.20
Vinton Steel	Steel Mill	176.01

The largest point sources of VOCs are:

Figure 8

Facility	Facility Type	Tons per Year (2017)
Marathon El Paso Refinery	Petroleum Refinery	446.53
El Paso International	Airport	102.40
Newman Station	Gas-Fired Power Plant	95.60
Fort Bliss Army Installation	Military Base	49.88
Vinton Steel	Steel Mill	24.78

Updated information appears in the emission inventory in TCEQ's proposed state [implementation plan revision](#). The sources identified remain the largest industrial sources in El Paso.

Additionally, Figure 10 shows the 100 largest electric power producers in the United States. By national comparison, El Paso Electric ranks 68 out of the top 100 emitters in the United States according to the 2021 M.J. Bradley report: [Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States](#).

Figure 9

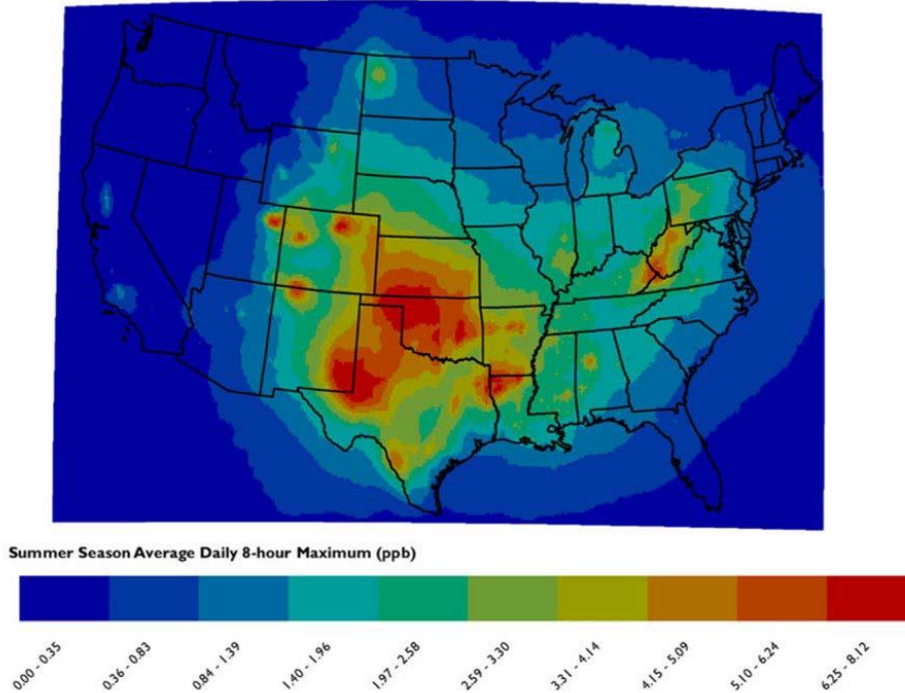
RANK	PRODUCER NAME	2019 MWh (million)	RANK	PRODUCER NAME	2019 MWh (million)	RANK	PRODUCER NAME	2019 MWh (million)	RANK	PRODUCER NAME	2019 MWh (million)
1	Duke	213.6	26	WEC Energy Group	30.8	51	Portland General Electric	15.7	76	Austin Energy	9.3
2	NextEra Energy	204.4	27	LS Power	30.3	52	IDACORP	15.3	77	Energy Northwest	9.1
3	Exelon	184.0	28	EDF	30.3	53	Brookfield	14.3	78	Arkansas Electric Coop	9.0
4	Southern	182.9	29	Invenergy	28.2	54	Enel	13.8	79	Omaha Public Power Distr	9.0
5	Vistra Energy	177.3	30	New York Power Authority	27.9	55	Edison International	13.6	80	JEA	9.0
6	Tennessee Valley Authority	140.3	31	Associated Electric Coop	26.2	56	Puget Holdings	13.4	81	Buckeye Power	8.8
7	Entergy	128.0	32	Pinnacle West	25.9	57	Lower Colorado River Authority	13.3	82	Algonquin Power	8.6
8	Dominion	118.3	33	Oglethorpe	25.4	58	Tenaska	13.0	83	Argo Infrastructure Partners	8.6
9	Berkshire Hathaway Energy	115.9	34	Global Infrastructure Partners	25.4	59	The Carlyle Group	12.7	84	Great River Energy	8.5
10	Energy Capital Partners	104.5	35	CPS Energy	25.2	60	Exxon Mobil	12.2	85	PUD No 2 of Grant County	8.2
11	AEP	92.7	36	Panda Power Funds	23.9	61	Municipal Elec. Auth. of GA	12.1	86	International Paper	8.0
12	Xcel	77.2	37	CMS Energy	23.8	62	RWE Group	11.9	87	TransAlta	7.7
13	US Corps of Engineers	74.2	38	Emera	23.1	63	Fortis	11.2	88	ALLETE	7.7
14	FirstEnergy	61.9	39	Alliant Energy	23.0	64	Seminole Electric Coop	10.8	89	PUD No 1 of Chelan County	7.6
15	PSEG	56.9	40	CLECO	21.3	65	Occidental	10.7	90	Intermountain Power Agency	7.6
16	NRG	46.5	41	Avangrid	20.8	66	Caitness Energy	10.6	91	Avista	7.4
17	DTE Energy	41.0	42	Basin Electric Power Coop	19.1	67	NISource	10.3	92	NC Public Power	7.3
18	ArcLight Capital	38.3	43	Starwood Energy	19.1	68	El Paso Electric	10.2	93	NextEra Energy Partners	7.3
19	Riverstone	37.8	44	AES	18.3	69	OMERS	10.1	94	Capital Power	7.1
20	Evergy	37.6	45	Santee Cooper	17.7	70	PNM Resources	10.1	95	Old Dominion Electric Coop	7.0
21	US Bureau of Reclamation	36.5	46	NE Public Power District	17.0	71	Tri-State	10.0	96	Sacramento Municipal Utility	6.8
22	Ameren	35.4	47	The Blackstone Group	16.9	72	Dow Chemical	9.8	97	North Carolina EMC	6.8
23	PPL	34.1	48	Ares	16.5	73	John Hancock	9.7	98	Cooperative Energy	6.7
24	PG&E	33.8	49	OGE	16.0	74	Los Angeles City	9.6	99	Itochu	6.7
25	Salt River Project	32.1	50	EDP	15.9	75	ConEdison	9.4	100	East Kentucky Power Coop	6.7

Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States
 Data tables and maps at: www.mjbradley.com
 July 2021

El Paso is also impacted by long-range pollution transported from the Permian Basin region. In recent years, explosive oil-and-gas development in the Permian Basin has caused ozone exceedances across southern New Mexico and west Texas, with even remote areas such as the Guadalupe Mountains National Park reporting ozone exceedances in recent years. Analysis by the Sierra Club showed that on most of the high ozone days in El Paso between 2018 and 2020, air traveled over the Permian Basin before reaching the El Paso area. Analysis from the New Mexico Environment Department showed about 1.5 parts per billion of ozone reaching the El Paso area could be linked to oil and gas production activities in the Permian Basin. The figure below is from a recent academic study that shows an even larger contribution could be expected:

Figure 10

Summer Season Average Daily 8-Hour Maximum Ozone



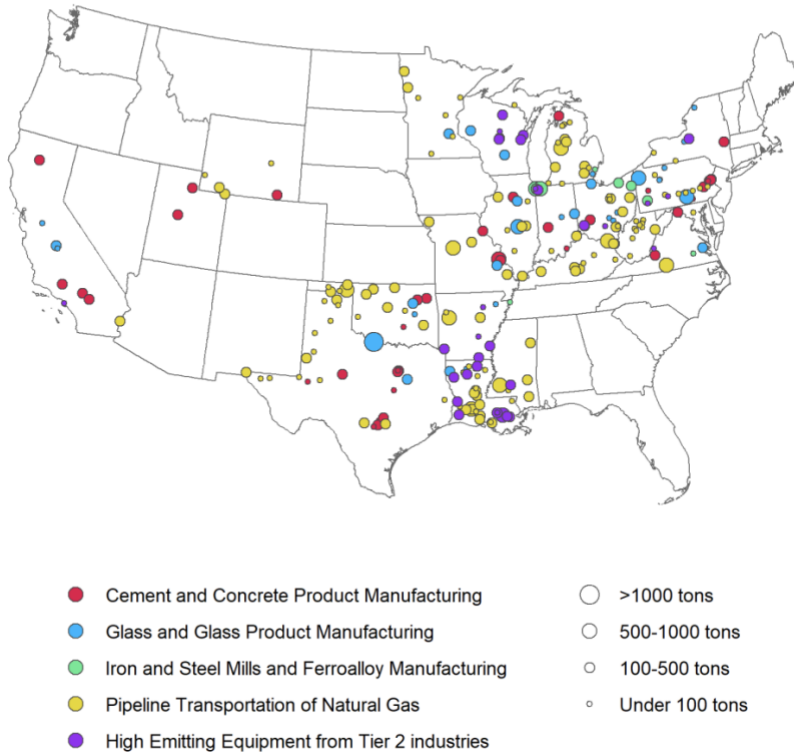
Source: Neal Fann et al., *Assessing Human Health PM_{2.5} and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in 2025*, 52 *Env't Sci. & Tech.* 8095 at 8099, [Figure 1 \(2018\)](#)

Accordingly, encouraging state and federal agencies to reduce pollution from the Permian Basin is an important part of any strategy for improving local air quality. Oil-and-gas activities that emit methane in the Permian Basin also contribute to declining ozone levels in our region, and we should support federal regulations that reduce emissions from this sector. Since ozone precursors are typically emitted alongside greenhouse gases like methane, taking action to reduce ozone pollution will also reduce our region's contribution to the climate crisis.

Community advocates and lawyers sent a [letter](#) encouraging the EPA to move forward with designating the Permian Basin as a nonattainment area for ozone, based on elevated ozone levels in Carlsbad and the national park. The EPA announced that it is conducting helicopter [flyovers of the Permian Basin region in New Mexico and Texas](#) to survey oil and gas operations and identify large emitters of methane. This is an increased effort to identify which facilities are responsible for the bulk of these emissions and help understand where reductions are most needed.

Figure 11

Non-EGU Ozone Season NOx Reductions



Source: EPA

Recommended Actions

Short-term

- The EPA should require the State of Texas to move forward with developing a plan to reduce ozone-forming pollution that is negatively impacting El Paso.
- Local governments should take advantage of federal funding for voluntary pollution reduction measures. For example, the Federal Aviation Administration’s [Voluntary Airport Low Emissions Program](#) provides funding for projects to reduce emissions from airports in nonattainment areas.
- Encouraging EPA to move forward with appropriate, science-based nonattainment designations for areas upwind of El Paso that contribute to our ozone problems, including the Permian Basin.

- EPA should require that the Texas Commission on Environmental Quality (TCEQ) place ozone monitors (where there are currently none) in the Permian Basin, especially in the Midland-Odessa area, to assist regulators in developing more effective strategies to reduce ozone pollution affecting El Paso.
- EPA should install non-regulatory pollution monitors in fence line communities, otherwise known as “hot spots,” to ensure proper monitoring and learn which pollutants they are being exposed to. This can be done as part of TCEQ’s Air Monitoring Network Plan. Community groups have already installed Purple Air monitors at schools in the Chamizal, and the readings are posted online. <https://map.purpleair.com/>
- The federal government should implement navigators to help individuals and businesses find resources for emission-reducing opportunities like grant programs that may be going unused.
- Federal regulators should make rules that reduce emissions of ozone-precursor pollution from the oil-and-gas sector. Examples include EPA’s proposed emission standards under section 111 of the Clean Air Act for oil and gas industry, and EPA’s rulemaking implementing the Clean Air Act’s “good neighbor” provision, which will include new emission standards for compressor engines used at natural gas pipelines and would reduce NOx pollution from pipeline compressor stations in the El Paso area.

Mid-term

- El Paso Electric (EPE) should continue accelerating the retirement schedule of fossil-fuel units. EPE has committed to retiring some of its most polluting units in the next few years. Accelerating the company’s transition to clean renewable energy is an important priority, given that EPE’s plants are some of the largest industrial sources of ozone-forming and GHG pollution in El Paso.
 - Over their transition period, EPE should add economic/financial parameters to maintain an environmental justice lens on impact and affordability. A recommendation would be to enforce an annual percentage limit on how much electric bills can go up to help manage length of time, activities, and financial impact on the community. EPE should also include a reliability analysis to know how this will affect the grid. The Public Utility Commission of Texas (PUCT) would oversee the redefinition of rates and City Council would intervene in rate cases whenever applicable.
- EPA should tighten performance standards for refineries, gas power plants, compressor engines, and other sources that contribute to ozone pollution in the El Paso area under section 111 of the Clean Air Act to ensure the use of the best system of emission reduction for these sources.

- It should be noted that while the recent ruling from the Supreme Court of the United States held that EPA could not use section 111(d) to require utilities to shift from coal plants to renewables, it did not affect EPA’s longstanding authority to regulate air pollution using more traditional systems for reducing emissions. However, considering this ruling, a recommendation for Congress would be to pass a law that would create a binding requirement on emission levels and performance standards.

4. Energy Sustainability

To adapt to our changing climate, we must achieve a meaningful and impactful reduction of GHG emissions on both the demand and supply sides of the energy sector. Increasing temperatures and longer summers will further exacerbate the need to upgrade building envelopes, a phrase commonly used to describe the interior and exterior features of a building that facilitate climate control like windows, doors, roof, floor, foundations, and insulation, to achieve the desired reduction in emissions associated with the building stock in our region. Residential and commercial sectors and the energy industry sector need to embrace this new paradigm.

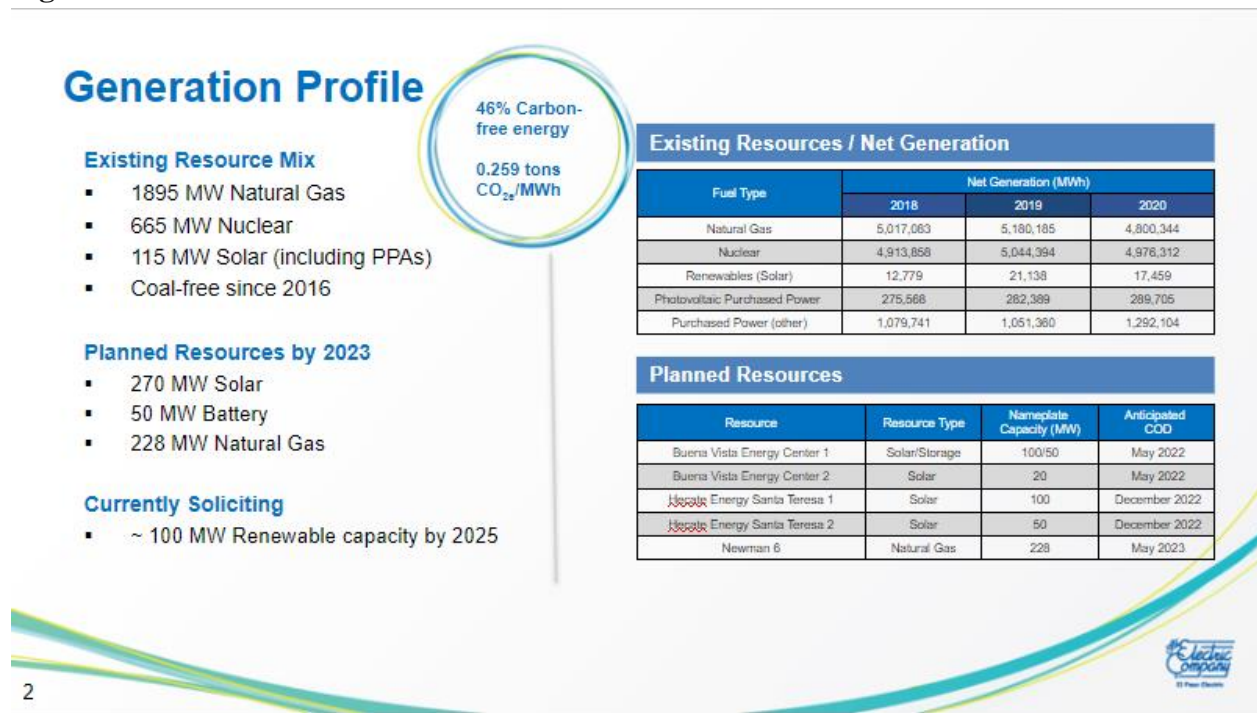
Figure 12

TOTAL NUMBER OF TRIPLE DIGITS BY MONTH BY YEAR						
YEAR	MAY	JUNE	JULY	AUG	SEP	TOTAL
2000	4	3	5	0	2	14
2001	2	6	7	1	0	16
2002	2	18	3	9	0	32
2003	0	2	13	5	0	20
2004	1	7	8	0	0	16
2005	5	13	18	0	0	36
2006	2	11	7	0	0	20
2007	0	7	6	3	0	16
2008	2	14	0	0	0	16
2009	0	1	16	4	0	21
2010	0	14	5	10	1	30
2011	0	21	12	16	1	50
2012	1	18	0	9	0	28
2013	0	18	6	2	0	26
2014	1	19	8	1	1	30
2015	0	4	5	8	1	18
2016	0	11	23	4	0	38
2017	0	16	6	0	1	23
2018	4	20	14	8	0	46
2019	0	8	20	19	0	47
2020	3	10	21	20	3	57
2021	0	17	1	2	0	20
2022	3	11	13	6	0	33
TOTAL	59	953	714	311	31	2068
	MAY	JUNE	JULY	AUG	SEP	TOTAL

Source: Chart showing annual triple-digit temperature days in El Paso created with data from Weather.com

The above data shows that in El Paso, the average number of triple-digit heat days (100F or above) are drastically increasing over time. In 2020, we had a record year with 57 days reaching 100F or more, and this summer alone, El Paso hit a new record of 56 consecutive days with triple digit temperatures. El Paso must harness and leverage its most accessible renewable resource: solar power. The total installed solar capacity in both rooftop and utility scale has almost doubled from 37 megawatts (MW) in 2017 to 70 MW in 2021. And as illustrated below, El Paso Electric (EPE) is poised to add 270 MW of solar energy to their generation profile by 2023. With 1,895 MW of natural gas capacity, the share of solar is still very low.

Figure 13



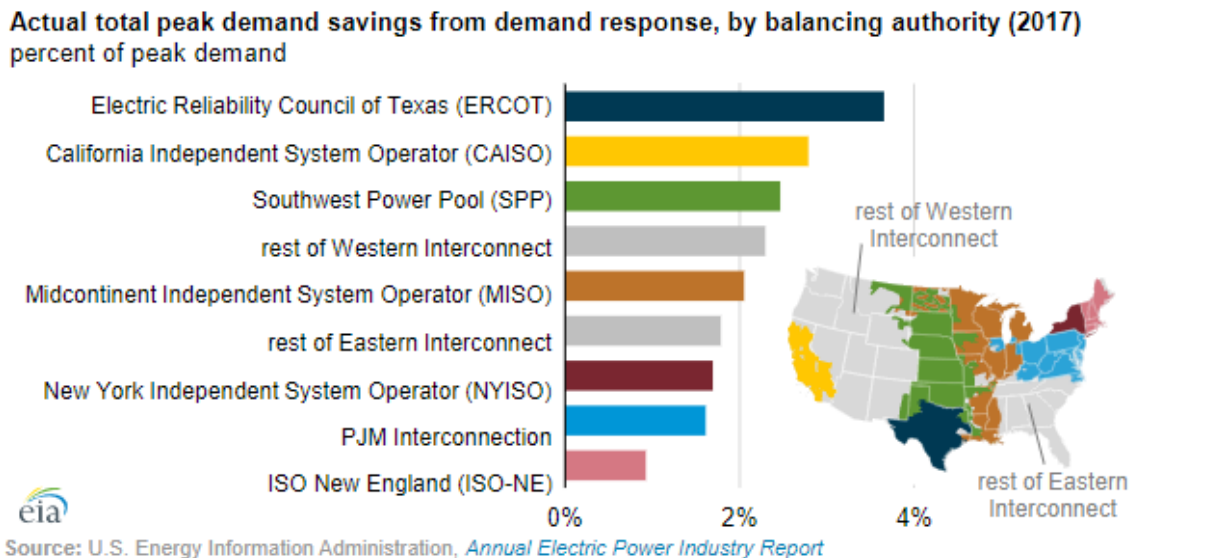
Source: EPE

Gas plants like Newman 6 will be transitioned out mainly by EPE installing more renewable energy sources and more solar generation at a larger scale on their own. But community and individual solar panels are also good ways to clean up the grid. Putting solar panels on a residence takes that home's consumption out of the regional peak demand on the electrical grid, so it helps to lower the utility's generation demand overall. To this end, EPE should continue pursuing its own community solar programs, but there needs to be state-level advocacy at the Public Utility Commission of Texas (PUCT) to allow communities to create community solar initiatives on their own. As El Paso Electric expands its solar power, it does have to increase its battery storage as well, in order to provide reliable power for industrial and residential consumers.

In the meantime, the City does have other means to increase solar incentives for residents. Just earlier this year, the City of El Paso [partnered with a nonprofit to help residents go solar](#) and create a co-op as a part of the implementation of the City’s strategic plan for their Regional Renewable Energy Advisory Council. This initiative will help El Pasoans access rooftop solar and save money.

On the other hand, energy efficiency and demand response programs must be aggressively pursued. Utilities implement demand-side management programs to help customers save energy and reduce peak demand. Energy efficiency programs offer customers incentives to increase efficiency and therefore, decrease overall electricity demand. According to an annual report from the U.S. Energy Information, these programs have a huge return on investment. The amount of incremental energy saved through energy efficiency programs increased from 26.5 million megawatt hours in 2014 to 29.9 million megawatt hours in 2017 and incremental spending on energy efficiency programs remained essentially flat. The graph below shows savings for all national grids across the board, including Western Interconnection, to which El Paso belongs.

Figure 14



Source: <https://www.eia.gov/todayinenergy/detail.php?id=38872>

As we chart a path forward toward sustainable energy transition, we must not lose sight of equity and environmental justice. A carbon neutral-powered future will require zero-emission energy, energy-efficient technologies, and energy performance-based building designs, all while understanding the anticipated cost for the ratepayer. Special consideration should be taken to address any potential negative and unintended consequences to the proposed climate actions, like

high costs and potential loss of jobs for LMI residents and small businesses. Incentives like education and training programs, developed in a comprehensive manner, will be key to mitigating any undesired consequences of the energy transition.

Before significant investments are made by the energy sector, an independent cost analysis and feasibility study should be conducted to help prioritize the largest profitability and efficiency for clean energy investments in the region. Project financiers should find innovative ways of financing projects and programs to further develop energy efficiency and renewable energy in all sectors, including grant programs, tax credits, public-private-partnerships. This will require all levels of government working with private entities. The goal of the following actions is to increase the equity and affordability of renewable energy and reduce the current cost of energy per capita.

Recommended Actions

Short-term

- Leverage federal and state funding to find the best return on investment that will get our region closer to renewables.
 - City and County governments could pursue federal and state funding to conduct a local cost analysis and feasibility study on investing in renewable energy like solar, wind, battery storage, electric transmission, and distribution line construction and upgrades to understand the anticipated cost for the customer (ratepayer).
 - The Department of Energy should continue to provide grants or other funding mechanisms to project seeding or incentives for innovative renewable energy technology and projects as they just did recently in the Inflation Reduction Act by extending the Solar Investment Tax Credit (ITC).
 - The Department of Education should continue to provide school districts the funding or option to implement renewable energy generation technology at the school level.
- Under current state law, only EPE is allowed to have community solar projects. To increase energy efficiency standards that will lower emissions in Texas and our region, State policymakers should advance [distributed generation](#) legislation and change regulations at the PUCT to allow community entities to sanction their own community solar projects. For example, if allowed, the City of El Paso could install panels in a city park and sell participation to the neighboring residents without requiring them to install solar panels on their own properties.
- The PUCT should eliminate solar energy minimum fee for solar installation and make permanent energy generation incentives and rebates.

- Texas Commission on Environmental Quality (TCEQ) should implement penalties or enforce fines for exceeding the maximum amount of pollution that is defined in permits and measure and observe events where emissions exceed acceptable exposure limits.

Mid-term

- Develop and implement a comprehensive plan for the electrification of houses, existing and new buildings, and transportation.
 - EPE should conduct an economic cost/benefit analysis around the electrification of existing and new buildings and transportation to determine cost affordability for implementation strategies to lower emissions.
 - Local municipalities and the State should change laws and regulations to require or incentivize low emissions building standards, demand-side management, passive energy designs, and alternative fuels. These entities should implement incentive programs and enforce emission performance requirements to encourage home builders and contractors to retrofit existing construction and incorporate electrification in new construction.
 - Local governments should explore evaluating energy performance as one of the requirements or incentives for economic development policies in attracting new businesses to the region. This would require a lot of discussion and conversation with the private sector before adoption of restructuring policies to support this. But currently, incentives for attracting businesses focus on capital and job adding projects, but green incentive could also be built in. Local economic development policy already creates a structure that is based on size of investment or industry type and how much incentive they can receive from local government. This can be just another criterion. Incentives should be put in place for every non-residential use, including small businesses and industries with large capital investments alike.
 - State legislators should advocate for state legislation that allows municipalities to encourage or even require most, or all, localized energy to be produced by renewable sources only.
 - Municipalities should make policy and code amendments to promote efficient energy consumption and demand reduction for both commercial and residential consumption. They should also develop energy benchmarking policies and energy performance standards for new construction permits for commercial and multi-family residential buildings.
- Municipalities should fund and review new and existing utility energy efficiency programs (buy back gas appliances and give rebates for purchasing electric appliances) to incentivize homeowners to electrify their homes with an interest in value to the ratepayer and how many residents currently participate. Energy efficiency incentives for electrical utilities

have not increased in more than a decade, and more incentives are needed, especially with carved out percentages for LMI residents.

- Municipalities with the cooperation of the private sector should create incentives that attract green energy businesses to build a robust green job industry in the region like leveraging the Infrastructure Investment and Jobs Act, in particular funds allocated for advanced manufacturing.
 - Higher learning institutions and Workforce Solutions Borderplex should create and expand community programs like internships and training programs to provide extracurricular activities that prepare our local youth for innovation professions in the local green job industry.

Long-term

- The [Strategic Petroleum Reserve](#), managed under the Office of Cybersecurity, Energy Security, and Emergency Response within the Department of Energy, was designed to be available for energy emergencies. A good way to improve its effectiveness would be to invest a certain amount of the proceeds into projects that reduce the demand on petroleum resources. The federal government should designate a small portion of the sales – ten million barrels equal to 2% of the SPR and would generate almost one billion dollars per year – to fund energy efficiency and building envelope programs in LMI areas that would otherwise not be able to afford to upgrade their building structures. This investment would continue to generate energy savings each year, paying for itself many times over.
- The EPA could push the State to comply with its federal guidelines for carbon emissions from the private sector by implementing a state-wide carbon tax on energy companies thereby incentivizing them to adopt greener energy sources.

5. Water Resiliency and Adaptation

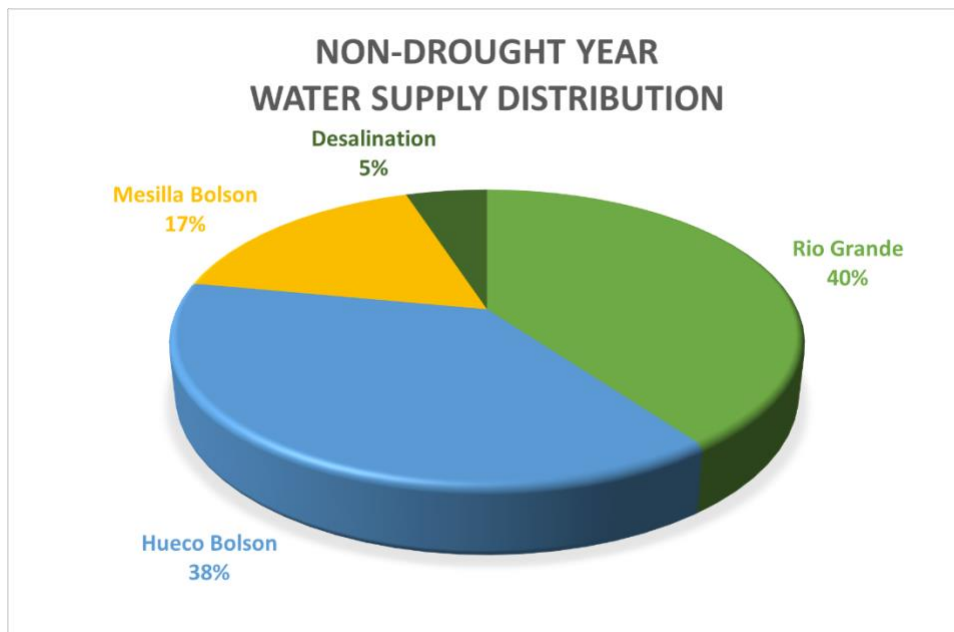
Access to water is a fundamental human right that should not be impeded. However, climate change could impact the El Paso region's water supply via desertification, a process that reduces a region's biological productivity; requiring a higher rate of resource importation to produce the same level of productivity. This desertification is observable in increasingly irregular precipitation trends, such as extreme drought and heavy rainfall episodes. While our region still receives relatively the same annual rainfall of 8-9 inches, more of it is in the form of flashflood - causing storms that result in the destruction of private and public property, and in some cases, the loss of human life. Severe storms are common enough that the National Oceanic and Atmospheric Administration (NOAA) had to revise its definition of the 100-year storm for the El Paso region: shortening the recurrence timeline for major storm events from 100 years to every couple of years. Additionally, with increased residential and commercial development over the years, impermeable surfaces have increased: exacerbating runoff.

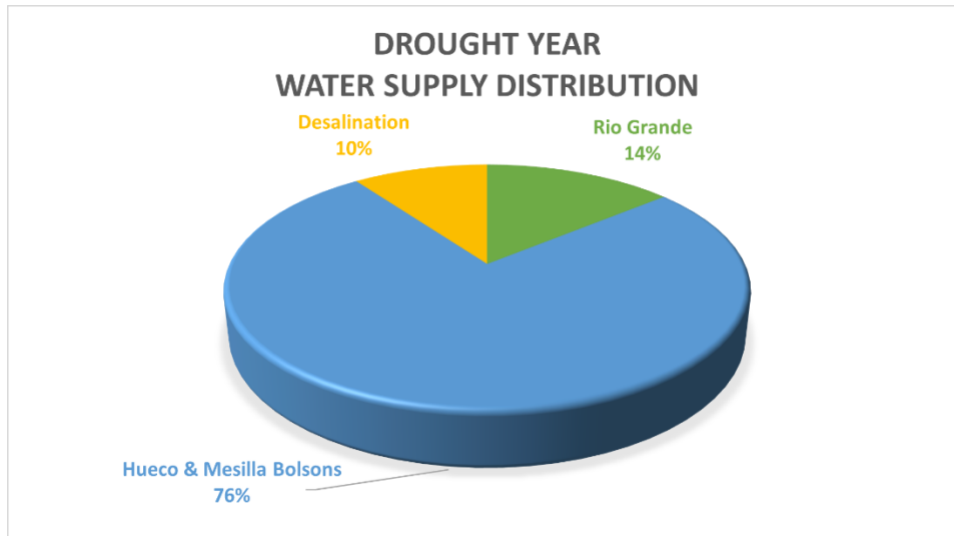
Intensified droughts will lead to an increased water demand during the summer months, which may lead to economic losses and increased pressures on the existing water supply.

Elephant Butte, the storage reservoir for the Rio Grande, has remained consistently low with a volume of approximately 500,000 acre-feet during irrigation season; compared to years of plenty: ~2,000,000 acre-feet. This has resulted in shortened river-water harvesting periods. A decline in natural, regenerative surface-water supplies, like Elephant Butte, will lead to an increased reliance on underground aquifers and alternative water sources.

The pie chart below illustrates the drought year supplies (expressed in acre- feet/year), utilized by El Paso Water in a typical year. Surface water from the Rio Grande can vary significantly during drought, but the majority of the current water supply comes from two major aquifers, the Hueco and Mesilla Bolsons.

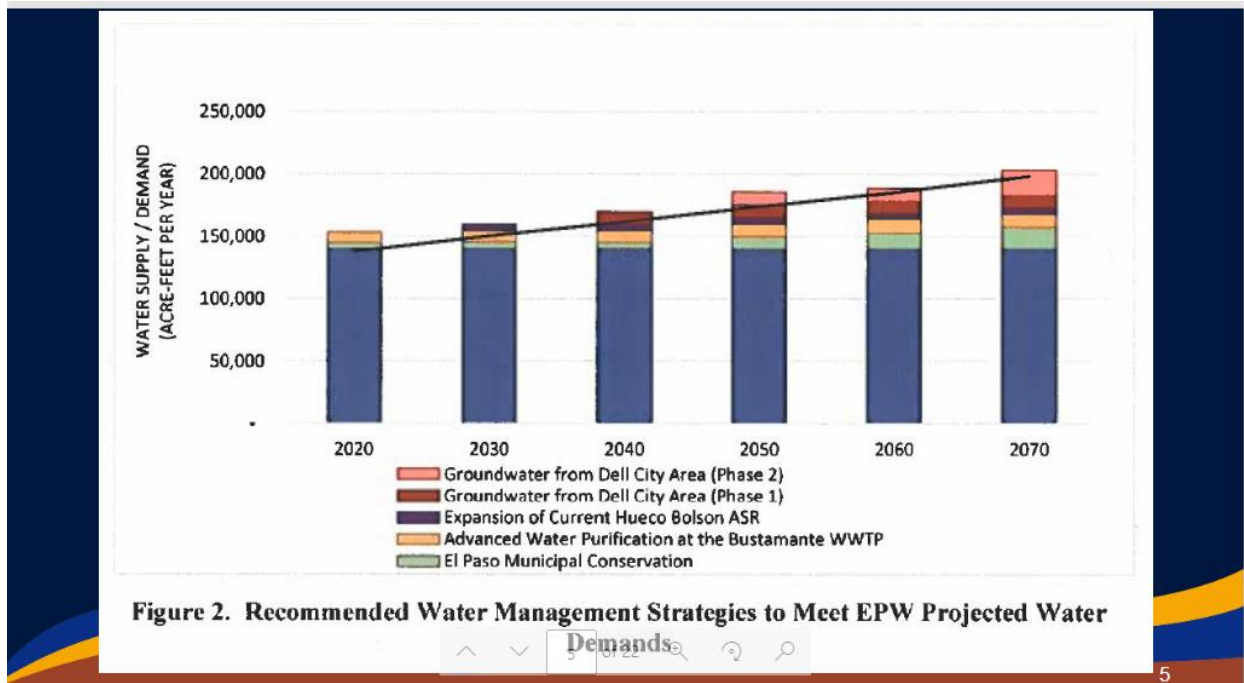
Figures 15 & 16





El Paso Water projects a nearly 60% increase in the population it will serve over the next 50 years. A direct increase in water supply is unsustainable as population grows, thus conservation methods must be employed and incentivized, while El Paso Water works to diversify its water sources.

Figure 17



Source: El Paso Water

The treatment and movement of water and wastewater are energy-intensive processes, therefore if El Paso Water can utilize more clean, renewable energy, either through its own independent solar sources or in partnership with El Paso Electric, there will be a significant benefit in emissions reduction for our community.

Currently, various agencies and organizations in the El Paso region have fostered and implemented initiatives that aim to create a greener environment by addressing the problems of water systems access, energy usage, flooding, and rising costs. As with Land Use development, whenever possible, green infrastructure should be implemented to create systems that mimic and promote natural water function . However, the problem at hand merits the need for accelerated efforts by all relevant stakeholders within the El Paso region to focus on expansive and innovative solutions to address regional water needs and impacts before the global climate crisis reaches critical mass.

Recommended Actions

Short-term

- El Paso Water (EPW), Municipal and County governments should expand public education of ongoing and future water resiliency and adaptation projects by doing outreach at schools, universities, and public media campaigns.
- EPW should establish water recapture programs for its consumers (for lawn and plant watering) and provide incentives and training for consumers to participate in such programs. Smaller communities outside of EPW’s service area may also be eligible to apply for USDA funding for these initiatives. The City of San Elizario recently implemented a water recapture program with USDA funding. Given our limited annual rainfall, the overall impact of these programs is capped.
- EPW, Municipal and County governments should foster existing relationships and expand collaboration with local higher education systems by finding other departments or staff/faculty that could further their efforts to implement sustainable water technologies. Strengthening these partnerships will make entities more competitive for federal dollars to fund innovative projects. Organizations to include:
 - University of Texas at El Paso
 - New Mexico State University
 - Texas A&M AgriLife Center at El Paso
 - UT Houston School of Public Health – El Paso Campus
 - El Paso Community College

Mid-term

- Expansion of water reclamation to preserve water runoff, especially in vulnerable areas with limited or non-existent infrastructure like colonias or unincorporated areas. EPW and El Paso County should expand strategic acquisition or retrofitting of existing facilities to create large, community-wide, green infrastructure investments that effectively manage and capture stormwater for aquifer recharge. To fund these types of projects, entities should take advantage of grant programs that place a priority on green infrastructure, like the [Green Project Reserve](#) from the Texas Water Development Board, and keep them in mind for future federal appropriations requests.
- EPW should reduce their reliance on EPE by expanding their renewable energy portfolio, to include solar and hydroelectric power.
 - EPW should develop a long-term plan to be fully sustainable by using renewable energy sources for standard water and wastewater operations while making use of as much reuse water as possible (i.e., expansion of existing water reclamation system, creation of solar farms and broad implementation of hydroelectric power within the next five to twenty years). Technological advances in battery storage will be needed to provide reliable energy 24/7 if a full transition to renewable energy sources is to be made.

Long-term

- EPW and Public Service Board (PSB) should expand water conservation programs to transition from our current per capita water usage (125 gallons per capita per day) to a goal of 118 gallons per capita per day by 2040; to include: incentives for turf/xeriscaping and native plant usage at homes (as opposed to traditional, water-hungry yards), and helping customers transition from evaporative cooling to refrigerated cooling systems. Overflowing and leaking wastewater/sewage into groundwater supplies is making it harder and more expensive to treat water in rural areas. The County should continue to build baseline infrastructure in outlying rural/lower-income communities focusing on neighborhoods that are densely populated and are near existing development if the cost for connection is reasonable to help reduce sewage in groundwater systems.
- County, state, and federal governmental entities should work together to expand agricultural incentives to further promote innovative, water-conservation farming techniques.
 - Local research entities like the Texas A&M AgriLife Center at El Paso should continue new programs and expand existing ones to help agricultural producers in our region take advantage of such incentives.

V. Conclusion & Next Steps

The recommendations outlined in this framework are only the beginning of a long journey to address the impacts of climate change in the Paso Del Norte region. Undoubtedly, there are many environmental issues that continue to harm our livelihood such as chemicals and toxins, plastic pollution, and loss of biodiversity. This climate action framework is not meant to be exhaustive but to highlight the issues that are most impactful, and in some cases, most unique to our community when it comes to climate.

One additional issue we wanted to highlight but didn't fall under one of our focus sectors is food waste. A huge component of the climate crisis is food waste, which is prevalent in schools. Achieving zero-food waste at schools should be a goal. Additionally, there are several initiatives and resources at the federal level that could tie incentives to help move school districts towards being greener and more sustainable. The Department of Education has offers [Green Ribbon School](#) awards to grade schools that achieve a certain level of sustainability. This program could give grade schools something to strive towards and match with federal accountability. The [EPA food recovery challenge](#) is another award that could help. Another method could be for schools to implement voluntary snack programs to help get leftover food to where it is needed most on campus.

Additionally, it should be noted that the state legislature has tried introducing its own climate change bills: the [Texas Climate Action Act](#) and an act to create a [Texas Climate Change Mitigation and Adaptation Commission](#) to study and address the impacts of climate change in the state. Both bills were referred to committee, and neither bill got put on the calendar in the last session.

It will take a concerted, multi-level and community-led effort to mitigate this crisis. This is a call to action to all people who call El Paso home to be better stewards of our natural landscape and resources and create an environment that is sustainable for future generations. Legislators and regulators at the local, state, and federal levels must create rules and policies that enforce the highest protections of our environment. But it is equally important for community members to become informed, advocate, and demand accountability from those who are in positions of power and decision-making to enact real change.

While the strategies provided in this framework are meant merely as suggestions, it will be the mission of the CCAC to push for equitable and just climate action in our region. The members of the CCAC will continue working collaboratively to ensure that local governments respond to the need for a regional climate action plan and that the stakeholders identified in this framework move forward with the implementation of the recommended actions.

VI. Appendix

Key Federal Programs & Grant Opportunities

The office of Congresswoman Veronica Escobar continues to actively encourage appropriate local entities to apply for federal grant opportunities that align with the committee's environmental goals for a more sustainable El Paso. The office can also provide letters of support upon request.

Bipartisan Infrastructure Law (BIL) provisions that improve grid resilience and reliability

- **[BIL Provision 40101 - Preventing Outages and Enhancing the Resilience of the Electric Grid / Hazard Hardening](#)** is a \$5 billion grant program to strengthen and modernize America's power grid against wildfires, extreme weather, and other natural disasters exacerbated by the climate crisis.
- **[BIL Provision 40107 - Deployment of technologies to enhance grid flexibility \(Smart Grid Grants\)](#)** expands the Smart Grid Grant program to include a broader suite of grid enhancing technologies that will increase the capacity of the existing transmission system; prevent faults that may lead to wildfires or other system disturbances; integrate ever increasing renewable resources; and deploy technologies that are better able monitor and analyze the impact of transportation and building electrification on the grid.
- **[BIL Provision 40323 - Civil Nuclear Credit Program \(CNC\)](#)** will oversee a \$6 billion investment to prevent premature retirement of existing zero-carbon nuclear plants.
- **[BIL Provision 40331 - Hydroelectric production incentives \(EPAAct 2005 section 242\)](#)** provides \$125 million in incentive payments to qualified hydroelectric facilities for electricity generated and sold, with an emphasis on communities with inadequate electric service.
- **[BIL Provisions 40332 - Hydroelectric efficiency Improvement Incentives \(EPAAct 2005 section 243\)](#)** provides a total of \$75 million in incentive payments to owners or operators of existing hydroelectric facilities who may apply for funding to make capital improvements that can increase efficiency by at least 3%.
- **[BIL Provision 40333 - Maintaining and enhancing hydroelectricity incentives \(EPAAct 2005 section 247\)](#)** provides \$553.6 million in incentive payments to enhance existing hydropower facilities through capital improvements directly related to three main areas: grid resiliency, dam safety, and environmental improvements.

This legislation also provides Federal backstop siting authority for interstate transmission lines, which will increase access to new renewable energy generation. The legislation created the Grid Deployment Office, which was established in August 2022 to provide electricity to everyone, everywhere by maintaining and investing in critical generation facilities to ensure resource

adequacy and improving and expanding transmission and distribution systems. Moreover, the BIL includes significant investments in energy efficiency, which will help reduce peak electricity loads that stress the grid. These investments include renewing the Energy Efficiency and Conservation Block Grant Program (\$550 million), funding an energy efficiency revolving loan fund within the State Energy Program (\$250 million), funding for DOE to support the implementation of updated building energy codes (\$225 million), and enhanced funding for the Weatherization Assistance Program (\$3.5 billion). The BIL also requires states to consider promoting demand response to reduce electricity consumption during peak times. As described below, electric vehicles (EVs) can provide backup power to residences and a modernized electric grid; the BIL invests \$7.5 billion in EV charging.

The Inflation Reduction Act

The Inflation Reduction Act (IRA), which includes the largest climate and clean energy investment in U.S. history: roughly \$370 billion to reduce pollution, boost resilience across America, ensure environmental justice for vulnerable communities, address the national security threats posed by extreme weather, and meet our climate goals, while putting money back in the pockets of Americans with electric vehicles and appliances, clean water heaters and cooling systems, and other clean technologies. Please continue to monitor the [whitehouse.gov](https://www.whitehouse.gov) website as updates are ongoing.

The IRA will make it more affordable for Texas families to purchase energy-efficient appliances when they need to, make repairs around their homes, and save money on their utility bills each month, through:

- Rebates covering 50-100% of the cost of installing new electric appliances including super-efficient heat pumps, water heaters, clothes dryers, stoves, and ovens. In Texas, millions of low-and moderate-income households are eligible for rebates.
- Rebates for households to make repairs and improvements in single-family and multi-family homes to increase energy efficiency.
- Tax credits cover 30% of the costs to install solar panels and battery storage systems, make home improvements that reduce energy leakage, or upgrade heating and cooling equipment. No income limits apply. For solar, uptake projections estimate that over 1 million additional Texas households will install rooftop panels as a result.

- Tax credits covering 30% of the costs of community solar projects—owned by local businesses that sign up families to save on their electric bills—with additional bonus credits of 20% for projects at affordable housing properties and 10% for projects in low-income communities.
- Grants to help state and local governments adopt the latest building energy codes, which would save the average new homeowner in Texas 8.9% on their utility bills— \$179 annually.
- \$66.5 billion of investment in large-scale clean power generation and storage to Texas between now and 2030.

CHIPS and Science Act

The CHIPS & Science Act, which invests nearly \$55 billion for semiconductor chips, which are increasingly essential components of electric vehicles, building electrification, renewable energy, and electric transmission technologies and authorizes new and expanded climate and clean energy research at DOE, NSF, NASA and NOAA.

- The Biden-Harris Administration through the U.S. Department of Commerce’s National Institute of Standards and Technology has launched the first [CHIPS for America funding opportunity](#) for manufacturing incentives to restore U.S. leadership in semiconductor manufacturing, support good-paying jobs across the semiconductor supply chain, and advance U.S. economic and national security.

Other Funding Opportunities

Energy:

[Empowering Rural America \(New ERA\)](#)

Description: USDA is supporting efforts by rural electric co-ops to make energy efficiency improvements; to purchase, build, or deploy renewable energy, zero-emission systems, and carbon capture storage systems; or to purchase renewable energy. **Letter of Interest Application Window: July 31-August 31, 2023.**

[Green and Resilient Retrofit Program](#)

Description: HUD will provide grants and loans to HUD-assisted properties to improve energy or water efficiency or make the properties more resilient to climate impacts. **Rolling application submission process through May 2024.**

[Powering Affordable Clean Energy \(PACE\)](#)

Description: USDA is helping to finance large-scale solar, wind, geothermal, biomass, and hydropower projects and energy storage in rural America. **Letter of Interest Application Window: June 30- September 29, 2023.**

[Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants -](#)

Description: The program provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems or to make energy efficiency improvements. Agricultural producers may also apply for new energy efficient equipment and new system loans.

Water:

[Border Environment Infrastructure Fund \(BEIF/PDAP\)](#)

Description: This program offers grant financing exclusively for the implementation of high-priority municipal drinking water and wastewater infrastructure projects located within 100 kilometers of the U.S.-Mexico border.

The objective of the program is to make water infrastructure projects affordable by combining grant funds with loans and other forms of financing. It is designed to reduce project debt to a manageable level in cases where utility customers would face undue financial hardship and projects could not otherwise be implemented.

[Drinking Water State Revolving Fund Lead Service Lines Replacement](#)

Description: Drinking Water State Revolving Fund funding as described in the Drinking Water State Revolving Fund program, below, with eligible projects limited to lead service line replacement and associated activities related to identification, planning, design and removal. Under the Bipartisan Infrastructure Law, 49 percent of funds shall be eligible to be grants or 100 percent principal forgiveness loans.

[Drinking Water State Revolving Fund](#)

Description: The Drinking Water State Revolving Fund is a financial assistance program to help water systems and states to achieve the health protection objectives of the Safe Drinking Water Act. States are required to give priority for the use of Drinking Water State Revolving Fund project funds to: Address the most serious risks to human health, ensure compliance with the requirements

of the Safe Drinking Water Act, and assist systems most in need on a per household basis according to state affordability criteria. Not all drinking water compliance problems, however, can be solved through capital financing of infrastructure improvements. Under the Bipartisan Infrastructure Law, 49 percent of funds shall be eligible to be grants or 100 percent principal forgiveness loans.

Clean Water State Revolving Fund-Emerging Contaminants

Description: Clean Water State Revolving Fund funding as described in the Clean Water State Revolving Fund program, with eligible projects limited to those that address emerging contaminants, such as PFAS.

Air Quality:

Voluntary Airport Low Emissions Program (VALE)

Description: VALE improves airport air quality and provides air quality credits for future airport development. Created in 2004, VALE helps airport sponsors meet their state-related air quality responsibilities under the Clean Air Act. Through VALE, airport sponsors can use Airport Improvement Program (AIP) funds and Passenger Facility Charges (PFCs) to finance low emission vehicles, refueling and recharging stations, gate electrification, and other airport air quality improvements.

Congestion Mitigation and Air Quality Improvement (CMAQ) Program

Description: The Congestion Mitigation and Air Quality Improvement Program was implemented to support surface transportation projects and other related efforts that contribute air quality improvements and provide congestion relief.

Transportation:

Clean School Bus Program

Description: State or local governments, eligible contractors, and nonprofit school transportation associations are authorized to receive grant funds. Fifty percent of the funds are authorized for zero-emission school buses, and fifty percent of the funds are authorized for alternative fuels and zero-emission school buses. Funds may be prioritized for rural or low-income communities and entities that have matching funds available. The Environmental Protection Agency Administrator is authorized to provide funds to cover up to 100 percent of the costs for the replacement of the bus. **Closes Tuesday, August 22, 2023.**

National Electric Vehicle Infrastructure (NEVI) Program

Description: The U.S. Department of Transportation's (DOT) Federal Highway Administration (FHWA) NEVI Formula Program will provide funding to states to strategically deploy electric vehicle (EV) charging stations and to establish an interconnected network to facilitate data collection, access, and reliability. Funding is available for up to 80% of eligible project costs, including:

The acquisition, installation, and network connection of EV charging stations to facilitate data collection, access, and reliability.

Proper operation and maintenance of EV charging stations; and,

Long-term EV charging station data sharing.

Climate Crisis Advisory Committee Stakeholder List

- Central Labor Union - El Paso Chapter
- Citizens' Climate Lobby El Paso
- City of El Paso
- Climate Interfaith Network of El Paso
- County of El Paso
- Earthworks
- ECO El Paso
- El Paso Chamber
- El Paso Electric
- El Paso Metropolitan Planning Organization
- El Paso Water
- El Paso Zoo
- Fort Bliss Directorate of Public Works
- Office of Mayor Oscar Leeser
- Office of Senator Cesar J. Blanco
- Sierra Club
- Sunrise El Paso
- Texas Farm Bureau
- Texas Gas Services
- The University of Texas at El Paso
- U.S. Green Chamber of Commerce
- UT Houston School of Public Health in El Paso
- Ysleta Del Sur Pueblo

Glossary

- **AQ** Air Quality
- **BRT** Bus Rapid Transit
- **CAP** Climate Action Plan
- **CCAC** Climate Crisis Action Committee
- **CNG** Compressed Natural Gas
- **DG** Distributed Generation
- **EPA** Environmental Protection Agency
- **EPE, EPEC** El Paso Electric Co.
- **EV** Electric Vehicle
- **GHG** Greenhouse Gasses
- **GSI** Green Stormwater Infrastructure
- **LID** Low Impact Development
- **LMI** Low and Medium Income
- **NAAQS** National Ambient Air Quality Standards
- **PM** Particulate Matter
- **R&D** Research and Development
- **RE** Renewable Energy
- **SCCC** Select Committee on the Climate Crisis
- **TCEQ** Texas Commission on Environmental Quality
- **VOC** Volatile Organic Compounds
- **Building Envelope** - A simple definition of building envelope is the separation of the interior and exterior of a building. The envelope serves to protect the interior while facilitating climate control. Building envelope arguably encompasses the entire exterior building system of your home. This includes your windows, doors, roof, floor, foundations, and insulation.
- **Complete Streets** - Complete Streets are streets designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders.
- **Distributed Energy** – Distributed energy resources (DER) refers to often smaller generation units that are located on the consumer’s side of the meter, like rooftop solar photovoltaic units, wind generating units, and battery storage.
- **Electrification** – Electrification refers to the process of replacing technologies that use fossil fuels (coal, oil, and natural gas) with technologies that use electricity as a source of energy.

- **Land Use** – Land use involves the management and modification of natural environment or wilderness into built environment such as settlements like buildings and semi-natural habitats like arable fields, pastures, and managed woods.
- **Resource Management** – Resource Management is concerned with the most effective means of avoiding damage to environmental assets and extracting beneficial uses of environmental resources, within the context of social institutions.

Local, Regional, and National Resources

- Building public-private partnerships
 - [El Paso Chamber Shared Value Initiative](#)
 - [City Business Climate Alliance](#)
- Establishing a carbon emission report
 - [C40 Cities Climate Leadership Group](#)
 - [World Resources Institute](#)
 - [International Council for Local Environmental Initiatives \(ICLEI\) – Local Governments for Sustainability](#)
 - [GHG Protocol](#)
- Land Use and Transportation
 - [Plan El Paso](#)
 - [El Paso Metropolitan Transportation Plan](#)
 - [Farm&City](#)
 - [National Association for Transportation Officials \(NACTO\)](#)
 - [Smart Grown America \(SGA\)](#)
- Energy
 - [El Paso Regional Renewable Energy Advisory Committee Strategic Plan](#)
 - [Resilient El Paso Report](#)
 - [The Rockefeller Foundation: 100 Resilient Cities](#)
- Other Cities’ Climate Action Plans
 - [Dallas Comprehensive Environmental & Climate Action Plan \(CECAP\)](#)
 - [San Antonio Climate Ready: A Pathway for Climate Action & Adaptation](#)
 - [Phoenix Climate Action Plan 2021 Edition](#)
 - [Tucson Resilient Together](#)