CLEAN AIR TAMPA BAY

PRIORITY CLIMATE ACTION PLAN

A CLIMATE POLLUTION REDUCTION GRANT PROJECT

Prepared For:
State and Local Climate and Energy Program
U.S. Environmental Protection Agency

Prepared By:
Tampa Bay Regional Planning Council

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Acknowledgment

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Executive Summary

The Inflation Reduction Act (IRA) of 2022 provided tools to reduce greenhouse gas (GHG) pollution through programs such as the Climate Pollution Reduction Grants (CPRG) Program. With funding from the IRA, the U.S. Environmental Protection Agency (EPA) coordinated the development and implementation of climate action plans to reduce GHGs for states, U.S. territories, municipalities, air pollution control agencies, tribes, and other regional organizations. CPRG is a dual-phase program:

- Phase One
    - Planning Phase: $1 million was provided to the 67 most populous MSAs to develop climate action plans to reduce GHGs.
    - A 4-year grant period
- Phase Two
    - Implementation Phase: $4.3 billion for grants to implement GHG reduction measures developed through the phase one planning grants.
    - A 5-year grant period

Through Phase One, the Tampa Bay Regional Planning Council (TBRPC) received the $1 million planning grant funding from the EPA to lead the Tampa-St. Petersburg-Clearwater MSA developed of a climate action plan. By participating in Phase One, the Tampa-St. Petersburg-Clearwater Metropolitan Statistical Area (MSA) jurisdictions, municipal agencies, departments, other municipal government offices, council of governments, metropolitan planning commissions, or other regional organizations comprised of multiple municipalities are eligible to apply for grant funding through Phase Two.

The Tampa-St. Petersburg-Clearwater MSA Priority Climate Action Plan (PCAP) analyzed high-priority, implementation ready projects in the largest GHG sectors in the MSA. The analysis showed that the energy and transportation and mobile combustion sectors as the largest emitters with 45.3% from the energy sector and 43.2% from the transportation sector. Jurisdictions and agency partners prioritized near-term, implementation ready projects in all sectors, but there was a large focus on the energy and transportation sectors. Projects that were identified were solar installation, deep energy efficiency retrofits, extend public, and converting on-road vehicles to electric vehicles.

Using the identified projects in those sectors, a benefits and reduction measures analysis was completed. With a medium population growth in the MSA, implementing the prioritized projects in the energy and transportation sector is projected to decrease in GHG by 2.14% by 2030 and 51% by 2050. These projects could be focused on areas in the low-income and disadvantaged communities (LIDAC) that were identified, and engage with community stakeholders to establish community needs. Moving into the Comprehensive Climate Action Plan (CCAP), these areas will be expanded on to develop a robust plan that sets actionable goals and measures to help create a more resilient future.

Introduction

Climate Change & the Tampa Bay Region

Introduction to Climate Change

Naturally occurring gases dispersed in the atmosphere determine the Earth's climate by trapping solar radiation, a phenomenon known as the greenhouse effect. Overwhelming evidence shows that human activities are increasing the concentration of GHG and changing the global climate. The most significant contributor is the burning of fossil fuels for transportation, electricity generation, and other purposes, which introduces large amounts of carbon dioxide and other GHG into the atmosphere. Collectively, these gases intensify the natural greenhouse effect, causing global average surface and lower atmospheric temperatures to rise, threatening the safety, quality of life, and economic prosperity of global communities (IPCC, 2021).

Although the natural greenhouse gas effect is necessary to keep the Earth warm, a human-enhanced greenhouse effect, characterized by the rapid accumulation of GHGs in the atmosphere, leads to excessive heat and radiation being trapped. Human activities are estimated to have caused approximately 1.0°C of global warming above pre-industrial levels, with a likely range of 0.8°C to 1.2°C (IPCC, 2018). Global warming is likely to reach 1.5°C between 2030 and 2052 if the current rate of increase persists. Warming from anthropogenic emissions will continue to cause further long-term changes in the climate system, such as sea level rise, with associated impacts. However, these emissions alone are unlikely to cause global warming of 1.5°C. Climate related risks for natural and human systems are higher for global warming of 1.5°C compared to present conditions, but lower than at 2°C. These risks depend on the magnitude and rate of warming, geographic location, levels of development and vulnerability, and on the choices and implementation of adaptation and mitigation options (IPCC, 2018).

Climate Change in the Tampa-St. Petersburg-Clearwater MSA

Climate change is now widely regarded as one of the most pressing problems in global society, and the Tampa-St. Petersburg-Clearwater MSA faces challenges that many other large metropolitan areas are currently grappling with. However, due to specific geographical characteristics unique to the region, besides having to address issues related to carbon emissions, energy efficiency and security, social inequality, pollution, public transportation, and economic development, this metropolitan area, situated around one of the largest open-water estuaries in the southern United States (Xian et al., 2007), has a level of concern regarding water that most places in the United States do not share, especially concerning sea level rise.

While Florida is accustomed to for dealing with coastal hazards, sea level rise is considered one of the major climate change-related concerns in the state, with almost half of the 13 million people who could be displaced by sea level rise in the United States residing in Florida (Holmes & Butler, 2021). Additionally, other consequences associated with climate change include elevated heat and average sea temperatures, ocean

acidification, and alterations in precipitation patterns. These factors could lead to significant and far-reaching impacts on coastal properties and ecosystems, including more frequent and intense hurricanes, all of which are issues currently facing the Tampa-St. Peterburg-Clearwater MSA.

As many local governments work independently to address climate-related issues in the area, the regional development of a climate action plan is a new initiative for the Tampa-St. Petersburg-Clearwater MSA. There is a lack of regional data on GHG emissions, but air quality issues and extreme weather continue to cause significant damage to the communities in this area. With the development of the Tampa-St. Peterburg-Clearwater MSAs first Climate Action Plan, it will facilitate regional data collection for future uses, actionable measures, and project priorities to address the climate-related issues facing the citizens and their communities.

Plan Development

To prepare for the development of this plan, the TBRPC developed two strategies: engaging with jurisdictions, partners, and communities through branding; and organizing collaborative meetings.

Branding

The TBRPC team developed a logo and branding materials to market this grant program to our jurisdictions, partners, and communities. The initiative was named **Clean Air Tampa Bay.**

This branding serves to communicate to jurisdictions and partners, clearly distinguishing this document from other organizational planning documents and giving it a unique identity within each organization. Additionally, it facilitates effective communication with communities to convey the goals of the plan providing a clear understanding of where this planning initiative is located.

The branding colors draw inspiration from the air quality index and the blue skies of Florida, while the chosen fonts ensure clean, readable materials that do not detract from the overarching message of prioritizing clean air for the people who work, play, and live in our MSA.

CLEAN AIR
TAMPA BAY

Collaborative Meetings

The Clean Air Tampa team has actively engaged and collaborated with other MSAs, jurisdictions, partners, community groups, and technical assistance forums.

Internal Meetings

The Clean Air Tampa Bay Team at the TBRPC collaborates with Florida MSAs (Miami-Fort Lauderdale-Pompano Beach, Orlando-Kissimmee-Sanford, Jacksonville, and North Port-Sarasota-Bradenton) through a bi-monthly CPRG Applicant Exchange. The TBRPC team also attends monthly Peer Cohort through the Collective Strategies Consulting, where MSAs around the country participate and discuss ongoing progress and obstacles they are facing in the CPRG planning process.

Since June of 2023, the Clean Air Tampa Bay Team has collaborated on this planning process and action plan implementation. The technical assistance team and the community engagement team meet once per week.

Technical Assistance Meetings

The technical assistance team has conducted four meetings with stakeholders. During these meetings the team introduced the CPRG program and its significance to the MSA. Additionally, collaborations occurred with all stakeholders on projects that the Tampa-St. Petersburg-Clearwater MSA are currently working on, and discussions were held on regional projects they would like to see developed.

In June and August of 2023, meetings were held with jurisdictions and partners to introduce the CPRG program. The team continued to update jurisdictions and partners as more information was received from EPA.

In October 2023, a two-hour meeting was held with jurisdictions and partners to collect information on existing projects, future projects, and regional projects that tackle GHG reduction.

In December 2023, a jurisdiction and partner meeting was held to present initial findings for the GHG inventory and provide more information on Phase II funding.

Community Engagement Meetings

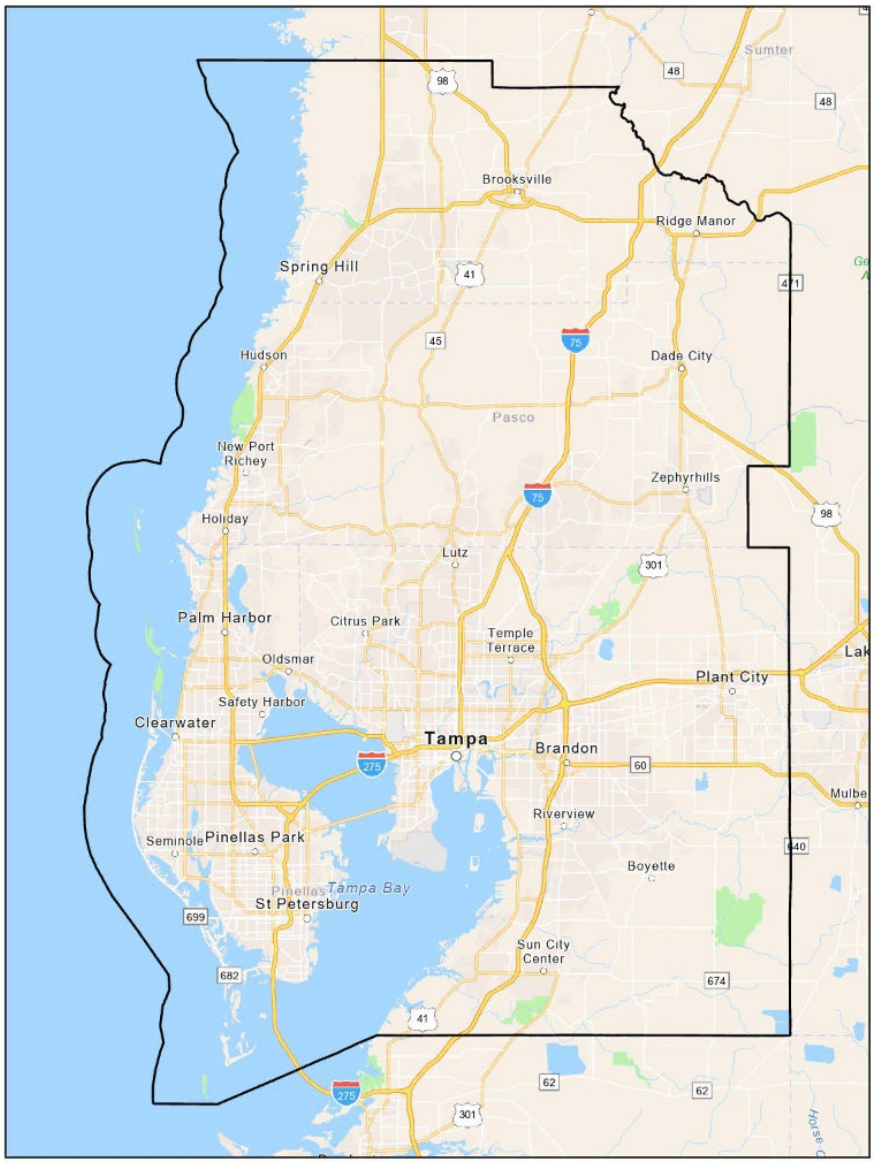
The community engagement team has interacted with local community-based organizations to identify low-income and disadvantaged communities (LIDAC) and establish projects and programs currently underway in these areas. Community meetings were held in the four counties comprising the MSA. Through these meetings, the need for a central repository for information sharing with these communities was identified, along with the sharing of challenges faced by LIDACs in the Tampa-St. Peterburg-Clearwater MSA and the building of cross-county relationships.

An Advisory Council was subsequently formed to facilitate cross-county communication and discuss community engagement strategies and resources. Engagement continues beyond these meetings through a monthly newsletter and a Facebook Group, allowing ongoing sharing to work throughout the MSA.

Scope of the PCAP

Tampa-St. Petersburg-Clearwater MSA

As indicated by the EPA, the Tampa-St. Petersburg-Clearwater Metropolitan Statistical Area (MSA) is the 17th most populated MSA in the United States. Spanning across Hernando, Hillsborough, Pasco, and Pinellas Counties and encompassing 34 municipalities, the Tampa-St. Petersburg-Clearwater MSA has a population of 3.15 million as of 2021. Covering over 2,515.7 square miles, it boasts a median household income of $69,290 (Tampa-St. Petersburg-Clearwater Data USA, n.d. & US Census Bureau, 2022).



Tampa Bay Regional Planning Council

The TBRPC serves as the lead organization representing the Tampa-St. Petersburg-Clearwater MSA for the CPRG. Established in 1962, the mission of the TBRPC is to serve its citizens and member governments by providing a forum to foster communication, coordination, and collaboration in identifying and addressing issues and needs regionally. As a regional entity, the TBRPC comprises 28 member governments throughout the Tampa Bay region spanning Citrus, Hernando, Hillsborough, Manatee, Pasco, and Pinellas Counties.

Florida Statutes 186.502(4)910 recognize Regional Planning Councils as the state's only multipurpose regional entities in the position to plan for and coordinate intergovernmental solutions to growth-related problems on greater-than-local issues, provide technical assistance to local governments, and meet other needs of the communities in each region.

Tampa Bay Regional Resiliency Coalition

TAMPA BAY
REGIONAL RESILIENCY COALITION

Clean Air Tampa Bay leverages the existing work of the Tampa Bay Regional Resiliency Coalition (The Coalition). Formed in 2018, the Coalition aims to coordinate climate adaptation and mitigation activities across county lines, advance local and regional responses to projected economic and social disruptions resulting from sea-level rise, and to provide state and local agencies with access to technical assistance and support in addressing of climate change. With representation from 33 member governments in the six-county Tampa Bay region, as well as Sarasota County bordering to the south, and over 90 partners, the Coalition is dedicated to building a resilient Tampa Bay, together.

PCAP Elements Overview and Definitions

The purpose of this Priority Climate Action Plan (PCAP) is to offer a strategic framework for measuring, planning, and reducing greenhouse gas (GHG) emissions and related climatic impacts within the Tampa-St. Petersburg-Clearwater MSA. The approach involves designing and utilizing this climate action plan as a customized roadmap for making informed decisions and understanding where and how to achieve the largest, most cost-effective GHG reductions that align with the region's goals. The plan will address the following objectives:

GHG Inventory

A GHG inventory is a list of emission sources and the associated emissions quantified using standardized methods. The Tampa-St. Petersburg-Clearwater MSA inventory is sector-specific and collects data on all GHGs, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbon (HFCs), perfluorocarbon (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

Completed through extensive research and analysis, the Tampa-St. Petersburg-Clearwater MSA GHG inventory provides a snapshot in time using the best available information, with a baseline year of 2021. The inventory follows the International Local Government Greenhouse Gas Emissions Analysis protocol developed by ICLEI (Local Governments for Sustainability).

GHG Emission Projections

Emissions projections will enable visualization of the implementation of policies, programs, and projects over a set time period to observe GHG reduction.

Utilizing the ICLEI ClearPath forecast module, this section will analyze the 2021 baseline GHG inventory and forecast GHG emissions until 2050 through a reduction scenario of low, medium, and high. The low GHG reduction projection scenario will reflect a "business as usual" approach with average population growth and current goals being implemented by local governments and power utilities. The medium and high scenario will incorporate several reduction measures identified in the plan, with medium population growth considered. These scenarios will primarily focus on reduction measures in the energy and transportation sector.

GHG Reduction Measures

This section will focus on near-term, high-priority, implementation ready measures with a focus on high-priority sectors for the Tampa-St. Petersburg-Clearwater MSA. By implementing projects and reducing GHG this will improve the health of citizens, benefits to low-income and disadvantage communities through workforce development, and economic impact that are manifested because of the GHG reduction measures.

Benefits Analysis

This section presents the benefits of GHG reduction measures in terms of reduced co-pollutants from power generation facilities and vehicles. These benefits are analyzed using two EPA tools: AVoided Emissions and geneRation Tool (AVERT) and the CO-Benefits Risk

Assessment Health Impacts Screening and Mapping Tool (COBRA). Together, these tools enable the estimation of air quality and related economic impact generated because of the GHG reduction measures.

Low Income/Disadvantaged Communities Benefits Analysis

This section analyzes the impact of implementing GHG reduction measures for low-income and disadvantaged communities (LIDAC). It discusses the benefits of GHG reduction measures in these communities, including climate resilience, workforce development, and a decrease in the cost of energy use. This section is consistent with the Justice40 Initiative and utilizes a combination of the Climate & Economic Justice Screening Tool (CEJST) and the Environmental Justice Screening and Mapping Tool (EJScreen) to collect data for identifying these communities.

To respond to the complex and intertwined issues of climate change and social equity within the LIDAC community, the Tampa-St. Peterburg-Clearwater MSA intends to make a concerted effort to include these communities in all decision and policy-making processes, as well as in implementation strategies. This integrated approach aims to go beyond simply reducing carbon emissions and seeks to create a comprehensive response.

Review of Authority to Implement

For each measure, there is an indication of whether relevant local government is existing statutory or regulatory authority to implement.

Next Steps

This section will provide a detailed summary of the next steps in the planning process, which include jurisdiction and partner meetings, GHG analysis, GHG reduction measures, and community engagement.

PCAP Elements

Greenhouse Gas Inventory

Background

The Clean Air Tampa Bay initiative has resulted in the development of a regional community-wide GHG emissions inventory for the Tampa-St. Petersburg-Clearwater MSA. While individual jurisdictions in the region, such as the City of Tampa, City of St. Petersburg, and the City of Largo, have previously adopted similar practices, it is now recognized that long-term goals aimed at reducing GHG emissions and mitigating climate change effects will be more efficient if the counties work together to develop a GHG emissions inventory as a region through the development of this PCAP.

A GHG inventory is an important tool used to analyze GHG emissions and develop strategies for emissions reductions, representing a critical step in the global effort against climate change, which poses substantial risks to the future health, well-being, and prosperity of communities. To achieve emissions reduction and move toward climate neutrality (net-zero GHG emissions), the Tampa-St. Petersburg-Clearwater MSA needs to set a clear goal and act efficiently following a holistic and integrated approach. In addition to mitigating climate change, climate actions bring opportunities for the community to

experience a wide range of co-benefits, such as creating socio-economic value, reducing poverty and inequality, and improving public and environmental health.

The Tampa-St. Petersburg-Clearwater MSA GHG inventory includes emissions from four counties: Hernando, Hillsborough, Pasco, and Pinellas. It utilizes the ICLEI ClearPath tool to estimate current levels of GHG emissions from different sectors and forecast future emission levels under distinct scenarios. This approach allows observation of which sectors are contributing more to the emissions levels in the region, development of measures to reduce emission levels, and understanding of how those measures can impact the region's GHG emissions as well as co-benefits.

The ClearPath inventory tool uses the approach and methods provided by the U.S. Community Protocol for Accounting and Reporting Greenhouse Gas Emissions (Community Protocol) and the Local Government Operations Protocol for Accounting and Reporting Greenhouse Gas Emissions (LGO Protocol). The following sectors are included in the inventory: Energy, Transportation and Mobile Combustion, Solid Waste, Upstream Impact of Activities, Process and Fugitive Emissions, Agriculture, Forestry, and Other Land Use (AFOLU), and Carbon Removals.

Emissions from scopes 1 and 2 are included in the inventory. Scope 1 refers to emissions from sources within the Tampa-St. Petersburg-Clearwater MSA boundary, including building on-site fuel combustion, waste disposal services, and in-boundary transportation. Scope 2 refers to emissions from grid-supplied electricity, transmission and distribution losses, and steam. Details of the inventory can be found in Appendix A.

Methodology

By developing a GHG emissions inventory and a PCAP, the Tampa- St. Petersburg-Clearwater MSA is well-positioned to mitigate climate change impacts by reducing GHG emissions focusing mostly on the transition to renewable energy, increasing energy efficiency, and increasing electric vehicles as well as public transportation services. The methodology follows the ICLEI ClearPath tool for baseline inventory and projections of GHG emissions as detailed below.

GHG Emission Sector & Data Collection Selection

The scope considered in the Tampa-St. Petersburg-Clearwater MSA inventory assessment the following ‘major’ sectors:

- Energy
    - Electricity, natural gas, distillate fuel oil, residual fuel oil, HGL, and coal are used to power, heat or cool homes and commercial businesses based on population and households in the region. The types of fossil fuel used to generate electricity emit different amounts of CO_2 and are based on those used by Tampa Electric and Duke Energy in the local region through residential, commercial, and industrial stationary combustion uses.
    - Data downscaled from the Energy Information Administration (EIA) Statewide energy and State and Local Planning for Energy (SLOPE) datasets. The consumption for the state of Florida was obtained from the 2021 EIA dataset and the consumption per county was obtained from the

SLOPE platform. Then, all data were added for the Tampa-St. Petersburg-Clearwater MSA to calculate a downscaling factor by dividing the Tampa-St. Petersburg-Clearwater MSA consumption by the state of Florida consumption.

- Transportation and Mobile Combustion
    - The combustion of fossil fuels such as gasoline and diesel to transport people and goods in this sector includes sources such as on-road and off-road vehicles, air travel, marine transportation, and rail.
    - Data collected from the Environmental Protection Agency (EPA) National Emissions Inventory Data Retrieval Tool for the latest 3-year cycle, 2020.
- Solid Waste
    - This is based on tons of solid waste disposed, recycled, composted, or incinerated and estimated based on population.
    - Data collected from the Florida Department of Environmental Protection's (FDEP) report "Total Tons of MSW Managed in Florida Facilities."
- Upstream Impact Activities
    - This represents emissions that occur during the production of goods or services which can include raw material extraction and processing, manufacturing and production, and distribution. Emissions in this sector also include values related to grid losses.
    - Data downscaled from the Energy Information Administration (EIA) Statewide energy and State and Local Planning for Energy (SLOPE) datasets. The processing of information was the same as for the energy sector.
- Process and Fugitive
    - This sector includes emissions from industrial processes and losses from natural gas distribution systems.
    - Data collected from EPA's Facility Level Information on Greenhouse Gases Tool (FLIGHT).
- Agriculture, Forestry and Other Land Use
    - Greenhouse gas emissions from agriculture come from livestock population, crop production, and fertilizers applied.
    - Data collected from the Florida Department of Environmental Protection's (FDEP) report "Total Tons of MSW Managed in Florida Facilities."
- Cabon Removals
    - The natural and non-natural way of capturing carbon is to remove it from the atmosphere through items such as trees and carbon capturing systems.
    - Data found within the Florida Department of Environmental Protection's (FDEP) report "Total Tons of MSW Managed in Florida Facilities."

Development of the Greenhouse Gas Inventory

Emissions data was entered into the ClearPath platform which combines the data into a single system that calculates metric tons of CO_2 equivalent through different calculators divided by sector. The tool enables data analysis of all sectors combined and divided by sector, in addition to forecasting distinct scenarios based on the level at which actions were implemented to reduce greenhouse gas emissions.

Baseline Inventory

The 2021 baseline inventory is used to calculate expected emissions reductions from measures proposed in this PCAP. In 2021, Transportation and Mobile Sources represented 42.8% of the total emissions from the Tampa-St. Peterburg-Clearwater MSA. The second and third biggest categories are Residential Energy and Commercial Energy, representing respectively 21.7% and 19.3% of the total emissions in the year. Together, the three categories account for 83.8% of total emissions recorded in the Tampa-St. Peterburg-Clearwater MSA. The sector that comes next in terms of the highest number of emissions is Solid Waste, with 4.8%. This data demonstrates that the focus of actions to reduce emissions should be on the transportation and energy sectors.

Sector	CO2e (MT CO2e)
Transportation & Mobile Sources	13,723,830
Solid Waste	1,537,915
AFOLU	255,605
Commercial Energy	5,901,614
Industrial Energy	1,521,203
Residential Energy	6,964,750
Upstream Impact of Activities	576,546
Process & Fugitive Emissions	1,265,883
Carbon Removals	-1,553,630
Total Net Emissions	**30,193,715**

Table 1. Numerical amount of carbon dioxide equivalent per metric ton for each sector in the inventory.

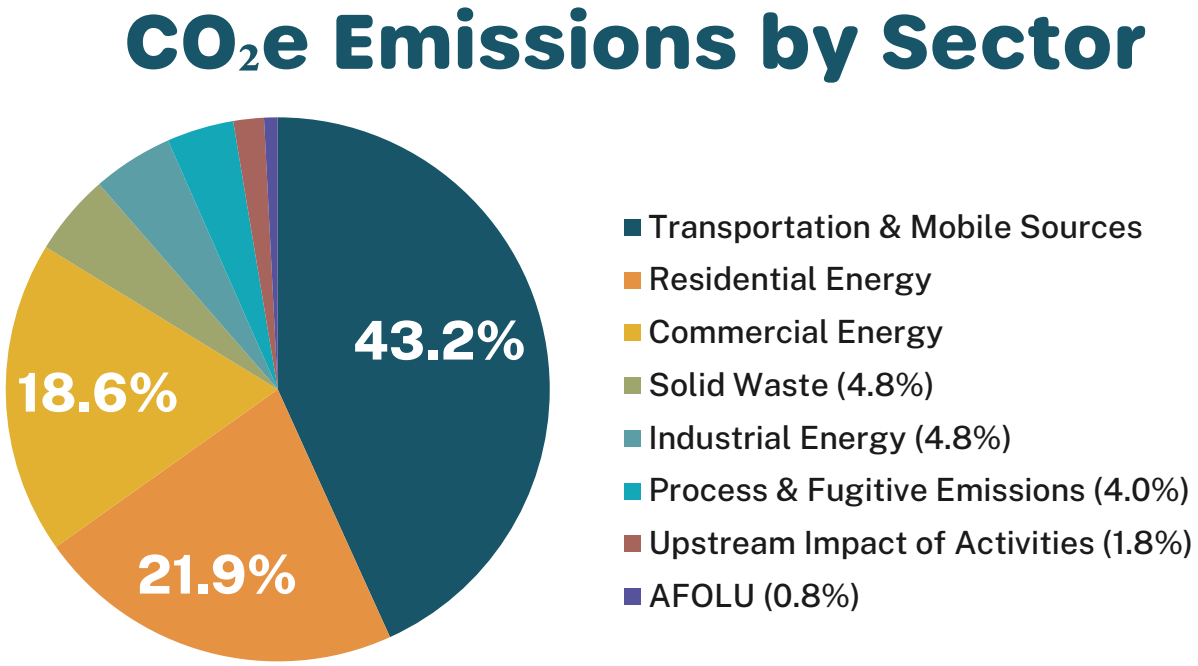


Figure 1. Percentage of emissions by sector in the inventory.

Sectors

Energy Sector

The energy sector, which combines three categories — commercial, residential, and industrial energy — accounts for the largest emissions in the Tampa-St. Peterburg-Clearwater MSA in 2021, representing 45.7% of total emissions. The majority of emissions come from grid-supplied electricity, particularly for the commercial and residential sectors. Tampa Electric (a subsidiary of TECO Energy), Duke Energy, and the Withlacoochee River Electric Cooperative supply most of the MSA's electricity. The GHG produced from electricity results from burning fuel to generate energy, the natural gas being the most used resource as a source. Givin the significant share of GHG emissions attributed to the energy sector, changing the generation of electricity to renewable sources and increasing energy efficiency must be implemented to achieve the proposed PCAP goals.

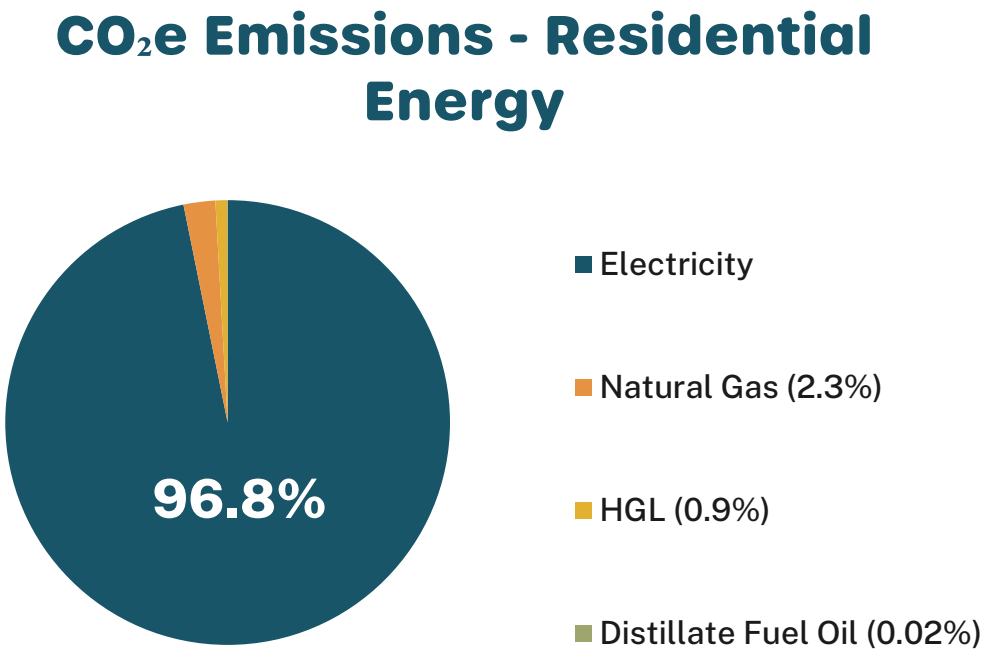


Figure 2. The carbon dioxide equivalent percentage in each source of residential energy.

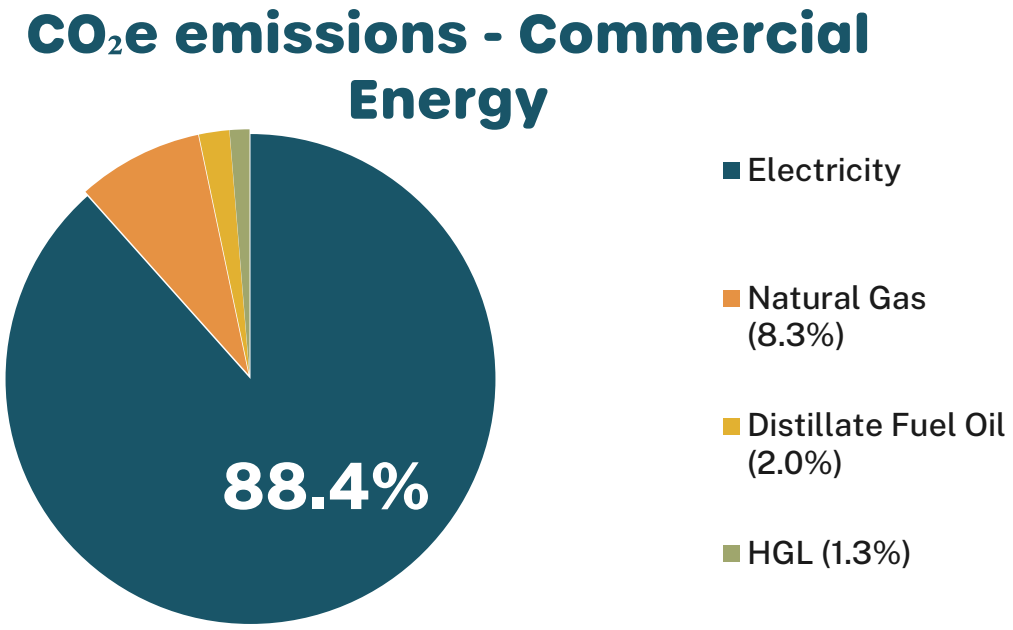


Figure 3. The carbon dioxide equivalent percentage in each source of commercial energy.

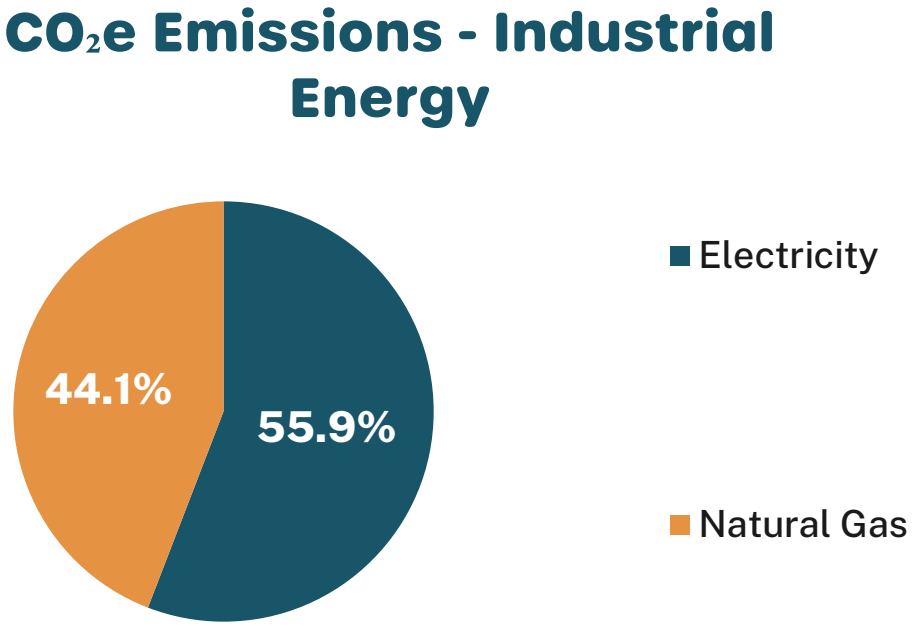


Figure 4. The carbon dioxide equivalent percentage in each source of industrial energy.

Transportation & Mobile Sources

The transportation and mobile sources sector accounts for 43.2% of total emissions in the Tampa-St. Petersburg-Clearwater MSA in 2021. Most emissions in this sector come from on-road transportation, with vehicles fueled by gasoline are responsible for 52.3% and vehicles fueled by diesel are responsible for 22.3%, adding 74.6% of emissions from the transportation sector. Considering the significant population growth experienced by the Tampa-St. Peterburg-Clearwater MSA in recent years, which has increased the demand for transportation, projects aimed at improving and expanding the public transit system and transitioning to electric vehicles are crucial for reducing greenhouse gas emissions in the region.

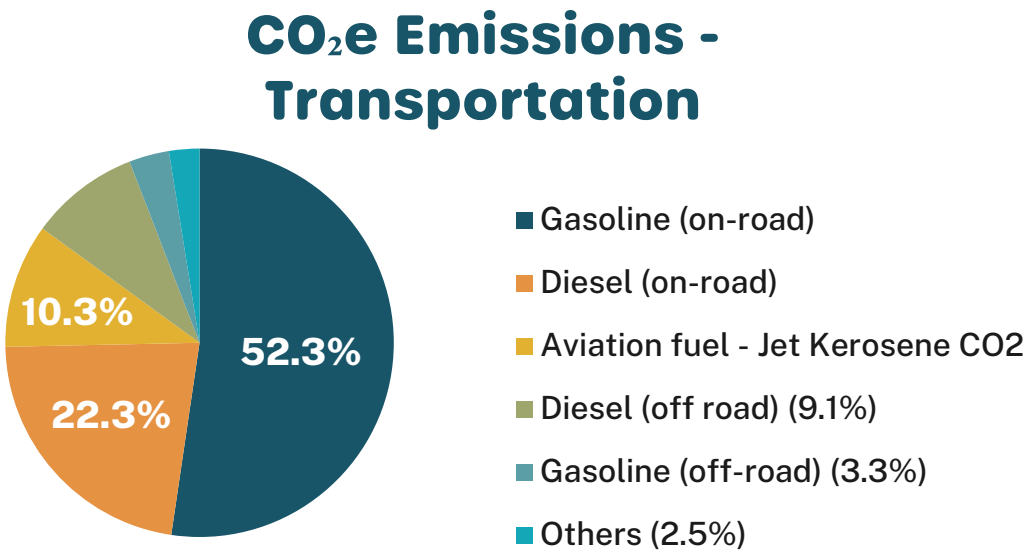


Figure 5. The carbon dioxide equivalent percentage in each source of transportation.

Solid Waste

Solid waste is an intrinsic aspect of a society, resulting from everyday human activities. In the Tampa-St. Peterburg-Clearwater MSA, solid waste accounts for 4.8% of the total emissions in the region in 2021, a little more than two-third caused by landfilled waste and the remaining third is caused by combustion of solid waste. While this percentage represents a small number in comparison to the energy and transportation sectors, developing programs to improve the recyclability and reusability of materials, resulting in a reduction in greenhouse gas emissions, is both a challenge and a goal.

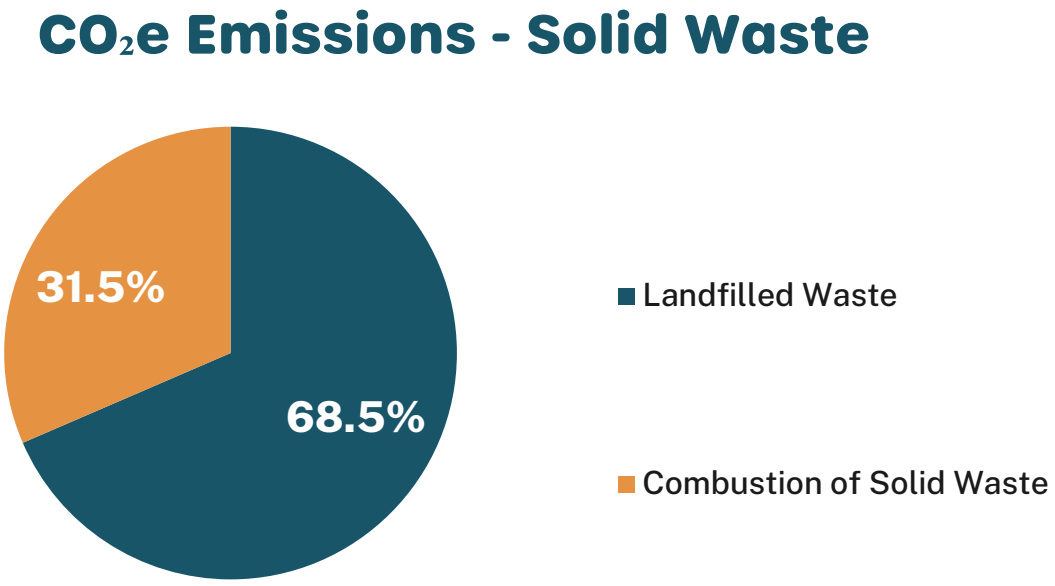


Figure 6. The carbon dioxide equivalent percentage in each source of solid waste.

Process and Fugitive Emissions

Process and fugitive emissions consist of emissions that come from industrial processes such as petroleum and natural gas systems, refineries, chemical and mineral plants, and others. Fugitive emissions are unintended releases of gases or vapor from a pressurized containment, and leakage/losses from natural gas distribution systems in an industrial setting. This sector accounts for 4% of emissions in the Tampa-St. Peterburg-Clearwater MSA. Energy efficiency, renewable energy, and fugitive emissions control are factors that can be implemented to reduce such emissions.

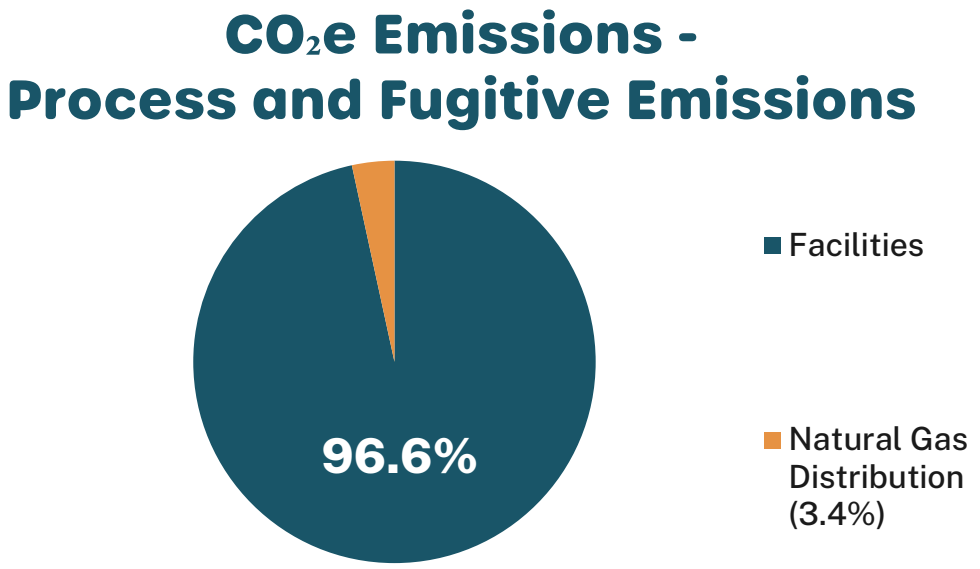


Figure 7. Carbon dioxide equivalents of process and fugitive emissions through industrial processes from facilities and natural gas distribution are presented in percentage of emissions in each source.

Upstream Impact of Activities

This sector accounts for 1.8% of total emissions in the Tampa-St. Peterburg-Clearwater MSA. While upstream activities can vary significantly depending on the industry and processes involved, it consists of emissions that occur during the production of goods or services. This can include raw material extraction and processing, manufacturing and production, and distribution. In this inventory, only emissions from transmission losses for electricity supply residential, commercial, and industrial sectors were considered, representing emissions associated with the transportation and distribution of energy. Measures that could reduce emissions from this sector include energy efficiency, renewable energy adoption, and supply chain optimization.

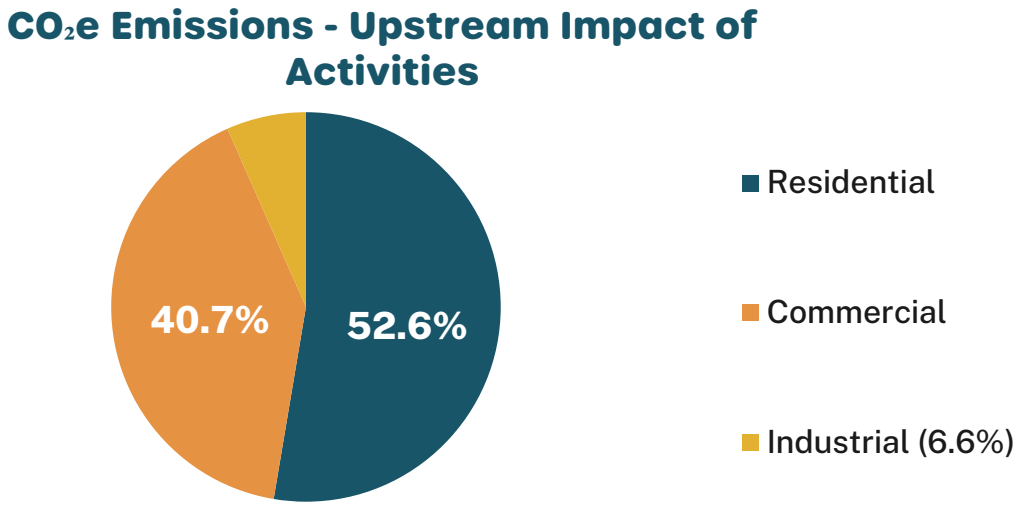


Figure 8. Carbon dioxide equivalent through the upstream impact of activities during the production of transmissions losses.

Agriculture, Forestry, and Other Land Use

AFOLU represented only 0.8% of total emissions in the Tampa-St. Peterburg-Clearwater MSA. Within this sector, almost half of the emissions came from forest disturbances, such as deforestation, forest degradation (including human-induced fires), and natural disturbances (such as wildfires). Actions that could reduce emissions from this sector include reducing deforestation, promoting sustainable logging practices, fire management, reforestation, and conservation. It is relevant to consider that such actions, while increasing or maintaining the number of trees in the area, can have the opposite impact, helping the region to remove carbon dioxide from the atmosphere.

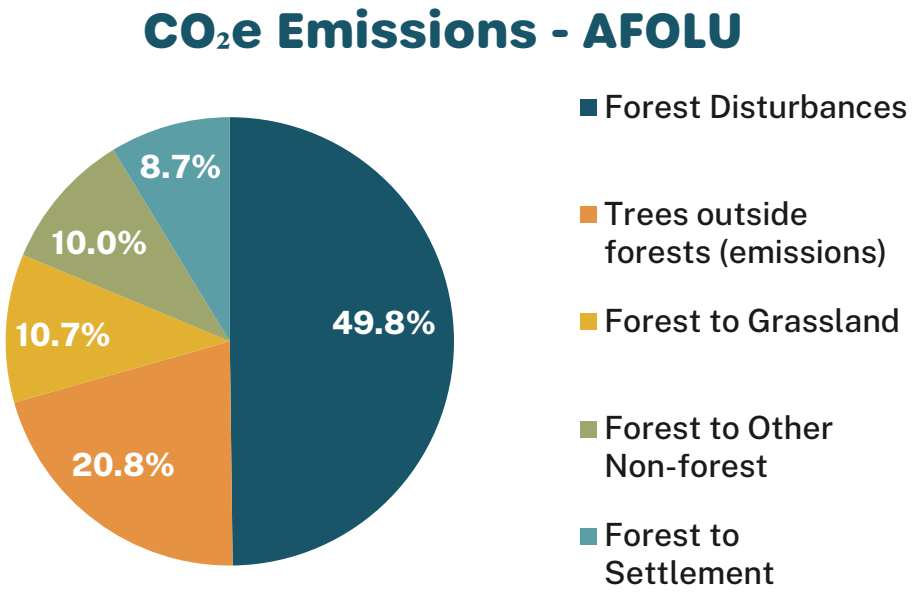


Figure 9. The percentage of carbon dioxide equivalent represented in each source of AFOLU emissions.

Carbon Removals

Data in the AFOLU sector included carbon removals, divided into three subsections: undisturbed forest, transformation of non-forest area to forest area, and removals from trees outside of forests. The ClearPath tool was used to calculate metric tons of CO_2 removals in 2021. About two-thirds of carbon removals came from undisturbed forests, while the other third is represented by removals from trees outside of forests.

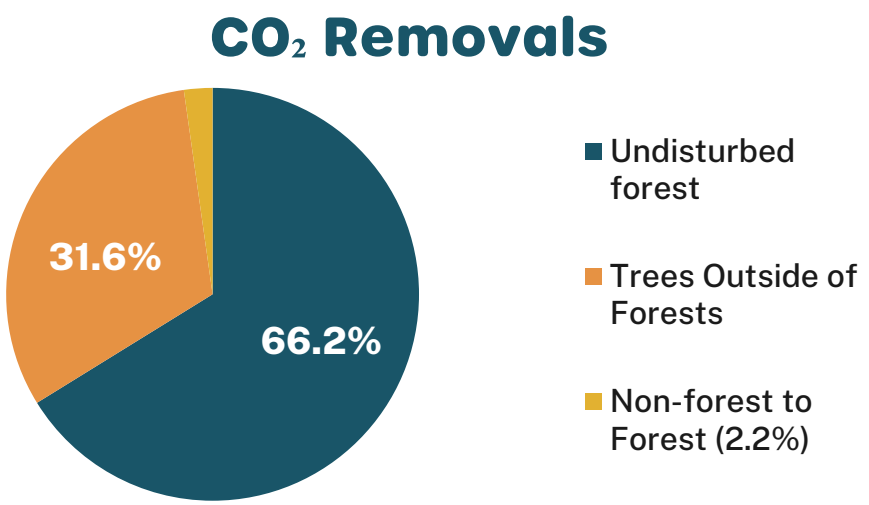


Figure 10. The CO_2 removals through trees in undisturbed forests, trees outside of forests, and non-forest to forest areas.

Net Greenhouse Gas Emissions

The total number of GHG emissions in the Tampa-St. Peterburg-Clearwater MSA was 31,747,642 metric tons of CO_2e. The total amount of carbon removals was -1,553,630 metric tons of CO_2, the **total net GHG emissions** was 30,193,175 metric tons of CO_2e.

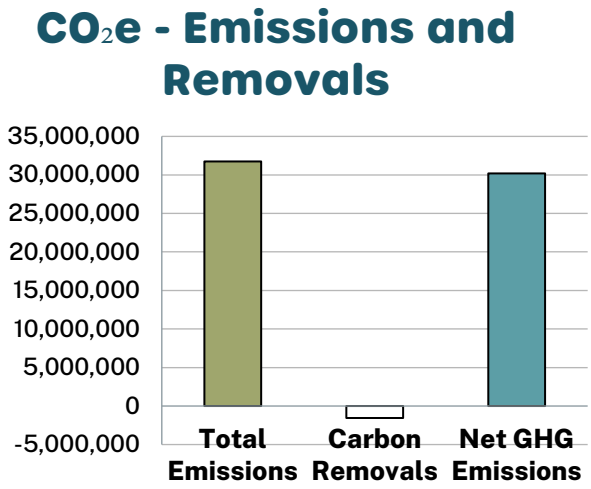


Figure 11. Net GHG emissions with the -1,553,630 metric tons of CO_2 removed showing a net GHG emission of 30,193,715 metric tons of CO_2e.

Greenhouse Gas Emission Projections

Forecasting GHG emissions is needed to understand the dynamics of GHG emissions under different reduction scenarios. It allows us to identify the various reduction measures that would achieve the stated goals. The GHG emissions inventory and projections are the basis for the climate action plan. In this report several reduction measures have been considered under the medium and high scenarios. The methodology and findings can be found in Appendix B.

Methodology

GHG emissions projections were estimated using the ClearPath forecast module. The projections are based on the baseline inventory of 2021 and forecast for 2050. In this report, GHG emissions projections were estimated for various reduction measures in the energy and transportation sectors under different scenarios. The projections considered three GHG reduction scenarios: Business as Usual (BAU), PCAP medium and PCAP high. The BAU scenario considered average population growth, fuel efficiency standards (CAFE standard) and the National Renewable Energy Laboratory (NREL)'s grid intensity projections factors for Florida (2022). The medium and high scenarios were modified according to the GHG reduction measures that were identified in the PCAP. Some of the PCAP GHG reduction measures include deep energy efficiency in the residential and commercial sectors, solar PV installations, reductions of VMT and increasing EV and associated charging stations.

Emissions from the solid waste, AFOLU, and process and fugitive emissions sectors increased under all scenarios since there were no proposed reduction measures in these sectors in the PCAP. According to the results of the baseline emissions inventory, more than 89% of the GHG emissions were generated from the energy and transportation sectors. Hence the focus of reduction targets in this PCAP was in the energy and transportation sectors. A detailed description of methodology and results can be found in the appendix.

GHG Emissions Projections

Results of GHG emissions for the three scenarios in the Tampa-St. Petersburg-Clearwater MSA are presented in this section. In the BAU scenario GHG reductions due to decarbonatization of grid electricity and fuel efficiency standards are considered and the PCAP measures are not implemented. In the PCAP scenarios, however, GHG reduction measures for medium and high reduction actions are fully implemented. Projections are reported for near-term (2030) and long-term (2050) periods.

Forecasting GHG emissions is needed to understand the dynamics of GHG emissions under different reduction scenarios. It allows us to identify the various reduction measures that would achieve the stated goals. The GHG emissions inventory and projections are the basis for the climate action plan. In this report different reduction measures have been considered under the medium and high scenarios. The appendix will provide a detailed profile of emissions reductions within the Tampa-St. Petersburg-Clearwater MSA. It provides information that serves as a reference for the counties to implement projects that will count towards these reductions.

Emissions Projections Key Findings

Figure 12 and Table 2 show communitywide projections under three scenarios: business as usual, medium, and high. The largest GHG reductions occur with the implementation measures in the high scenario, with a reduction of approximately 63% of GHG emissions from 2021 to 2050. In the BAU scenario, the GHG projections decrease by approximately 26% from 2021 to 2050. The corresponding reductions for the medium scenario were 51%.

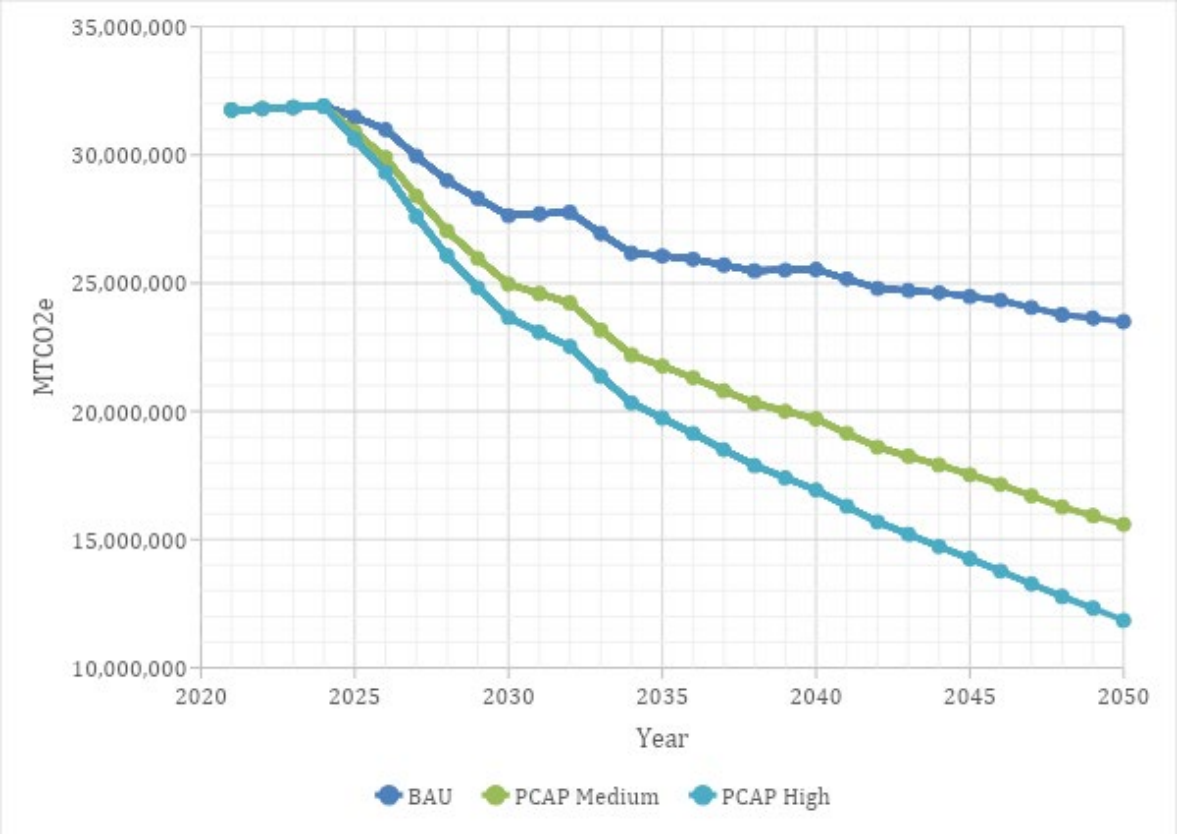


Figure 12. Projected MTCO2e Emissions with Reductions Applied per Scenario.

	MT CO_2e			Percent Reduction	
Scenario	**2021**	**2030**	**2050**	**2030**	**2050**
BAU	31,747,379	27,639,800	23,498,680	12.94%	25.98%
Medium	31,747,379	24,958,922	15,589,095	21.38%	50.90%
High	31,747,379	23,667,670	11,844,115	25.45%	62.69%

Table 2. $MTCO_2e$ emissions with BAU, medium, and high implementation with reductions applied per scenario and reduction percentages against 2021.

Table 3 shows GHG projections in all sectors under each scenario. The highest GHG emissions reductions come from the residential energy sector for the high scenario, where emissions decrease by 93% in 2050 due to the proposed reduction targets. The second most impactful sector is the commercial energy sector with 90% of GHG emissions reductions by 2050 under the same scenario, followed by the transportation sector with a 61% decrease in emissions. However, solid waste, AFOLU, and process and fugitive emissions increase in all scenarios since there are no reduction measures considered in this PCAP. Reductions in these sectors will be considered in the CCAP. It is also important to note that GHG reduction based on carbon capture in AFOLU has not been included in the projection's estimates.

	Baseline	Business as Usual		Medium		High	
Sector	**2021**	**2030**	**2050**	**2030**	**2050**	**2030**	**2050**
Residential Energy	6,964,755	4,963,563	3,756,678	4,305,666	1,829,263	3,769,713	566,459
Commercial Energy	5,901,614	4,409,467	3,549,948	3,780,485	1,768,407	3,428,234	500,761
Industrial Energy	1,521,203	1,265,904	1,109,724	1,265,904	1,109,724	1,265,904	1,109,724
Transportation and Mobile Sources	13,723,858	13,196,401	10,935,636	11,802,402	6,735,007	11,399,354	5,520,477
Solid Waste	1,537,915	1,709,707	1,935,012	1,709,707	1,935,012	1,709,707	1,935,012
AFOLU	255,605	284,157	321,604	284,157	321,604	284,157	321,604
Process & Fugitives	1,265,883	1,407,288	1,592,740	1,407,288	1,592,740	1,407,288	1,592,740
Upstream Activities	576,546	403,313	297,338	403,313	297,338	403,313	297,338
Total $MTCO_2e$	**31,747,379**	**27,639,800**	**23,498,680**	**24,958,922**	**15,589,095**	**23,667,670**	**11,844,115**

Table 3. $MTCO_2e$ emissions for each sector through the scenario of BAU, medium, and high.

Greenhouse Gas Reduction Measures

Climate adaptation and mitigation are crucial to responding to the impacts of climate change because they each focus on a different aspect of the multifaceted problem. Adaptation actions will reduce the short-term impacts of climate change for residents, businesses, and infrastructure including resiliency measures. More importantly, mitigation is necessary to reduce GHGs in the atmosphere from anthropogenic (economic activity) sources. By addressing the root cause of climate change through emissions reductions, the long-term impacts of climate change will be reduced.

Regionally Selected Projects

Jurisdictions and partners were identified to help collect information about existing projects and future needs of the region. Through this process, we have been able to identify specific needs of the region by specific sector.

Sector	Project
Energy	Regional solar feasibility and installation
	Solar storage for public facilities
	Energy efficiency program for fire stations, schools, and community facilities
	Street Light Conversion
	Regional Hydrogen Hubs
Transportation	Expansion of public transit network with expanded routes
	Expand Ridership for Public Transit
	Development of EV mapping and installation of regional charging hubs
	Incentivize EV Purchases
	Public/ Private Partnerships for EV Charging
	Alternate Fuels (CNG, Ethanol, & Hydrogen)
	Converting School Buses to EV
Industrial	Transition to EV Fleet with Solar Powered/Covered Parking & Charging
	Regional Incentives for New & Exiting Industrial Parks & Data Centers to Conserve/Reduce Energy
Building	Regional EV Charging Stations at Buildings
	District Chilling with Reclaimed H2O
Carbon Removal	Local Food Systems, Education, & Public Awareness

	Carbon Capture at Waste to Energy (WTE) /Port
	Regional Food Policy
	Youth Farm
	Tree Farming
	Incentives for Green Roofs Program
	Community Resiliency Hubs
	Green Corridor
Waste, Water, & Sustainable Materials	Reduction of organics to landfills and WTE facilities through incentives
	Regional Education for Proper Recycling
	Energy Efficiency at Wastewater Facilities
	Waste Disposal GHG Reductions

Table 4. Identified high-priority regional implementation project ideas within each sector.

Near-Term, High-Priority, Implementation Measures

Several selection factors were used to help identify near-term, implementation ready projects for the Tampa-St. Petersburg-Clearwater MSA PCAP included those that were recommended by prior regional sustainability plans; provided significant emission reductions from baseline inventories; maximized benefits while minimizing costs; appeared feasible and cost effective to implement and uniquely addressed the needs of the communities. More importantly, transportation and mobile combustion as well as energy use by residential, commercial, and industrial facilities were identified as two of the major sources of emissions that need addressing. Prioritizing projects in these sectors will allow for the most significant GHG reduction in a short amount of time.

After careful consideration, in a process that involved several stakeholders, the team from Tampa-St. Petersburg-Clearwater MSA identified multiple strategies for implementation in two sectors, (a) transportation and mobile combustion as well as (b) energy use by residential, commercial, and industrial facilities were to reduce GHG emissions. The strategies were selected with their potential to provide maximum impact, feasibility, and timeliness for implementation as well as significant cost-benefits. Below, brief explanations about projects that provide direct GHG reductions are provided, including calculations and assumptions in each category. For the Phase II of the CPRG program, many of will be considered for implementation in community-based centers, resiliency centers, or emergency shelters that will benefit low-income areas in the region. The full analysis of the GHG reduction measures can be found in Appendix C.

Legend	
Potential GHG Reduction	**Cost to Implement**
Indirect- No directly measurable GH reductions but helps create infrastructure for other projects that will reduce emissions. **Low-** Less than 20,000 $MTCO_2e$ **Medium-** 20,000-200,000 $MTCO_2e$ **High-** More than 200,000 $MTCO_2e$	**$ -** $0 - $25,000,000 **$$ -** $25,000,000 - $100,000,000 **$$$ -** $100,000,000 +

Transportation and Mobile Combustion

Description	Potential GHG Reduction	Schedule	Cost to Implement	Implementing Agency	Location	Potential Funding Sources	Tracking Metrics
Expansion of public transit network with expanded routes	Medium	1 to 5 years	$$	MSA Counties, Cities, and Other Governments	Tampa-St. Pete-Clearwater MSA	Federal, State, County, & City	% reduction in VMT % of network increase (routes and buses)
Expand Ridership for Public Transit	High	1 to 3 years	$	MSA Counties, Cities, and Other Governments	Tampa-St. Pete-Clearwater MSA	Federal, State, County, & City	% reduction in VMT % of the increase in ridership
Development of EV mapping and installation of regional charging hubs	Indirect	3 to 5 years	$	MSA Counties, Cities, and Other Governments	Tampa-St. Pete-Clearwater MSA	Federal, State, County, & City	% reduction in VMT % increase in EV charging stations & EV vehicles
Incentivize EV Purchases	High	3 to 5 years	$$	MSA Counties, Cities, and Other Governments	Tampa-St. Pete-Clearwater MSA	Federal, State, County & City	% reduction in VMT % of EV increase
Public/ Private Partnerships for EV Charging	Indirect	1 to 3 years	$	MSA Counties, Cities, and Other Governments	Tampa-St. Pete-Clearwater MSA	Federal, State, County, City & Private	% reduction in emissions % increase in EV charging stations & EV vehicles
Alternate Fuels (CNG, Ethanol, & Hydrogen	Indirect	1 to 5 years	$$$	MSA Counties, Cities, and Other Governments	Tampa-St. Pete-Clearwater MSA	Federal, State, & Private	% reduction in VMT % increase in alternate fuel vehicles
Converting School Buses to EV	Low	3 to 5 years	$$$	MSA Counties, Cities, and Other Governments	Tampa-St. Pete-Clearwater MSA	Federal, State, & County	% reduction in emissions % of EV school buses

Table 5. Implementation-ready projects in the transportation and mobile combustion sector.

Energy

Description	Potential GHG Reduction	Schedule	Cost to Implement	Implementing Agency	Location	Potential Funding Sources	Tracking Metrics
Regional solar feasibility and installation (Schools, community facilities, fire stations, resiliency hubs, and others)	High	1 to 5 years	$$$	TBRPC, MSA Counties, Cities, and Other Governments	Tampa Bay Region	Federal, County, & City	% of energy from renewables
Solar storage for public facilities	High	3 to 5 years	$$$	TBRPC, MSA Counties, Cities, and Other Governments	Tampa Bay Region	Federal, State, Couty, & City	% of energy from renewables
Energy efficiency program for fire stations, schools, and community facilities	Medium	1 to 3 years	$$	TBRPC	Tampa Bay Region	Federal, State, Couty, & City	% of energy (kWh) reduction
Street Light Conversion	Medium	1 to 3 years	$$	TBRPC, MSA Counties, Cities, and Other Governments	Tampa Bay Region	County & City	% of energy (kWh) reduction
Regional Hydrogen Hubs	Indirect	5 years	$$$	MSA Counties, Cities, & Other Governments	Tampa Bay Region	Federal, County, & City	% of energy (kWh) reduction
Waste to Energy – Carbon Capture	Medium	3 to 5 years	$$$	MSA Counties & Cities	Tampa Bay Region	Federal, State, County, & City	% reduction in GHG % carbon capture

Table 6. Implementation-ready projects in the energy sector.

Benefits Analysis

The implementation of the measures included in this PCAP are anticipated to have a broad range of benefits. This section presents benefits of GHG reduction measures in terms of reduced co-pollutants from power generation facilities and vehicles. These benefits are analyzed using two EPA tools: AVoided Emissions and geneRation Tool (AVERT) and CO-Benefits Risk Assessment Health Impacts Screening and Mapping Tool (COBRA). The analyses allow us to estimate improvements in air quality, public health and related economic benefits. This report considers only criteria air pollutants based on the following co-pollutants: sulfur dioxide (SO_2), nitrogen oxides (NO_x), fine particulate matter ($PM_{2.5}$), volatile organic compounds (VOC) and ammonia (NH_3).

Inventory of Co-Pollutants

The baseline Criteria Air Pollutants (CAP) for the Tampa-St. Petersburg-Clearwater MSA were extracted from EPA's 2020 National Emissions Inventory. County-level co-pollutants for the sectors targeted by the priority measures (Energy and transportation) are shown in Table 7. The co-pollutants from the energy sector represent those emitted from electricity via combustion that are located in the counties. Co-pollutants from the transportation sector are derived from on-road and non-road mobile transportation sources, which include: Mobile on-road diesel heavy duty, mobile on-road light duty, mobile on-road non-diesel heavy duty, mobile on-road non-diesel light duty, non-road equipment diesel, non-road equipment non-diesel and other sources.

Table 7. Co-pollutant emissions reductions anticipated from implementation of the proposed PCAP measures in the Tampa-St. Peterburg-Clearwater MSA (Four counties).

Sector/ County		SO_2 (tons)	NO_x (tons)	$PM_{2.5}$ (tons)	VOC (tons)	NH_3 (tons)
Energy for electricity generation						
	Hillsborough	866.0	29.1	254.3	162.0	51.5
	Pinellas	15.8	5.7	171.0	14.6	0.0
	Pasco	8.5	3.1	102.7	69.2	7.0
	Hernando	-	-	-	-	-
Transportation						
	Hillsborough	45.8	92.3	624.5	6,375.0	373.0
	Pinellas	27.5	62.2	376.5	4,624.0	213.5
	Pasco	16.4	35.3	192.3	2,390.0	136.5
	Hernando	6.1	14.5	70.3	1,112.0	53.9

Source: (NEI, 2020)

Co-pollutants Emission Changes from Priority Measures

Table 8 lists anticipated changes in co-pollutants for each measure considered in this PCAP. The co-pollutant reductions were estimated using EPA's AVERT tool. Additional details about the assumptions and methods for quantification of emissions changes for each measure are included in the footnote.

Table 8. Co-pollutant emissions reductions anticipated from implementation of the proposed PCAP measures in the Tampa-St. Peterburg-Clearwater MSA (Four counties).

Measure description	SO_2(lbs)	NO_x (lbs)	$PM_{2.5}$(lbs)	VOC (lbs)	NH_3 (lbs)	Notes
Energy efficiency programs	-50	-4,210	-440	-200	-200	EE[1]
Regional solar installation and storage	-310	-33,890	-3,510	-1,480	-1,670	Regional solar[2]
Increasing EV and charging stations	-10	-3,180	-20	-180	-210	EV busses[3]
Total	-370	-41,280	-3,970	-1,860	-2,080	

[1] This is based in deep energy efficiency retrofits in schools, fire stations and street lights that will save about 66.7GWh annually. Reduction in co-pollutant emissions are derived from reduced power generation form high polluting fuel sources.
[2] Regional utility solar include solar PV installations in schools, community related facilities and fire stations. It estimates a total of 270.8 MW solar installation.
[3] This measure considers converting 345 buses to EV buses along with charging stations.

Health and related benefits

Based on the co-pollutants reduction, economic value of the health benefits associated with clean energy policies, energy efficiency and other program related measures were estimated. These benefits were estimated using EPA's COBRA tool. The data for analysis was imported from the AVERT tool. COBRA allows for mapping and visually represent the air quality, human health, and health-related economic benefits from reductions in emissions of $PM_{2.5}$, SO_2, NO_X, NH_3, and VOCs.

	Change in Incidence	Monetary Value
Total Health Benefits (low/high)	-	$787,628/$1,778,718
Mortality (low/high)	0.07/0.16	$774,806/$1,753,471
Nonfatal Heart Attacks (low/high)	0.008/0.084	$1,498/$13,922
Infant Mortality	0.00	$4,081
Hospital Admits, All Respiratory	0.02	$1,040
Hospital Admits, Cardiovascular (except heart attacks)	0.02	$675
Acute Bronchitis	0.07	$45
Upper Respiratory Symptoms	1.31	$57
Lower Respiratory Symptoms	0.92	$26
Emergency Room Visits, Asthma	0.04	$22
Asthma Exacerbation	1.36	$100
Minor Restricted Activity Days	43.47	$3,810
Work Loss Days	7.34	$1,468

Table 9. Health benefits of co-pollutant reduction from the PCAP measures in the Tampa-St. Petersburg-Clearwater MSA.

Low Income/Disadvantage Communities Benefits Analysis

LIDAC Selection Methodology

The Climate & Economic Justice Screening Tool (CEJST) was utilized to identify LIDACs in Hillsborough, Pinellas, Pasco, and Hernando Counties. This tool facilitated a detailed analysis based on specific census tract numbers and community names, integrating geographic data to pinpoint these communities accurately.

Our approach involved several key steps:

1. Data Acquisition: Data was downloaded for each county directly from the screening tool, categorizing it by Disadvantaged Status and Census Tract number.
2. Geographic Mapping: Utilizing a mapping tool, matched Census Tract numbers with their geographic areas, and identified broader LIDAC communities within the four counties.
3. Data Compilation: The collected data was systematically compiled into a spreadsheet ensuring organized access to this crucial information.

In addition to geographical identification, utilization of the housing indicators provided by the same tool to gain deeper insights into the socioeconomic status of these communities. This involved assessing the Low-Income Percentile, Housing Cost Percentile, and levels of Historic Underinvestment for each identified disadvantaged community.

The LIDAC selection are characterized by several socioeconomic indicators, crucial for understanding the challenges faced by LIDACs:

1. Low Income Percentile: This metric, representing households earning less than or equal to twice the federal poverty level (excluding higher education students), highlighted communities considered disadvantaged at or above the 65th percentile.
    - Low Income Percentile (CEJST) from 2015-2019
2. Housing Cost Percentile: We analyzed the proportion of households earning below 80% of the area's median family income and spending over 30% of their income on housing. Communities were considered disadvantaged at or above the 90th percentile, in conjunction with low income.
    - Housing Cost Percentile (CEJST) from 2014-2018
3. Health Impacts: Cities are identified as disadvantaged if they are in census tracts that are at or above the 90th percentile for asthma OR diabetes OR heart disease OR low life expectancy AND are at or above the 65th percentile for low-income.
    - Asthma (Percentile) from 2016-2019
    - Low Life Expectancy (Percentile) from 2010-2015
4. Energy Impacts: Cities are identified as disadvantaged if they are in census tracts that are at or above the 90th percentile for energy cost OR PM2.5 in the air AND are at or above the 65th percentile for low income.
    - Energy Burden (percentile) from 2018
    - PM2.5 in the air (percentile) from 2017

5. Transportation Impacts: Cities identified as disadvantaged if they are in census tracts that are at or above the 90th percentile for diesel particulate matter exposure OR transportation barriers OR traffic proximity and volume AND are at or above the 65th percentile for low income.
    - Diesel Particulate Matter Exposure (Percentile) form 2014
    - Transportation Barriers (Percentile) from 2022
    - Traffic Proximity and Volume (Percentile) from 2017

Further, the EPA's EJScreen tool was employed to supplement the data with insights into home ownership patterns within these communities. The 'Home Ownership' metric, denoting the average percentage of the population living in owner-occupied housing, was aggregated, and averaged using blockgroup numbers from EJScreen.

LIDAC Selection Findings

By synthesizing these data points, it allowed for identification of specific disadvantaged communities in Pinellas and Hillsborough Counties that were deemed 'project ready'. Project readiness was estimated based on criteria including a minimum of 70% owner-occupied housing, a Low-Income Percentile between the 65th and 85th, and a Housing Cost Percentile between the 65th and 95th. Historic underinvestment was also taken into consideration for a more comprehensive understanding.

These highlighted communities have informed a detailed stakeholder list for each county. This list is instrumental in assembling community engagement meeting invite lists, tailored to the needs and characteristics of each location.

Understanding that the data collected are from a variety of years starting in 2010—2022. Due to changes in population in the MSA, some areas identified may not be as disadvantaged as the tools have stated. Comprehensive LIDAC data is found in Appendix D.

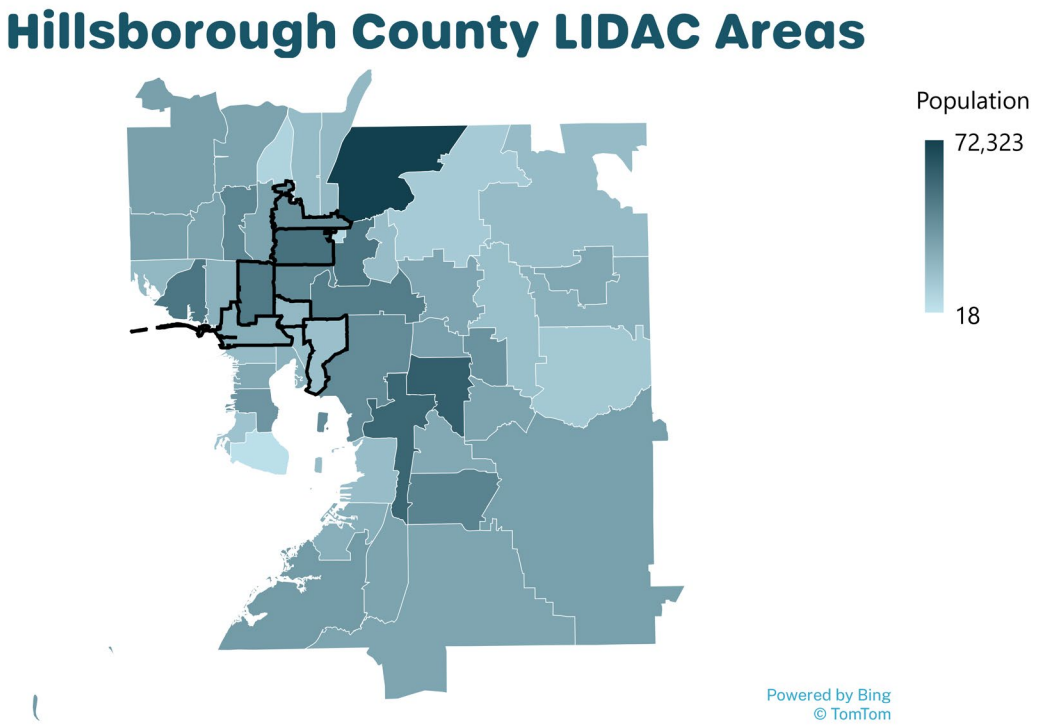


Figure 12. Map highlights LIDAC areas over the 50% threshold from indicator analysis in Hillsborough County.

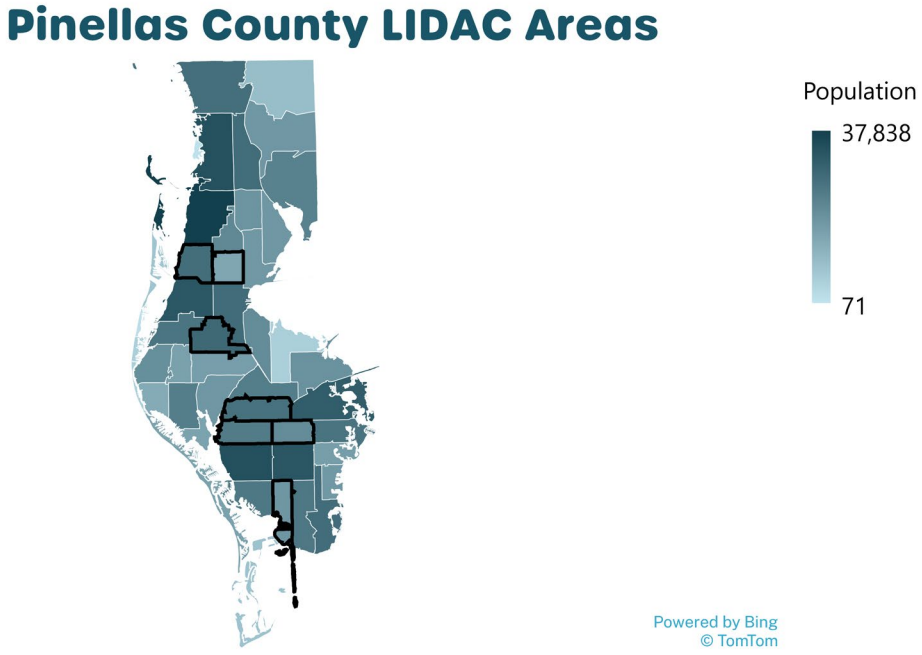


Figure 13. Map highlights LIDAC areas over the 50% threshold from indicator analysis in Pinellas County.

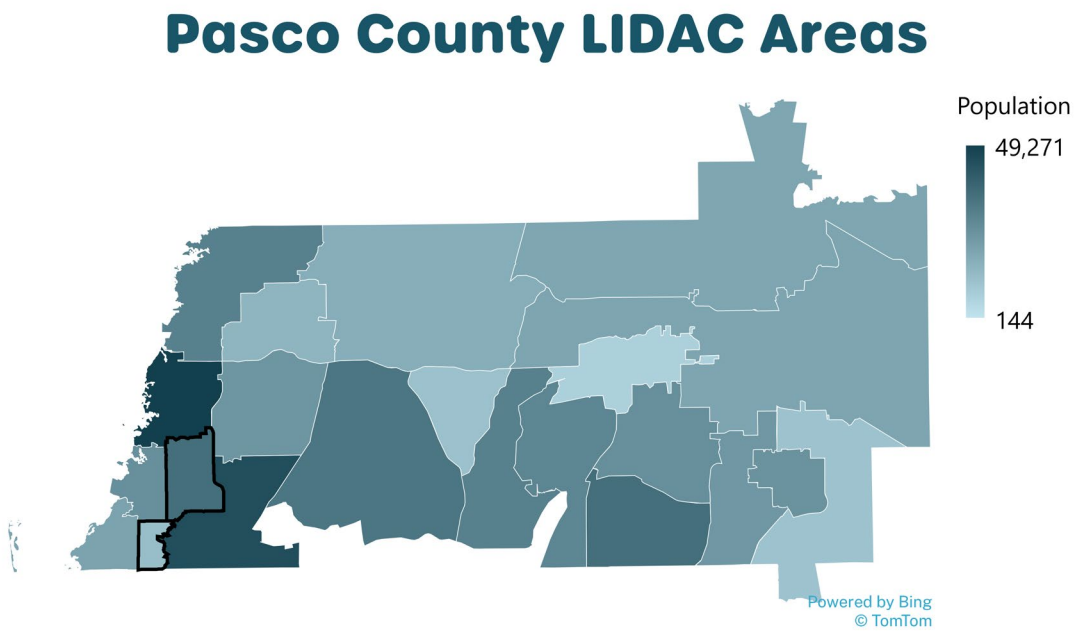


Figure 14. Map highlights LIDAC areas over the 50% threshold from indicator analysis in Pasco County.

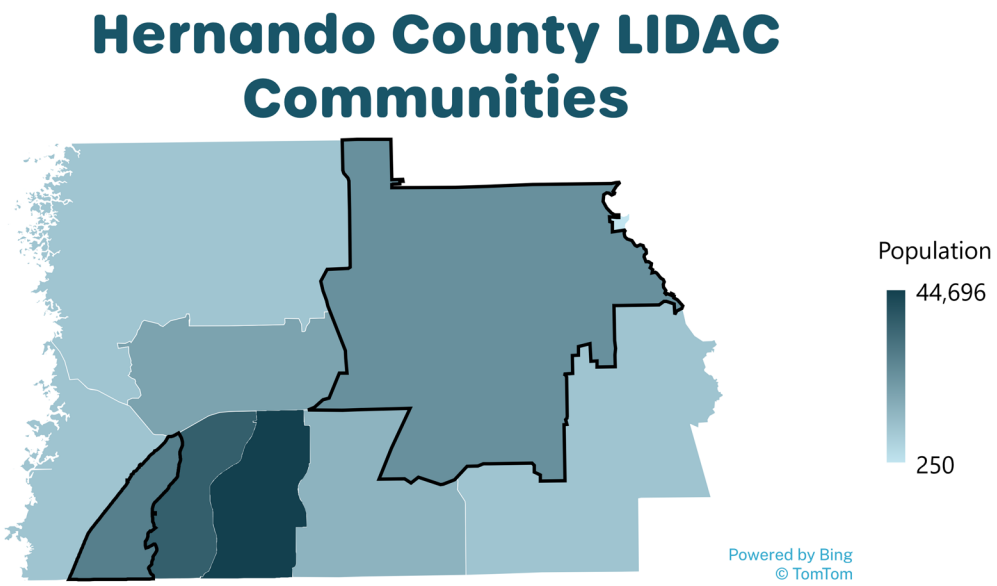


Figure 15. Map highlights LIDAC areas over the 50% threshold from indicator analysis in Hernando County.

Figure 15. Map highlights LIDAC areas over the 50% threshold from indicator analysis in Hernando County.

LIDAC Qualitative Benefits Analysis

Transportation and Mobile Sources

Identified Reduction Measures	Qualitative Description of Benefits
Expansion of public transit network with expanded routes	Reduction of GHG and co-pollutants Workforce development Community involvement in planning Increased understanding of community benefit Public health benefits Reduction of traffic
Expand Ridership for Public Transit	Reduction of GHG and co-pollutants Reduction in air pollution Workforce development Community involvement in planning Increased understanding of community benefit Public health benefits Reduction of traffic
Development of EV mapping and installation of regional charging hubs	Reduction of GHG and co-pollutants Workforce development Increased understanding of community benefit
Incentivize EV Purchases	Reduction of GHG and co-pollutants Increased understanding of community benefit Public health benefits
Public/ Private Partnerships for EV Charging	Reduction of GHG and co-pollutants Workforce development Community involvement in planning Reduction of GHG and co-pollutants benefit Reduced exposure to air pollution Public health benefits
Alternate Fuels (CNG, Ethanol, & Hydrogen	Reduction of GHG and co-pollutants Workforce development Community involvement in planning Increased understanding of community benefit Public health benefits

Table 10. LIDAC benefits analysis of transportation and mobile source sector GHG reduction measures.

Energy

Identified Description	Qualitative Description of Benefits
Regional solar feasibility and installation (Schools, community facilities, fire stations, resiliency hubs, and others)	Reduction of GHG and co-pollutants Workforce development Reduction of energy bills Community involvement in planning Increased understanding of community benefit Public health benefits Resiliency for communities
Solar storage for public facilities	Reduction of GHG and co-pollutants Workforce development Reduction of energy bills Community involvement in planning Increased understanding of community benefit Public health benefits Resiliency for communities
Energy efficiency program for fire stations, schools, and community facilities	Reduction of GHG and co-pollutants Workforce development Reduction of energy bills Community involvement in planning Increased understanding of community benefit Public health benefits
Street Light Conversion	Reduction of GHG and co-pollutants Workforce development Reduction of energy bills Community involvement in planning Increased understanding of community benefit Public safety benefits
Regional Hydrogen Hubs	Reduction of GHG and co-pollutants Workforce development Reduction of energy bills Community involvement in planning Increased understanding of community benefit Reduced exposure to air pollution Public health benefits
Waste to Energy – Carbon Capture	Reduction of greenhouse gases Workforce development Community involvement in planning Increased understanding of community benefit Reduced exposure to air pollution Public health benefits

Table 11. LIDAC benefits analysis of the energy sector GHG reduction measures.

Review of Authority to Implement

The TBRPC does not have authority to implement. Any projects done by the TBRPC are at the discretion of the counties and cities policies to implement. The policies identified are from adopted documents from jurisdictions in the MSA and they are currently being implemented. A list of policies by counties and cities are in Appendix E for the Authority to Implement.

Next Steps

Greenhouse Gas Inventory

Inventory Collection

The next steps in developing the Comprehensive Climate Action Plan (CCAP) involve obtaining high-quality data from jurisdictions and establishing connections with utilities in the Tampa-St. Petersburg-Clearwater MSA. Utilizing this data will enable making recommendations for reduction measures. Due to time constraints for this deliverable, data from local governments in the water sector is missing. Collaboration with all major jurisdictions will continue to obtain accurate data.

Jurisdictions and Agency Stakeholders Engagement

Jurisdictions and agency stakeholders will play a major role in the development of the Comprehensive Climate Action Plan. They will help set goals and flesh out projects, programs, and policies in the Tampa-St. Petersburg-Clearwater MSA. These stakeholders will assist in creating goals and metrics to ensure the plan's utilization after the CPRG program has ended.

Community Engagement

LIDAC Data Collection

The next steps involve using the P2 EJ Facility Mapping Tool from the US EPA to identify businesses and facilities in or adjacent to these communities. This will enhance the stakeholder list and provide context for air pollution from greenhouse gas emissions affecting these areas. Additionally, internet searches will be conducted to identify non-profit organizations serving these communities, further expanding the stakeholder and meeting invite lists and identifying actionable projects in LIDAC areas.

As an integral part of the approach, we are in the process of developing a comprehensive mapping and data compilation strategy. This initiative aims to enhance understanding of the geographical distribution and key characteristics of LIDAC communities. Advanced mapping tools will be utilized (details to be determined) to create detailed visual representations of these communities. These maps will play a crucial role in future phases of the project, aiding in the identification of resources, risk areas, and the precise targeting of interventions. Further details on the mapping process, tools used, and findings will be provided as this phase progresses.

Community Outreach

Educational Partnerships

Utilizing data from the Climate & Economic Justice Screening Tool, EJ Screen, and P2 EJ Facility Mapping Tool, identified middle and high schools in low-income and disadvantaged communities have been identified for partnership. Stakeholder identification has already occurred, and there is an intention to collaborate with organizations focused on air quality to develop and implement an educational curriculum, which will be shared with students and their families. This initiative aims to foster community connections and inspire students to explore environmental careers. Additionally, local organizations with existing environmental projects will be engaged to create opportunities that align with the educational programs.

Ongoing Advisory Council Engagement

There will be continued meetings with the Advisory Council to collate information and enhance communication strategies across the MSA. Partnerships will continue to expand efforts and ensure that all community-based organizations are involved in this process.

Community Inclusion in Project Implementation

After the completion of the bidding process and announcement of awards, plans include organizing meetings in or near partnered schools. During these meetings, project details will be discussed, and the community will be actively involved in the implementation process.

Appendix A

Community Emissions Inventory Results

Sector	Fuel or source	2021 Usage	Usage unit	2021 Emissions ($MTCO_2e$)
Residential energy	Electricity (TECO and Duke Energy)	17776406.4	MWh	6742800
	Natural Gas	3018925.73	MMBtu	160566
	Distillate Fuel Oil	15170.48	MMBtu	1129.5
	HGL	970910.79	MMBtu	60254
Residential energy total				**6,964,750**
Commercial energy	Electricity	13760817.9	MWh	5219644
	Natural gas	9264902.17	MMBtu	492768
	Distillate Fuel Oil	1548931.01	MMBtu	115328
	HGL	1190382.17	MMBtu	73874
Commercial energy total				**5,901,614**
Industrial energy	Electricity	2240049.50	MWh	849678
	Natural gas	12652501.0	MMBtu	671525
Industrial energy total				**1,521,203**
On-road transportation	Gasoline (passenger vehicles)	$1.781x10^{10}$	Annual VMT	7181900
	Diesel (passenger vehicles)	$2.128 x10^{9}$	Annual VMT	3065500
Aviation	Jet A (Jet Kerosene)	$1.7400 x10^{7}$	MMBtu	1418489
Off-Road	Diesel	$1.692E x10^{7}$	MMBtu	1251700
	Gasoline	6,391,713.2	MMBtu	458600
	CNG	169,975.051	MMBtu	10893
	LPG	1,422,767.6	MMBtu	87638
Waterborne	Diesel	279,440.416	MMBtu	20679
	Gasoline	929,580.234	MMBtu	66883
	Diesel (Commercial Marine Vessels)	1,972,803.2	MMBtu	145858
Rail	Diesel (passenger)	5,467.23	MMBtu	407.7
	Diesel (operation)	204,844.508	MMBtu	15282
Transportation total				**13,723,829.70**

Sector	Fuel or source	2021 Usage	Usage unit	2021 Emissions ($MTCO_2e$)
Solid Waste	Waste Generated	3,138,597.00	Tons	1053590
	Annual Mass of Municipal Solid Waste (MSW)	1,397,319.00	Short Tons	484325
Solid waste total				**1537915**
AFOLU	Forest Disturbances	127186	MTCO2e	127186
	Forest to Settlement	22253	MTCO2e	22253
	Forest to Grassland	27435	MTCO2e	27435
	Forest to Other Non-Forest	25531	MTCO2e	25531
	Trees Outside of Forests (emissions)	53200	MTCO2e	53200
AFOLU total				**255,605.00**
Process & Fugitive Emissions	Fugitive Emissions from Natural Gas Distribution	43263.3	MTCO2e	43263.3
	Facilities	1222619.4	MTCO2e	1222619.4
Process & Fugitive total				**1265882.7**
Upstream Impact of Activities	Residential Electricity	17776406.43	MWh	303426
	Commercial Electricity	13760817.93	MWh	234884
	Industrial Electricity	2240049.503	MWh	38236
Upstream Impact of Activities total				**576,546**
			Total community-wide emissions	**31,747,345**
AFOLU Emissions Removal		Total Removal	MTCO2e	-1,553,630
			Total net emissions	**30,193,715**

Table A1. Metric tons of CO2e for each sector and source.

Community Emissions Inventory Methodology Details

Energy

The following tables show each activity, related data sources, and notes on data gaps.

Activity	Data Source	Data Gaps/Assumptions
Communitywide		
Residential, commercial, and industrial electricity consumption	U.S. Energy Information Administration (EIA) and the State and Local Planning for Energy (SLOPE) Platform	The consumption for the state of Florida was obtained from the EIA dataset. Downscaling factors for each county were estimated from the SLOPE platform. Electricity consumption at the county level was calculated by multiplying the downscaling factor and the Florida level electricity consumption from EIA. Emissions for industrial energy from other fuels types were estimated from FLIGHT data.
Residential, commercial, and industrial natural gas consumption		
Residential and commercial distillate fuel oil consumption		
Residential and commercial HGL consumption		
Commercial motor gasoline Consumption		

Table A2. Energy data sources.

Year	CO_2 (lbs./MWh)	CH_4 (lbs./GWh)	N_2O (lbs./GWh)
2021	832.9	53	7

Table A3. Emissions factors for electricity consumption.

Transportation

Activity	Data Source	Data Gaps/Assumptions
Communitywide		
Vehicle miles traveled	US EPA's National Emissions Inventory (NEI)	Data collected from the 2020 inventory, which is the most recent information released.
Transit ridership		

Table A4. Transportation & mobile combustion data sources.

For vehicle transportation, it is necessary to apply average miles per gallon and emissions factors for CH4 and N2O to each vehicle type. The factors used are shown in Table 5.

Fuel	Vehicle type	MPG	CH_4 g/mile	N_2O g/mile
Gasoline	Passenger car	25.3	0.0084	0.0069
Gasoline	Light truck	18.2	0.0117	0.0087
Gasoline	Heavy truck	5.383557	0.0719	0.0611
Gasoline	Motorcycle	44	0.0084	0.0069
Diesel	Passenger car	25.3	0.0005	0.001
Diesel	Light truck	18.2	0.001	0.0015
Diesel	Heavy truck	6.561615	0.0051	0.0048

Table A5. MPG and emissions factors by vehicle type.

Potable Water and Wastewater

There was no data available from the process emissions from different drinking water and wastewater treatment plants. However, emissions from electricity use by wastewater and water facilities are included in commercial electricity use. Emissions from the wastewater process are expected to be a small fraction of the emissions from electricity consumption.

Solid Waste

Activity	Data Source	Data Gaps/Assumptions
Communitywide		
Waste Generated Annual Mass of MSW	Florida Department of Environmental Protection – Waste Reduction Content	Information for the year 2021 was collected for each of the four counties in the Tampa-St. Petersburg-Clearwater MSA.

Table A6. Solid waste data source.

Agriculture, Forestry and Other Land Use

Activity	Data Source	Data Gaps/Assumptions
Communitywide		
Forest to Other LULUC Emissions Trees Outside of Forests (emissions)	ICLEI's LEARN Report	The most recent information for each sector was used as follows: • 2013 – 2019 for Forest and Land Cover Change, • 2011 – 2016 for Trees Outside Forests, • Gainesville, FL under Select a Similar Location The data was obtained for each county and then added for the Tampa-St. Petersburg-Clearwater MSA.
Forest remaining forest, non-forest to forest and Trees outside of forest (removals)	ICLEI's LEARN Report	GHG removals were estimated from LEARN reports for each county. These were marked as "information only" in ClearPath but the total removals were included in the report to calculate net GHG emissions.

Table A7. AFOLU data source.

Fugitive Emissions

Activity	Data Source	Data Gaps/Assumptions
Communitywide		
Natural Gas	U.S. Energy Information Administration (EIA) and the State and Local Planning for Energy (SLOPE) Platform	The consumption for the state of Florida was obtained from the EIA dataset. Downscaling factor for the county was estimated from the SLOPE platform. The downscaling factor was used to calculate electricity consumption in the residential and commercial sectors at the county level by multiplying the downscaling factor and the Florida level electricity consumption from EIA.
Facilities	EPA Facility Level Information on Greenhouse Gases Tool (FLIGHT)	Data was obtained for the year 2021 for diverse facilities in each county such as cement plants, fertilizer plants, recovery material plants, and so on. The information includes emissions from stationary combustion and production. Then, all data was added for the Tampa-St. Petersburg-Clearwater MSA.

Table A8. Fugitive emissions data source.

Upstream Impact of Activities

Activity	Data Source	Data Gaps/Assumptions
Communitywide		
Transmission losses from residential, commercial, and industrial electricity consumption	U.S. Energy Information Administration (EIA) and the State and Local Planning for Energy (SLOPE) Platform	The consumption for the state of Florida was obtained from the EIA dataset. Downscaling factor for the county was estimated from the SLOPE platform. The downscaling factor was used to calculate electricity consumption in the residential and commercial sectors at the county level by multiplying the downscaling factor and the Florida level electricity consumption from EIA. Grid loss factor of 0.045 was used as an average for TECO and Duke Energy transmission lines.

Table A9. AFOLU data source.

Appendix B

Greenhouse Gas Emissions Projections 2022-2050

Forecasting Methodology

With a completed GHG inventory was completed, GHG emissions were projected using the methodology in ClearPath. The forecast module that was used for emissions projections is shown in Figure B1. The projections are based on the baseline inventory of 2021 and forecast for 2050 under three GHG reduction scenarios: Business as Usual (BAU), PCAP medium, and PCAP high.

The BAU scenario considered average population growth, fuel efficiency standards (CAFE standard), and the National Renewable Energy Laboratory (NREL) grid intensity projections factors for Florida (2022). The medium and high scenarios were modified according to the GHG reduction measures that were identified in the PCAP. Some of the PCAP GHG reduction measures include deep energy efficiency in the residential and commercial sectors, solar PV installations, reductions of VMT, and increasing EV and associated charging stations.

Figure B1. Methodology to create a GHG Forecast on ClearPath.

Create Forecast

The first step in applying this methodology is creating a new forecast using the ClearPath tool. To achieve this, the user selects the "New Forecast" option in the forecast menu, provides a name, and selects a previously created GHG inventory. In this case, the inventory "Tampa-St. Peterburg-Clearwater MSA" is selected to create related forecasting scenarios. Finally, the user writes an end forecast year, which in this case is 2050 (see Figure B2.)

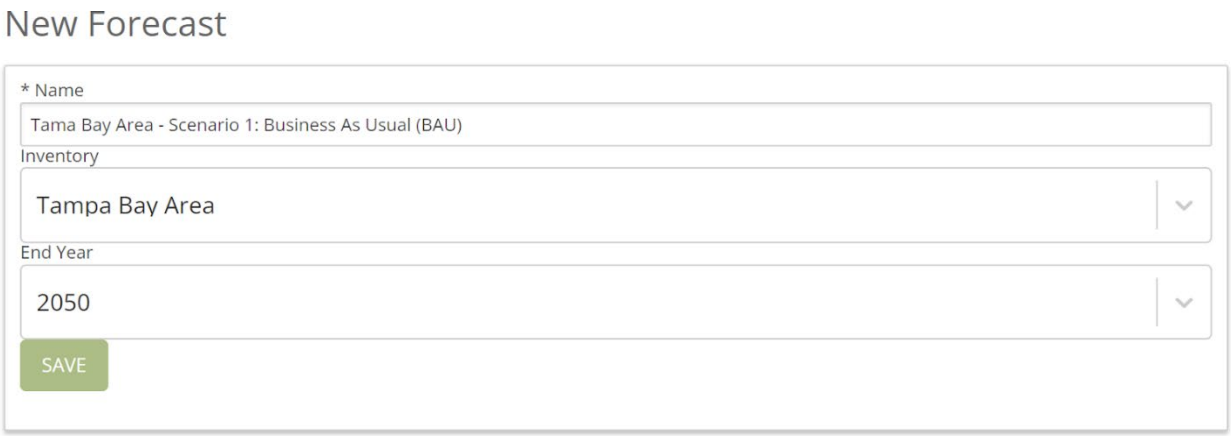


Figure B2. New forecast prompt menu on ClearPath.

Create Growth Rates

Growth rates were applied to estimate how an activity or quantity will change over time (ICLEI, 2024). For the Tampa-St. Petersburg-Clearwater MSA, several growth rates were used for the forecast. The first one is related to the population's estimated growth rate, which was calculated using data from the Projections of Florida Population by County, 2025–2050 (Rayer & Wang, 2022). To calculate the total population growth rate for the TBR, the population for 2021 and subsequent 5-year growth estimates from each county were added until 2050 (see Table B1.) This result was used as the medium population growth rate for GHG emissions projections.

Table B1. Tampa-St. Petersburg-Clearwater MSA baseline population in 2021 and estimated to 2050.

County	2021	2025	2030	2035	2040	2045	2050
Pinellas	964,490	979,500	994,400	1,006,400	1,016,500	1,025,200	1,033,100
Pasco	575,891	623,300	672,400	712,800	746,700	776,300	803,400
Hillsborough	1,490,374	1,595,000	1,702,000	1,786,700	1,857,800	1,919,800	1,976,100
Hernando	196,540	207,600	219,000	228,300	235,900	242,300	248,000
Tampa-St. Peterburg-Clearwater MSA	**3,227,295**	**3,405,400**	**3,587,800**	**3,734,200**	**3,856,900**	**3,963,600**	**4,060,600**

Source. *(Rayer & Wang, 2022)*

The electricity carbon intensity factor was applied from NREL's grid emissions intensity projections for Florida (2022), which can be found in Table B2. The base year data was chosen from the eGRID because it is measured raw data (EPA, 2023); while projections were used from NREL's mid-case scenario projections.

Table B2. NREL's grid electricity growth rates.

End Year	Grid Emissions Intensity (lbs./MWh)
2021	837.5
2024	811.234
2026	738.856
2028	613.017
2030	526.992
2032	533.077
2034	444.606
2036	433.516
2038	413.476
2040	419.319
2042	386.558
2044	382.965
2046	373.463
2048	350.976
2050	343.281

Note. NREL's grid emissions intensity (2022)

For the transportation sector, the Default Carbon Intensity Growth Rates (CAFE Standards) were used (see Table B3). These standards affect the carbon intensity for each mile driven and "are expected to decrease due to mandated improvements in vehicle fuel economy (ICLEI, 2021)".

Table B3. Fuel efficiency projections for the CAFÉ standards.

Forecast Period	Passenger Vehicle/Light-Duty Truck Carbon Intensity Factors
2020-2024	-0.018
2025-2029	-0.018
2030-2034	-0.018
2035-2039	-0.018
2040-2044	-0.018
2045-2049	-0.018
2050-2054	-0.018

Note. ICLEI's ClearPath Reference Sheet – Default Carbon Intensity Factors *(2021)*

The final growth rate was flat population or No action growth rate, indicating that the growth rate would remain "constant." Therefore, the projected GHG emissions for an activity will not change in time.

Apply Growth Rates

Once growth rates and intensity factors were defined, they were applied to each activity and carbon intensity as coefficients.

Sector	Coefficients	Growth Rate Factor
Residential Energy	Growth Rate	Medium Population
	Carbon Intensity Factor (for electricity)	Florida Grid Electricity Projections
Commercial Energy	Growth Rate	Medium Population
	Carbon Intensity Factor (for electricity)	Florida Grid Electricity Projections
Industrial Energy	Growth Rate	Flat Population
	Carbon Intensity Factor (for electricity)	Florida Grid Electricity Projections
Transportation & Mobile Sources	Growth Rate	Medium Population
	Carbon Intensity Factor	CAFE Standards
Solid Waste	Growth Rate	Medium Population
	Carbon Intensity Factor	Flat Population
AFOLU	Growth Rate	Medium Population
	Carbon Intensity Factor	Flat Population
Process and Fugitive Emissions	Growth Rate	Medium Population
Upstream Impacts of Activities	Growth Rate	Medium Population
	Carbon Intensity Factor	Florida Grid Electricity Projections

Table B4. Tampa-St. Petersburg-Clearwater MSA applied growth rates for each sector.

As shown in Table B4, growth rates in industrial activity used flat population growth rate because it is assumed that industrial growth is not following the trend of population growth. For carbon intensity in all electricity consumption, NREL's grid intensity projections for Florida were used.

For solid waste and AFOLU, the carbon intensity factor used was the flat population coefficient. This assumes that GHG emissions per unit of activity will not change over time as there are no changes in the way the activities are performed.

Set Reduction Goals

This section is related to TBRPC's overall reduction goals (see Figure B3). However, any goals set do not affect the calculation of the reduction measures. The goals would be simply represented in the charts by a horizontal dotted line. In our projections, we did not set overall reduction goals. Instead, we used medium and high GHG reduction scenarios based on different PCAP projects.

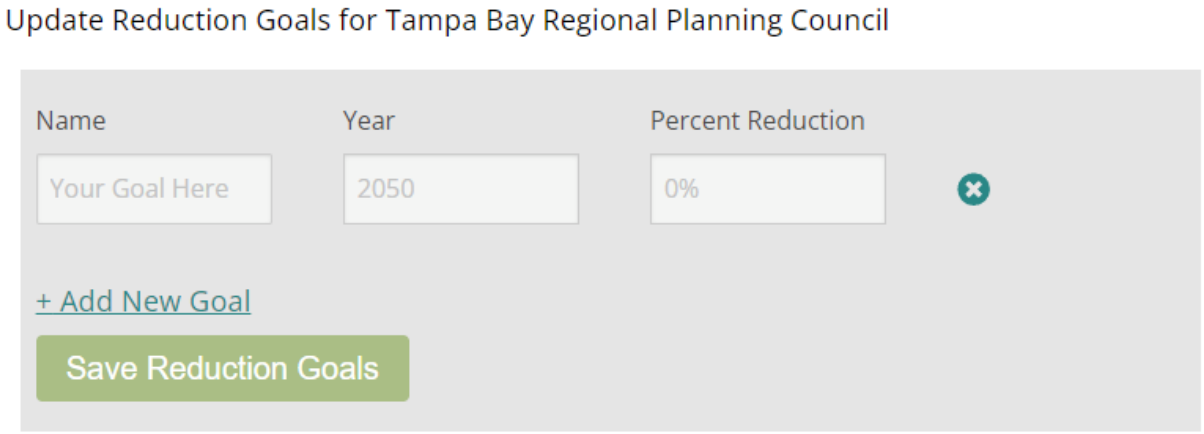


Figure B3. Step 4 in the Forecast Methodology in ClearPath.

Model Reduction Measures

This step of the methodology includes using the calculators available on ClearPath to propose reduction measures. There are three categories of calculators in this step: high-level, detailed, and user-defined. High-level calculators represent a top-down approach, where reduction strategies are grouped (multiple strategies) to address emissions within a sector. The detailed calculators represent a bottom-up approach to address a specific strategy or program that will impact emissions. Finally, user-defined calculators are created by the user outside of ClearPath to evaluate the impact of reduction measures on the activity and then manually input these results in the calculator.

For the TBR projections, high-level calculators were used and selected from the list of reduction strategies (see Figure B4) for the medium and high GHG reduction scenarios. Projections of the medium and high GHG reduction scenarios were based on the BAU scenario.

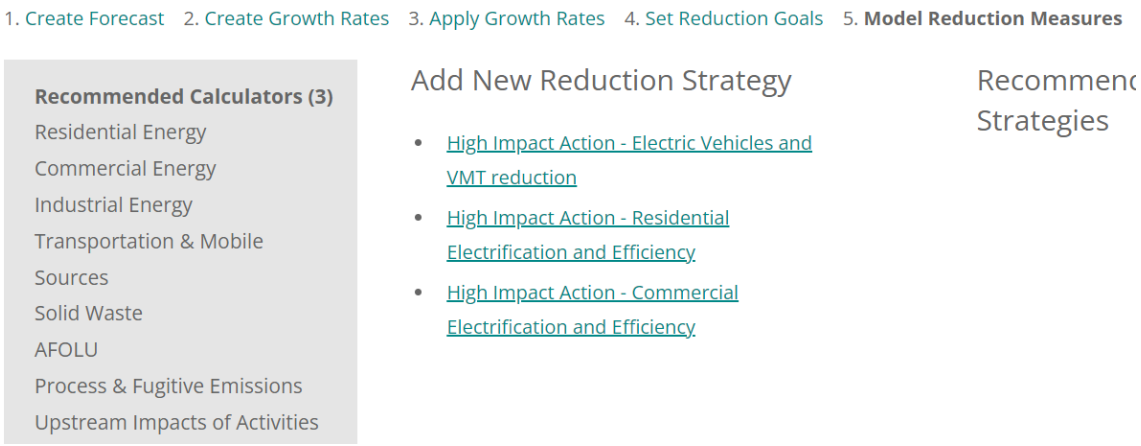


Figure B4. model reduction measures prompt menu on ClearPath.

For the PCAP, the proposed reduction measures for the medium and high scenarios included projects and programs in the energy and transportation sectors. A list of the reduction measures and corresponding reduction targets is shown in Table B5.

Sector	Reduction Measure	Target Percentage	
		Medium	High
Residential Energy	Installation of solar panels on rooftops	5%	10%
	40% energy retrofit savings in a percentage of buildings	5%	10%
Commercial Energy	Installation of solar panels on rooftops	2.5%	5%
	40% energy retrofit savings in a percentage of buildings	2.5%	5%
Transportation and Mobile Sources	Converting On-Road Diesel Vehicles to Electric	5%	10%
	Converting On-Road Gasoline Vehicles to Electric Vehicles	5%	10%
	Expanding public transit network to reduce VMT Vehicles	5%	10%
Streetlighting	Converting street lighting to LED	70%	100%

Table B5. Proposed reduction measures for the Tampa-St. Petersburg-Clearwater MSA.

As shown in Table B5, the energy sector is focused on efficiency and renewable energy, mostly solar on rooftops and infrastructure efficiency measures. In the transportation sector, VMT reduction of various vehicle types and increasing EV along with charging stations are considered. These changes are based on some assumptions that are consistent with recent practices and plans in Florida.

View Results

The final step in the methodology includes creating a New Planning Scenario to apply the different reduction measures created in the previous step. As previously mentioned, this forecast contemplates three different scenarios: BAU, medium, and high. The BAU scenario assumed only changes in grid carbon intensity based on NREL's GRID coefficients from 2024-2050 and fuel efficiency based on CAFE standards. The medium and high scenarios used the BAU as a basis for the additional measures where reduction measures relevant to each scenario were added from a drop-down menu. Once the reduction measures were added, the results were generated where future GHG emissions were plotted. In the medium and high scenarios, the BAU curve was included as a reference to visualize.

Forecast Results

The total community-wide forecast emissions for the BAU, medium, and high scenarios are shown in Figure B5, Figure B6, and Figure B7, respectively. The forecasts are based on the 2021 baseline inventory data.

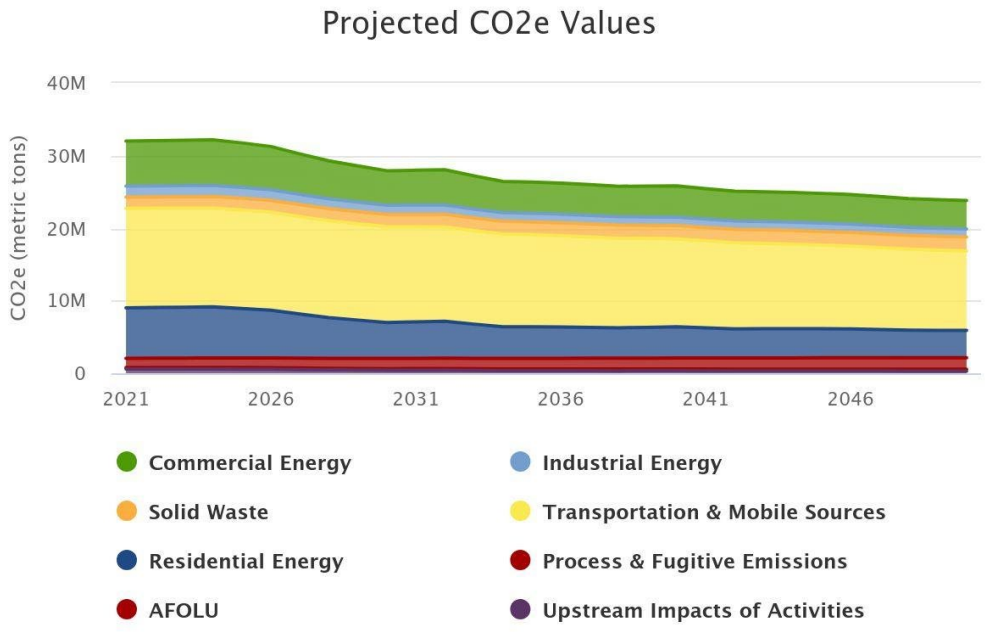


Figure B5. Business as usual scenario for the Tampa-St. Petersburg-Clearwater MSA.

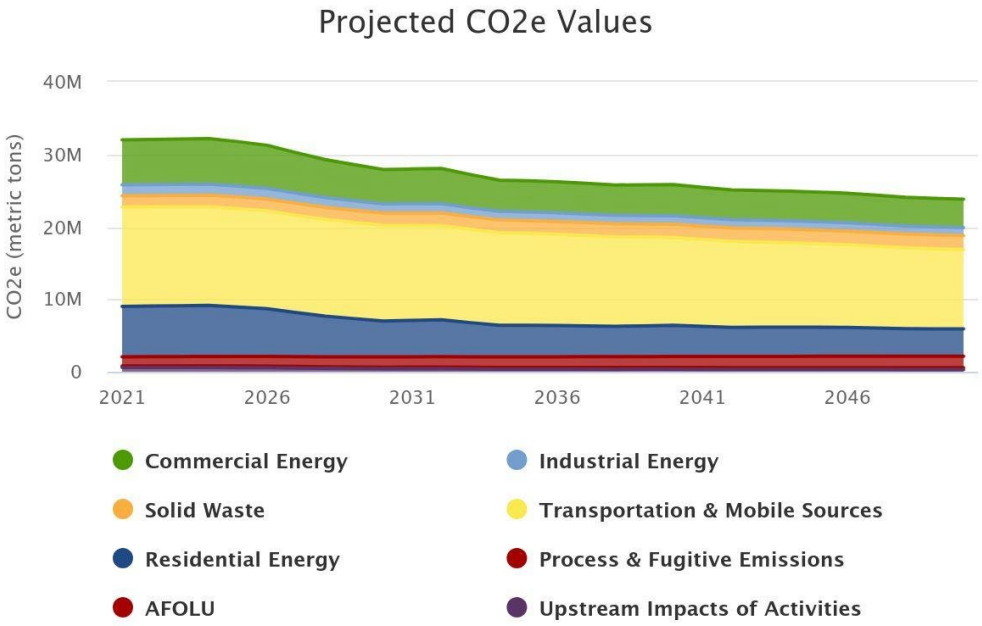


Figure B6. Medium scenario for the Tampa-St. Petersburg-Clearwater MSA.

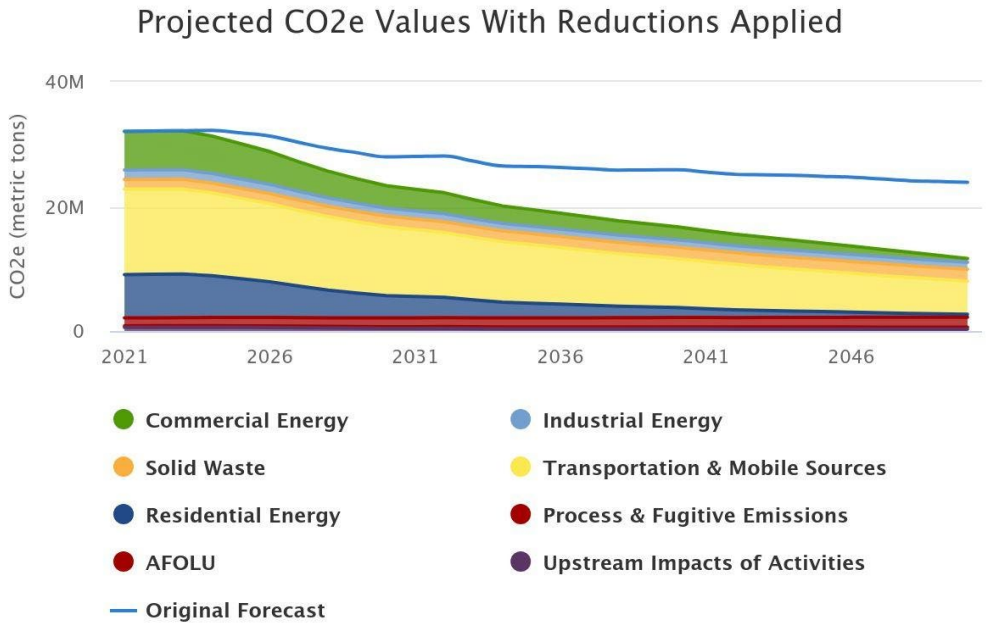


Figure B7. High scenario for the Tampa-St. Petersburg-Clearwater MSA.

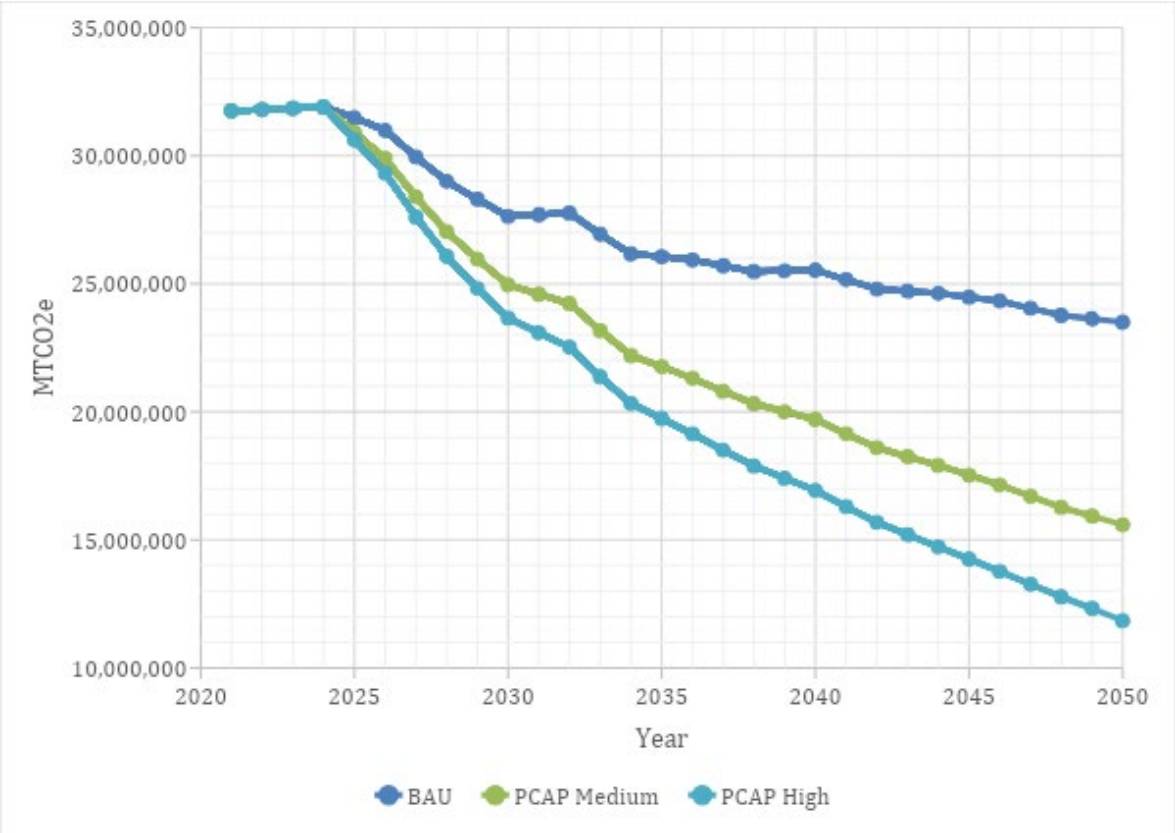


Figure B8. Projected $MTCO_2e$ emissions with reductions applied per sector under each scenario.

Figure B8 shows a comparison between the three different scenarios. In the BAU scenario, GHG emissions projections decreased by approximately 12.9% from 2021 to 2030 and 26% from 2021 to 2050. These results indicate that with overall fuel efficiency in the transportation sector and the expected decarbonization of grid electricity by utilities, GHG emissions will decrease in the TAMPA-ST. PETERSBURG-CLEARWATER MSA. Under the medium scenario, with conservative reduction measures, GHG emissions projections will decrease by approximately 21.4% by 2030 and 51% by 2050. In the case of the high scenario, GHG emissions decreased by approximately 25.5% by 2030 and 62.7% by 2050.

	Baseline	BAU		Medium		High	
Sector	2021	2030	2050	2030	2050	2030	2050
Residential Energy	6,964,755	4,963,563	3,756,678	4,305,666	1,829,263	3,769,713	566,459
Commercial energy	5,901,614	4,409,467	3,549,948	3,780,485	1,768,407	3,428,234	500,761
Industrial Energy	1,521,203	1,265,904	1,109,724	1,265,904	1,109,724	1,265,904	1,109,724
Transportation and Mobile Sources	13,723,858	13,196,401	10,935,636	11,802,402	6,735,007	11,399,354	5,520,477
Solid waste	1,537,915	1,709,707	1,935,012	1,709,707	1,935,012	1,709,707	1,935,012
AFOLU	255,605	284,157	321,604	284,157	321,604	284,157	321,604
Process & Fugitives	1,265,883	1,407,288	1,592,740	1,407,288	1,592,740	1,407,288	1,592,740
Upstream activities	576,546	403,313	297,338	403,313	297,338	403,313	297,338
Total MTCO2e	6,964,755	4,963,563	3,756,678	4,305,666	1,829,263	3,769,713	566,459

Table B6. GHG emissions projections per sector under each scenario.

Table B6 shows GHG emissions projections for each sector under each scenario. Since the reduction measures are applied to the energy and transportation sectors, they account for all the GHG emissions reductions until 2050. The residential sector is the highest contributor to GHG emissions reductions with a 74% decrease in the medium PCAP scenario and 92% in the high PCAP scenario by 2050. The commercial energy sector showed a 70% reduction in the medium PCAP scenario and 92% in the high PACP scenario by 2050. The transportation sector showed a 51% reduction in the medium PCAP scenario and 60% in the high PACP scenario by 2050.

Emissions from the solid waste, AFOLU, and process and fugitive emissions sectors increased under all scenarios since there were no proposed reduction measures from these sectors in the PCAP. According to the results of the baseline emissions, more than 89% of the GHG emissions were generated from the energy and transportation sectors. Hence the focus of reduction targets in this PCAP was in these sectors.

Appendix C

GHG Reduction Measures Calculations

Prior efforts over several years had focused on evaluating the feasibility of implementing GHG reduction measures at county and city owned facilities at multiple sites around the Tampa-St. Petersburg-Clearwater MSA as part of a coordinated Clear Sky Tampa Bay program. Examples of measures included solar and storage, energy efficiency, EV charging infrastructure, fleet conversion of electric vehicles and buses, carbon capture and sequestration etc. that were analyzed in detail for renewable energy conversion, kWh reduction, overall cost of implementation, CO2 emission reduction and return on investment. The facilities included schools, solid waste facilities, fire stations, airports, wastewater reclamation sites, public works, parking garages, pumping stations, administration buildings, community centers, libraries, recreation complexes, landfills etc. These were reviewed as potential implementation projects for CPRG Phase II efforts and for scaling to achieve GHG reduction targets.

For the two priority sectors selected the following information was collected as baseline data from 2020 US census bureau, 2022 Florida Department of Highway Safety and Motor Vehicles, local county websites, and Niche.com. These were used to calculate the potential for conversion of each asset to lower GHG emission.

	Hillsborough County	Pinellas County	Pasco County	Hernando County	Total
Energy Sector					
Number of Residential Homes	628,454	519,812	2727,025	94,442	**1,512,733**
Number of Commercial Establishments	41,388	31,001	11,121	3,660	**87,170**
Number of Schools	376	179	115	33	**703**
Number of Fire Stations	43	28	29	20	**120**
Number of Street Lights	34,000	9,106	24,850	15,721	**83,677**
Transportation Sector					
Number of Registered Vehicles (Passenger)	1,001,870	713,803	407,782	143,947	**2,267,402**
Number of Buses	3,297	2,453	1,130	307	**7,187**
Number of Heavy Trucks	105,554	57,628	39,133	16,420	**218,725**
Number of School Buses	1,101	333	400	87	**1,921**

Table C1. Baseline data for calculating potential GHG reduction.

GHG Reduction Targets and Measures for the Energy Sector

Stakeholders in the Tampa-St. Petersburg-Clearwater MSA prioritized several implementation measures: regional solar feasibility study and installation, solar storage on all public facilities, regional deep energy efficiency retrofit program for residential, commercial, and industrial facilities, and street lighting conversion to LED.

Solar energy plays a significant role in reducing GHG emissions by producing electricity without emitting GHG such as carbon dioxide (CO_2), methane (CH_4), or nitrous oxide (N_2O), unlike fossil fuel-based power plants. The installation of solar energy depends on other processes, such as understanding regulatory considerations, producing analysis on benefits to low-income neighborhoods, and developing a detailed project plan that includes construction timelines, resource allocation, logistics, energy generation and quality control. Storing renewable energy can have several benefits, including reducing the dependence on fossil fuels, promoting resiliency, enhancing energy security, reducing costs in the long-term, and mitigating climate change impacts. Deep energy efficiency retrofits are modifications on existing buildings to update equipment to allow for reduction in energy consumption. Deep energy efficiency projects in buildings can provide a great number of benefits, including mitigating climate change impacts by reducing greenhouse gas emissions, increasing resource conservation, increasing cost savings over the long-term, educational awareness to community, improving energy security, and increasing energy access. Converting streetlights to LED technology is a practical and impactful project with several benefits, including increasing energy efficiency (which means less energy consumption) and cost savings because of their longer lifespan and lower maintenance costs.

To calculate the impact of aggressive GHG reduction targets over the next 25 years a 5% and 10% annual conversion rate was considered appropriate for residential and commercial facilities, respectively, resulting in the number of facilities that implemented solar and deep energy savings shown in the table below.

Year	Number of Residential Homes Converted	Number of Commercial Facilities Converted
1	151,273	8,717
5	619,479	35,697
10	985,276	56,776
15	1,201,275	69,222
20	1,328,820	76,572
25	1,404,134	80,192

Table C2. Number of facilities implementing solar and deep energy savings

In addition, by assuming that an average residential facility installs 2.5 kW, and a commercial facility installs 100 kW of solar and using standard solar PV tool kits, it was determined that over 15,175,000 MWh of energy can be reduced annually, after 25 years, resulting in over 10.75 million metric tons of CO_2 reduction per year, as seen in table C3. Similar analysis for implementing deep energy retrofits show that with 40% energy savings obtained from improved roof insulation, duct sealing, efficient lighting, high efficiency heat pumps, variable speed pumps, use of energy star appliances, education outreach, and tool kits will result in over 10,577,000 MWh of energy savings and a net reduction of around 7.5 million metric tons of CO_2 reduction per year after 25 years.

Meanwhile, for the CPRG Phase II implementation projects over the next five years a more conservative approach was considered in the Tampa-St. Petersburg-Clearwater MSA. For solar projects installed at schools and community centers (over 760 existing) a 5% annual conversion rate was assumed for an average of 1.5 to 2.1 MW per installation, while a 10% annual rate was assumed for fire stations (120 existing in region) with an average installation size of 66 kW. Over a five-year period, it is estimated that over 220 facilities could benefit from solar installations if funding was available as anticipated from federal, state, county, and private sources. Collectively these projects would result in 418,000+ MWh of energy savings per year or 296,917 of CO_2 reductions each year after 5 years. Similar analysis was performed for deep energy efficiency retrofits for county and city owned facilities, small and large, as well as for converting streetlights to energy efficient LED lights. Conversion rates assumed were 10%, 5% and 10% annually over 5 years for each, respectively. This is collectively estimated to save 70,252 MWh/yr. and 49,787 metric tons of CO_2 annually after 5 years.

Detailed calculations are provided in Tables C3 to C6.

Energy Sector GHG Reduction Targets

Solar Installation	# of Facilities	Avg. MW/Facility*	% Conversion/Yr	Total # of Facilities Converted (After 25 Years)	Total MW Installed (after 25 years)	Total MW/Year	MWh/Year Savings	kWh/KW
Residential	1,512,733	0.0025	10%	1,404,134	3,510	140	5,430,489	1,547
Commercial	87,170	0.1	5%	62,990	6,299	252	9,744,545	1,547

	Total Costs (M)	$(M)/Year Electric Cost Savings	CO_2 Reduction Metric Tons/Year (after 25 years)
	$8,776	$663	3,848,479
	$12,598	$994	6,905,764

Table C3. Calculation results for GHG reduction targets for energy projects for implementation for solar installation after 25 years.

Deep Energy Efficiency Retrofits	# of Facilities	Avg. MW/Facility*	% Conversion/Yr	Total # of Facilities Converted (After 25 Years)	Avg Energy Savings (%)/ Facility/Year	Total Retrofits/year	MWh/Year Savings (after 25 years)
Residential	1,512,733	11.8	10%	1,404,134	40%	56,165	6,600,097
Commercial	87,170	157.86	5%	62,990	40%	2,520	3,977,484

	Total Costs (M)	$(M)/Year Electric Cost Savings	CO_2 Reduction Metric Tons/Year (after 25 years)
	$674	$806	4,677,363
	$252	$486	2,818,767

Table C4. Calculation results for GHG reduction targets for energy projects for implementation of deep energy retrofits after 25 years.

Energy Sector GHG Reduction Measures

Solar Installation	# of Facilities	Avg. MW/Facility	% Conversion/Yr	Total # of Facilities Converted (After 5 Years)	Total MW Installed (after 5 years)	Total MW/Year
Schools	703	1.50	5%	159	238.3	47.7
Community Related Facilities Analyzed (Est.)	60	2.16	5%	14	29.3	5.9
Fire Stations	120	0.066	10%	49	3.2	0.6
	MWh/Year Savings (After 5 Years)	**kWh/KW**	**Total Costs ($M)**	**$(M)/Year Electric Cost Savings**	**CO_2 Reduction Metric Tons/Year (after 5 years)**	
Schools	368,682	1,547	$477	$45.05	261,278	
Community Related Facilities Analyzed (Est.)	45,271	1,547	$59	$5.53	32,083	
Fire Stations	5,017	1,547	$8	$0.61	3,556	

Table C5. Calculation results for GHG reduction targets for energy projects for implementation for solar installation after 5 years.

Deep Energy Efficiency Retrofits	# of Facilities	Avg. MW/ Year per Facility	% Conversion/Yr	Total # of Facilities Converted (After 5 Years)	After Energy Savings (%)/ Facility/Yr	Total Retrofits/Year
Fire Stations/Community Facilities	5,000	11.8	10%	2,048	40%	410
Schools/Community Facilities	2,000	157.9	5%	452	40%	90
Streetlight Conversion	83,677	1.17	10%	34,267	80%	6,853

	MWh/Year Savings (After 5 Years)	Total Costs ($M)	$(M)/Year Electric Cost Savings	CO_2 Reduction Metric Tons/Year (after 5 years)
Fire Stations/Community Facilities	9,664	$25	$1.18	6,849
Schools/Community Facilities	28,569	$45	$3.49	20,246
Streetlight Conversion	32,019	$69	$3.91	22,691

Table C6. Calculation results for GHG reduction targets for energy projects for implementation for deep solar retrofits after 5 years.

GHG Reduction Targets and Measures for the Transportation Sector

Stakeholders in the Tampa-St. Petersburg-Clearwater MSA prioritized several implementation measures: expansion of public transit network with expanded routes, expansion of ridership for public transit, increasing energy vehicles (EV), converting school buses to energy vehicles, development of EV mapping and installation of regional charging hub, expansion of energy vehicle charging network. For the analysis the three 'direct' measures to reduce GHG were used to calculate impact expanding public transit networks, converting diesel vehicles (trucks and buses) to electric and converting gasoline vehicles to electric. The other 'indirect' measures, expansion and installation of EV charging hubs and networks were considered dependent on direct measures and their cost/benefits and impact included in those calculations.

Projects aimed at expansion of the public transit network hold significant benefits, not only in terms of improving quality of life but also as a strategic approach to mitigate environmental impacts. Public transit is generally more energy-efficient and emits fewer GHGs per passenger mile compared to private vehicles. Moreover, switching vehicles powered by fossil fuels to electric vehicles can reduce the amount of GHG and pollutants being released because fuels such as gasoline and diesel have greater GHG emissions potential while vehicles powered by electricity, depending on the energy mix of the region where they are operated, tend to emit fewer GHG, generally associated with grid-dependent emissions. As the demand for electric vehicles grows, the development of infrastructure that accompanies the energy transition in the transport sector is crucial. In this sense, both the construction of a large-scale regional EV charging hub network could provide benefits while accelerating EV adoption.

To calculate the impact of aggressive GHG reduction targets over the next 25 years a 10% annual conversion rate was considered appropriate for each of the three measures expanding ridership in public transit networks, increasing the number of passenger vehicles, and increasing the number of buses/light duty trucks, resulting in the number of ridership and transportation assets shown in the table below.

Year	Increase in Public Ridership	Number of Passenger Vehicles Converted	Number of Trucks and Buses Converted
1	66,613	226,740	22,591
5	97,528	928,524	92,513
10	157,070	1,476,808	147,141
15	252,963	1,800,564	179,399
20	407,399	1,991,739	198,446
25	656,120	2,104,626	209,694

Table C7. The number of ridership increased, and transportation assets converted over 25 years.

As a next step in the reduction target analysis the ridership, conversion of passenger vehicles and buses to electric vehicles, was translated to vehicle miles traveled (VMT) for each situation. The average VMT for each vehicle was determined from EIE on-road diesel and gasoline data for the Tampa-St. Petersburg-Clearwater MSA and by proportionally converting it using the percent of passenger vehicles, light duty trucks and buses in each category. Moreover, using average VMT information and the miles per gallon for each vehicle type (25 for passenger, 118 for EV and 4.8 for diesel buses, 12 for EV buses), percentage of annual reduction in VMT for each category was calculated. The results indicated that a public transit rider (from using a passenger vehicle) would reduce average VMT by 74% annually. Similarly, converting passenger vehicles to EV would reduce VMT by 79% annually and converting diesel buses to electric would reduce VMT by 60%. The result is a total reduction of 1,280 million gallons of gasoline each year after 25 years in all three categories with a total impact of 11.3 million metric tons of CO_2 reduction annually.

And again, for the CPRG Phase II implementation projects over the next five years a more conservative approach was considered in the Tampa-St. Petersburg-Clearwater MSA. The two measures that were evaluated for this phase were expansion of public transit networks and converting school buses to electric. 5% and 10% conversion rates were identified for each category respectively. A total of 40,668 new riders will benefit from public transit network expansion and a total of 435 new electric school buses will be added to the transportation system over a five-year period, if funding was available as anticipated from federal, state, county, and private sources. Collectively these projects would result in 8.545 million less gallons of gasoline used per year and 75, 943 metric tons of CO_2 reduction annually.

Detailed calculations and results are provided in Tables C8 to C11 below.

Transportation Sector GHG Reduction Targets

	Number of Transit Users	Change in VMT/Vehicle to Transit User/Year	% Conversion/Yr	Total # of New Transit Users Converted after 25 Years	Avg. VMT Savings (%)/ per user after conversion	Total VMT Reduction/Yr after 25 years (Vehicle to Public Transit)	Total Gallons Gas Saved/Year (after 25 years)	Total Costs (M)
Expand Public Transit	66,613	4,249	10%	655,119	74%	2,783,540,348	111,335,520	$2545

CO_2 Reduction Metric Tons/Year (after 25 years)
989,439

Table C8. Calculation results for GHG reduction targets for transportation projects for implementation for expanding public transit after 25 years.

Converting On Road	# of Vehicles	VMT/Vehicle/Year	% Conversion/Yr	Total # of Vehicles Converted after 25 years	Avg VMT Savings (%)/Vehicle	Total VMT Reduction/Yr after 25 years (Vehicle to Public Transit)
Diesel Vehicles to Electric	225,912	30,082	10%	209,694	60%	3,784,756,744
Gasoline Vehicles to Electric	2,267,402	5,745	10.0%	2,104,626	79%	9,528,884,589

	Total Gallons Gas Saved/Year (after 25 years)	($M)/Year Electric Cost Savings	CO_2 Reduction Metric Tons/Year (after 25 years)
Diesel Vehicles to Electric	788,490,988	$115,332	7,007,319
Gasoline Vehicles to Electric	381,155,384	$126,278	3,387,328

Table C9. Calculation results for GHG reduction targets for transportation projects for implementation for converting on-road vehicles after 25 years.

Transportation Sector GHG Reduction Measures

	# of Transit Users	Change in VMT/Vehicle to Transit	% Conversion/Yr	Total # of New Transit Users Converted (After 5 Years)	Avg VMT Savings (%)/per user after conversation	Total VMT Reduction/Yr after 5 years (Vehicle to Public Transit)
Expanding Public Transit Network	66,613	4,249	10%	40,668	74%	172,891,454
	Total Gallons Gas Saved/Year (after 5 years)	**Total Costs ($M)**	**CO_2 Reduction Metric Tons/Year (after 5 years)**			
	6,911,386	$56	61,421			

Table C10. Calculation results for GHG reduction targets for transportation projects for implementation for expanding public transit after 5 years.

	# of Vehicles	VMT/Vehicle/Yr	% Conversion/Yr	Total # of Vehicles Converted (After 5 Years)	Avg VMT Savings (%)/Vehicle	Total VMT Reduction/Yr after 5 years
Converting School Buses to EV	1,921	30,082	5%	435	60%	7,843,482
	Total Gallons Gas Saved/Year (after 5 years)	**Total Costs ($M)**	**CO_2 Reduction Metric Tons/Year (after 5 years)**			
	1,634,059	$239	14,522			

Table C11. Calculation results for GHG reduction targets for transportation projects for implementation for converting school buses to EV after 5 years.

Waste-to-Energy: Carbon Capture

According to the City of Tampa's GHG inventory in 2019 2, municipal solid waste accounted for 59% of the GHG emissions in government operations. During that year, approximately 86% of the city's waste was combusted at the McKay Bay Waste to Energy (WTE) facility, while 14% was sent to the Southeast County landfill located over 20 miles outside the city boundaries. Recycling constituted less than three percent of the waste management practices. Based on data from the EPA FLIGHT database 3 in 2021, the McKay Bay WTE facility generated 110,470 metric tons of CO2, which represents approximately 95% of the total GHG emissions. The initial concept design calculations indicate that retrofitting McKay Bay Waste To Energy (WTE) Facility with an off-site CO2 sequestration facility creates the potential to reduce current CO2 emissions by 75%, amounting to approximately 82,500 metric tons CO2 per year.

	Amount Capture with Offsite Sequestration	Capital Cost ($M)	Cost of Electricity ($/MWh)	Annual CO_2 Reduction Metric Tons (after 20 years)
Carbon Capture	75%	170	$101/MWh	82,500

Table C12. Calculation results for GHG reduction measures for waste-to-energy carbon capture.

Appendix D

Low-Income and Disadvantage Communities Analysis

Hillsborough County

Neighborhood Name(s)	LIDAC Zip Code	Census Tracking Number	Low-Income	Housing	Energy	Transportation	Health
Wellswood, Riverside Heights, Ybor Heights, Rivercrest, Robles Park, and Southeast Seminole Heights	33603	1205700300	✓	✓	✓	✓	✓
		12057002900					
		12057002100					
Ybor Heights, VM Ybor, Historic Ybor, Palmetto Beach, Historic East Ybor, North Ybor College Hill-Belmont Heights, Jackson Heights, and Highland Pines	33605	12057003100	✓	✓	✓	✓	✓
		12057003400					
		12057003600					
		12057003200					
		12057003300					
		12057003500					
		12057003800					
		12057003900					
		12057005302					
Northeast McFarlane, Old West Tampa, West Tampa, and Carver City-Lincon Gardens	33607	12057002700	✓	✓	✓	✓	✓
		12057004300					
		12057004400					
		12057004500					
Drew Park, Pinecrest West Park, Plaza Terrace, Oak Grove, and Egypt Lake-Leto	33614	12057002600	✓	✓	✓	✓	✓
		12057011802					
		12057011804					
		12057011803					
		12057011901					
		12057011902					
		12057011904					
		12057011906					
		12057011905					
Forest Hills, North Forest Hills, Azure Estates, University Square, Tampa Overlook and North Tampa	33612	12057010805	✓	✓	X	✓	✓
		12057010815					
		12057010816					
		12057010814					
University, Lake Magdalene, and Avila	33613	12057010817	✓	✓	X	✓	✓
		12057010818					
		12057010808					
		12057010813					

Table D1. Hillsborough County identified low-income and disadvantaged communities.

Pinellas County

Neighborhood Name(s)	LIDAC Zip Code	Census Tracking Number	Low-Income	Housing	Energy	Transportation	Health
Glenwood, Country Club Estates, and Sunset Club Estates	33755	12103026101	✓	✓	✓	X	✓
		12103026200					
		12103026300					
		12103026300					
		12103026602					
		12103026500					
Antietam Acres, Coachman Ridge, and Coachman Lake Estates	33765	12103026602	✓	✓	✓	X	✓
		12103026703					
Water View Estates, Fairway Village, Bella Oak Villas, and Village Green	33771	12103025503	✓	✓	X	X	✓
		12103025303					
		12103025305					
		12103025417					
		12103025408					
Terrace Park & Five Towns, Five Towns, Pine Bay, Lake Rich Village, Parkside Village, West Lealman, Brookside MHP, & Sun Haven Homes	33709	12103025019	✓	X	X	✓	✓
		12103025017					
		12103025018					
		12103024803					
		12103024804					
		12103024803					
Coral Way North, Tropical Gardens, Twin Gables, Borth Midway, Arcadian Heights, Lealman, Lowe' City, & Clearvista	33714	12103024701	✓	X	X	✓	✓
		12103024602					
		12103024703					
Pinellas Park	33781	12103025004	✓	X	X	✓	✓
		12103024905					
		12103024906					
		12103024902					
		12103024901					
		12103024601					
		12103024803					
Childs Park, Bayview, Broadwater, and Maximo	33711	12103022000	✓	✓	X	✓	✓

Table D2. Pinellas County identified low-income and disadvantaged communities.

Pasco County

Neighborhood Name(s)	LIDAC Zip Code	Census Tracking Number	Low-Income	Housing	Energy	Transportation	Health
Crest Ridge Gardens, Dixie Groves Estates, Holiday Gardens, La Villa Gardens, and Forest Hills East	34690	12101030601	✓	✓	✓	X	✓
		12101030602					
		12101030501					
		12101030502					
New Port Richey East, Summer Lakes, and Park Lake Estates	34653	12101030901	✓	✓	X	X	✓
		12101030905					
		12101030904					
		12101031407					
		12101031401					
		12101031406					
		12101031404					
		12101031405					
		12101031408					
		12101031409					

Table D2. Pasco County identified low-income and disadvantaged communities.

Hernando County

Neighborhood Name(s)	LIDAC Zip Code	Census Tracking Number	Low-Income	Housing	Energy	Transportation	Health
Brooksville, North Brooksville, South Brooksville, Lake Lindsey, Spring Lake, Nobleton, and Istachatta	34601	12053040601	✓	✓	X	✓	✓
		12053040201					
		12053040202					
		12053040400					
		12053040501					
		12053040502					
		12053040602					
Timber Pines	34606	12053041201	✓	✓	X	✓	X
		12053041203					
		12053041204					
		12053041401					

Table C4. Hernando County identified low-income and disadvantaged communities.

Appendix E

Authority to Implement

Transportation and Mobile Combustion

Expand Public Transit Network with Expanded Routes

Jurisdiction	Policy	Source
Hernando County	Strategy 1.05(2)c - Concentration of commercial uses, mixed uses and town-center type development along and/or easily accessed from SR-50, including park and ride opportunities for future inter-county transit	Hernando County Comprehensive Plan: 2040 Plan
	Strategy 5.01D(2)d. - Dedicated right of way or accommodation for transit pullouts and amenities and for future bus rapid transit may be required	
	Strategy 5.01F(2) - The County should continue to prioritize enhancement of its local fixed-route transit system and special needs ADA (Americans with Disabilities Act) service via a process that solicits and responds to frequent user feedback. Enhancements may include route expansions/updates, real-time information services, transit vehicle upgrades for users, and other initiatives	
Hillsborough County	Mobility Objective 5.4 - Support HART [Hillsborough Area Regional Transit] in efforts to identify and increase frequence of service to higher density and intensity areas, bus emphasis corridors, transportation disadvantaged communities, Neighborhood Revitalization Strategy Areas and Low-Moderate Income Areas as defined by the Department of Housing and Urban Development (HUD)	Unincorporated Hillsborough County Comprehensive Plan
	Environmental and Sustainability Objective 3.1.2 - Support public and alternative transportation programs and actions intended to reduce motor vehicle emissions	
	Objective 54 - To plan for a fixed guideway transit system that connects activity centers within Hillsborough County and the Tampa Bay Region // 54.1 The County shall encourage the use of mass transit in order to decrease the dependency upon the automobile for work and non-work trips.	Future Land Use Element
	Greater Sun City Area: Goal 7 - Bus Service: Encourage Hartline to provide bus service to Tampa, the new library and other destinations, with efficient routes and convenient schedules to encourage increased usage.	Livable Communities Element
Hillsborough County	Southshore Areawide: Objective 4.a.i. - Continue to evaluate: Bus ridership demand within parts of Southshore that can be efficiently and effectively served by transit, as development occurs and population increases. This includes the potential need for evening or late shift transit service.	Livable Communities Element
	Riverview: Goal 4 - Provide safe, attractive, efficient multi-modal transportation, including vehicular, bicycle/pedestrian and transit. Expand mass transit, such as more bus stops and routes and park and ride facilities	
	Wimauma Village: Goal 6 - Multi-modal Transportation and Connectivity; Expand local bus service, establish local circulator with connection to Ruskin, and provide bus shelters along the identified circulator route.	
	Greater Palm River: Goal 3, Strategy 8 - Public transit that serves existing and future development should include more frequent service, adequate routes, extended hours of operation, bus stop enhancements, and safe sidewalk access.	
	Little Manatee South: Goal 4 - Infrastructure and Services; Encourage the introduction of transit service, at the time of more urban-style development to include regular/express bus options	

	Seffner-Mango: Goal 5 - Ensure safety and mobility by supporting transportation improvements, transit service, bicycle and pedestrian opportunities; Support express bus service on I-4.	
	Brandon: Goal 1, Strategy 2 a. - Improve local bus service by increasing frequency of existing routes to downtown Tampa, Westshore and University of South Florida. b. Evaluate the need to expand express bus service to downtown Tampa / Marion Transit Center and MacDill Air Force Base. c. Study feasibility of Express Bus service From Brandon to Westshore and from Brandon to USF.	
	Greater Carrollwood-Northdale: Goal 6 - Improve and expand public transportation opportunities, which allow convenient access throughout the area and region. Ensure that these facilities are attractive, maintained, and meets the needs of its users.	
	Through partnership with [MPO Chairs Coordinating Committee] CCC and TMA Leadership Group, regional projects have been funded or prioritized for future funding: Central Avenue Bus Rapid Transit (Pinellas County)	It's TIME Hillsborough 2045 Long Range Transportation Plan
	Through partnership with CCC and TMA Leadership Group, regional projects have been funded or prioritized for future funding: Regional Express Bus on I-275	
Pasco County	Objective TRA 7.3 - Investigate the need for other service opportunities, such as expanded fixed-route bus services, park-and-ride services, and carpools/vanspools.	2025 Comprehensive Plan Pasco County
Pinellas County	TRA 1.1.4 - Prioritize public transit and assist in the development of a modern, efficient, and equitable transit system that offers viable alternatives to single-occupancy motor vehicle travel	PLAN Pinellas
City of St. Petersburg	OBJECTIVE LU27 - To plan for and accommodate transit oriented development (TOD) around transit stations that are part of a premium transit system as established in the Pinellas County Metropolitan Planning Organization's (MPO) Long-Range Transportation Plan. Transit stations will be located along the route (or routes) identified at the conclusion of the Pinellas Alternatives Analysis, with the specific station locations determined through a multi-agency joint planning process as part of the Pinellas Alternatives Analysis and Bay Crossing Alternatives Analysis, and other similar transit planning activities.	Comprehensive Plan
City of Tampa	MBY Policy 1.2.1 - Prioritize existing and planned transit routes during capital planning for repaving projects on state, County, and City streets.	Comprehensive Plan
	CAP Policy 1.6.9 - Coordinate with Hillsborough Area Regional Transit (HART) and the Hillsborough MPO to provide Transit Level of Service (LOS) "D" or better fixed route transit service at bus stops within 0.25 miles of 80% of homes and businesses within the City of Tampa.	
	Action 4.2.2 - Modernize and Expand the City's Streetcar System	Resilient Tampa
City of Tarpon Springs	Action 25 - Adopt a multimodal master plan that prioritizes future projects to improve bicycle and pedestrian safety and access to public transit and increase the milage of sidewalks and bicycle lanes or path.	Sustainable Tarpon Springs
City of Dade City	Objective TRA 1.3 - The City, through revisions to the land development code, shall establish criteria and procedures to ensure the maintenance of a safe, convenient, and energy efficient multimodal transportation system.	2020 Comprehensive Plan City of Dade City
	Policy TRA 1.5.2 - The City shall coordinate with Pasco County Public Transit (PCPT) to provide additional bus stops.	
City of New Port Richey	Policy TRA 3.1.5 - When conditions warrant, the City shall explore the feasibility of rubber tire trolley service in the downtown Transportation Concurrency Exception Area.	Comprehensive Plan, Transportation Element
City of Largo	Policy 1.1.2 - Collaborate with entities such as the Florida Department of Transportation (FDOT), Tampa Bay Area Regional Transit Authority (TBARTA), Forward Pinellas, Pinellas Suncoast Transit Authority (PSTA), and Pinellas County to develop a safe and efficient transportation network that reduces the need for automobiles.	Comprehensive Plan
City of Clearwater	B.1.1.6 The City shall continue to work with the Pinellas Suncoast Transit Authority (PSTA) to increase the efficiency of the fixed-route system by encouraging mass transit use through the application of the Mobility Management System and the City's site plan review process.	Comprehensive Plan

	B.3 Goal - The city shall support the efforts of mass transit service operators to provide generalized and special mass transit services. B.4 Goal - The city shall continue to actively support and participate in PSTA, the direct primary transit service provider in the city of clearwater	
City of St. Pete Beach	Initiative f.2.c - Transportation Management Plan. All new development, excluding single-family and duplex residential, shall be required to prepare and submit a Transportation Management Plan (TMP) to the City... that includes one or more strategies to reduce external trip generation, improve flow, reduce greenhouse gas emissions, and/or emphasizes safe and comfortable pedestrian, bicycle and mass transit mobility, will be required.	Comprehensive Plan
City of Pinellas Park	Objective T.1.1 - Develop and maintain a multi-modal transportation system that increases mobility for bicyclists, pedestrians, transit users, and motorists which promote development patterns that reduce vehicle miles traveled and greenhouse gas emissions consistent with the Future Land Use Map and the MPO/PPC adopted Long Range Transportation Plan (LRTP).	Comprehensive Plan
City of Brooksville	Ch 1. Policy 1-2 - Encourage transit development by encouraging higher density and compact infill development by encouraging higher density and compact infill development whenever feasible near existing and planned public transportation facilities Ch 2. Policy 1-9 - Coordinate with Hernando County and the MPO in maintaining a fixed route mass transit system to serve the city's industrial, commercial and service sector Ch 2. Policy 1-17 - The City will promote high density, transit friendly and mixed use development at planned transit hubs in order to take advantage of existing public transportation facilities and programs	Comprehensive Plan
City of Tarpon Springs	Action 25 - Adopt a multimodal master plan that prioritizes future projects to improve bicycle and pedestrian safety and access to public transit and increase the milage of sidewalks and bicycle lanes or path.	Sustainable Tarpon Springs
Town of Indian Shores	Objective 1.1 - Maintain a multimodal transportation system that increases mobility for bicyclists, pedestrians and transit users as well as motorists, and that promotes development patterns that reduce vehicle miles traveled and greenhouse gas emissions.	Comprehensive Plan
Town of North Redington Beach	Policy 12.1.7 - The Town shall continue to coordinate with the Pinellas Suncoast Transit Authority, particularly in regard to the provision of trolley service and routes necessary to support local business employment.	Comprehensive Plan
Town Redington Beach	TR Policy 1.1.2 - The Town shall continue to work with the Pinellas County Suncoast Transit Authority (PSTA) to increase the efficiency of the fixed route system by encouraging mass transit use through the application of the Pinellas County Mobility Plan and the Town's Site Plan Review Process.	Comprehensive Plan
Town of Redington Shores	Objective 1.1 - Maintain a multi-modal transportation system that increases mobility for bicyclists, pedestrians and transit users as well as motorists, and that promotes development patterns that reduce vehicle miles traveled and greenhouse gas emissions.	Comprehensive Plan
City of Zephyrhills	Policy TRA-1-5-2 - The City will coordinate with Pasco County Public Transit (PCPT) to provide additional bus stops	Comprehensive Plan
City of Belleair Beach	Goal 1 - Maintain an overall transportation system which meets existing and future demands including, but not limited to roadways, mass transit, bikeways, sidewalks and parking facilities.	Comprehensive Plan
Town of St. Leo	TE Policy 1.3.3 - Continue to coordinate with Pasco County to provide a transit route to serve the Town of St. Leo.	Comprehensive Plan
City of Indian Rocks Beach	Objective 1.5 -The City shall encourage the development and utilization of a safe, convenient, and energy efficient multi-modal transportation system	Comprehensive Plan

Town of Belleair	Objective 1.5 - The town shall encourage the development and utilization of a safe, convenient, and energy efficient multi-modal transportation system.	Comprehensive Plan
Town of Kenenth City	Objective 1.3 - The Town shall encourage the development and utilization of a safe, convenient, and energy efficient multi-modal transportation system, supporting motorized and non-motorized transportation, and meeting the special needs of the transportation disadvantaged.	Comprehensive Plan
City of South Pasadena	Goal 201 - Provide for a safe, convenient, and energy efficient multimodal transportation system that serves to increase mobility, reduce the incidence of single-occupant vehicles, efficiently utilize roadway capacity, reduce the contribution to air pollution from motorized vehicles and improve the quality of life for the citizens and businesses of South Pasadena.	Comprehensive Plan
City of Oldsmar	Policy 2.1.1 - Support approved strategies to increase the use of transit, particularly along routes serving low-income and other transportation disadvantaged users, and ensure transit affordability.	Comprehensive Plan - Transportation TOD 2010
Town of Bellair Shore	Policy 7.4.3 - Transportation Issues: The Town shall coordinate with Pinellas County on transportation issues that pertain to pedestrian safety, lighting, and enhancement of Gulf Boulevard	Comprehensive Plan

Expand Ridership for Public Transit

Jurisdiction	Policy	Source
Hernando County	Strategy 2.01B(6) - Hernando County should coordinate with the Pasco-Hernando State College on workforce training, transit connections, co-location of facilities and other activities that would be mutually beneficial	Hernando County Comprehensive Plan: 2040 Plan
	Objective 3.01A(1) - The convenient and efficient movement of workers to and from job sites should be prioritized through a multi-modal transportation network the includes transit and pedestrian/bicycle improvements and enhancements, and an efficient roadway network	
Pasco County	Objective TRA 6.1 - Public Awareness and Marketing; Expand the distribution of transit system information and route schedules and pursue marketing opportunities through community associations and clubs.	2025 Comprehensive Plan Pasco County, Florida
	Policy LUD 4.3. - Incorporate the location of public spaces, transit stops, and other public services with pedestrian, bicycle, and neighborhood networks (Alternative Transportation Network) to create, [sic] safe and convenient access to these resources... F.S. Intent: Create quality communities of a design that promotes alternative transportation networks and travel by multiple transportation modes	
	Policy TP 5.8. - Adopt an Alternative Transportation Vision Plan and associated design guidelines which provide a connected network of non-auto travel	
	Policy TRA 1.1.2 - Public transportation alternatives; Pasco County shall promote public transportation alternatives to the automobile, emphasizing fixed-route bus service through various marketing strategies.	
Hillsborough County	Environmental and Sustainability 3.1.2 - Support public and alternative transportation programs and actions intended to reduce motor vehicle emissions	Unincorporated Hillsborough County Comprehensive Plan
	Mobility Objective 5.5.5 - Promote access to transit via a safe multimodal network through street and site design guidelines and capital improvements that complete the network in the vicinity of existing and planned transit stops and encourage bicycle, pedestrian, and public transit use.	
	The Real Choices When Not Driving program, which applies for funding to support the Hillsborough County Long Term Transportation plan to expand bus services, "helps to make sure the traveling public has access to other reliable transportation options," including transit services.	It's TIME Hillsborough 2045 Long Range Transportation Plan

	Action C16.2 Active Commuting - "The County will support the gathering of information about employee commuting habits and level of interest".	HC Sustainability Action Plan
	Action C12.2 HART Bus Stop Inventory Study - "Reduce overall vehicle miles traveled and invite more ridership, it is important to identify the strategic nodes and linkages along potential permanent routes and to revisit existing routes with respect to schedule frequency and accessibility".	
Pinellas County	Transportation Strategy 1.1.4.3 - Collaborate with PSTA, Forward Pinellas, and municipalities to: Increase transit ridership through promotion, incentives and education; and develop multimodal "first and last mile" solutions to improve access to transit.	**Pinellas County**
City of St. Petersburg	T10.4 - The City shall support the PSTAs goal of doubling transit ridership in Pinellas County over the ten-year period from 2007/08 to 2017/18, and will work with PSTA to implement the necessary transit service modifications in St. Petersburg to achieve this goal.	Comprehensive Plan
City of Tampa	LU Policy 7.5.2 - Place new residential developments at locations that increase potential ridership on the regional transit system and support the major employment centers.	Comprehensive Plan
	Action 4.2.1 - Implement New Micro-Mobility Solutions That Expand Transit and Multimodal Options for Tampanians	Resilient Tampa
City of Dade City	Policy CON 1.1.1 - The City shall reduce the pollution potential from automobile emissions by: e. promoting public transit and car/van pooling	2020 Comprehensive Plan City of Dade City
	Goal TRA 1 - Establish and maintain a safe, convenient, and efficient multimodal transportation system that serves to increase mobility and reduce reliance upon the automobile	
City of New Port Richey	CON Objective 2.4 - Promote energy-efficient transportation	Comprehensive Plan: Conservation Element
	Policy CON 1.1.1 - The City shall reduce the potential for automobile emissions pollution by the following measures: b. promote the use of alternative transportation modes such as mass transit, car pooling, walking and bicycling, as well as encourage compact urban development pattern in accordance with the Future Land Use and Transportation elements	
City of New Port Richey	Policy FLU 1.4.10 - The land use pattern shall serve to minimize travel requirements and shall encourage increased use of public transit and walking and bicycling to support the City's multi-modal transportation system citywide and, particularly, within the Transportation Concurrency Exception Area.	Comprehensive Plan: Future Land Use Element
	Objective TRA 2.3 - Coordinate with and encourage Pasco County Public Transit (PCPT) to provide a convenient, efficient public transit system to the citizens of New Port Richey that provides a viable alternative to driving.	Comprehensive Plan, Transportation Element
City of Safety Harbor	Policy 1.1.11 - The City shall work with Pinellas Suncoast Transit Authority (PSTA) through Forward Pinellas and various citizen or technical committees in support of initiatives designed to increase transit ridership.	City of Safety Harbor Comprehensive Plan
City of Clearwater	A.6.8.7 - Create mixed-use, higher density, livable communities through design, layout and use of walkability techniques within existing and proposed transit corridors, including planned PSTA, Pinellas County MPO and TBARTA lines and potential station locations.	Comprehensive Plan
City of Dunedin	4.2.6. - The City will promote a variety of transportation modes such as walking, bicycling, ride sharing, and mass transit to increase transportation choices and decrease dependence on the single-occupancy automobile.	Comprehensive Plan
	Connected Clean Energy Transportation Systems Encourage clean energy to be used for transportation systems and in micromobility, such as golf carts. In the Multimodal Transportation Master Plan (MTMP), 70% of survey responders stated that they preferred to travel by golf carts around the city. Other forms of clean transportation, such as biking and walking, are to be promoted within this realm. Expanding and advocating for an increase in services for public transit, including the Jolley Trolley, can improve the ability for ridership to grow.	Dunedin DREAM
City of Gulfport	Policy 1.5.8 - The City shall coordinate with PSTA to improve bus service and scheduling within Gulfport.	

	Policy 1.7.2 - Mitigation techniques which could be employed include, but are not limited to, ride sharing, increased transit use, synchronized traffic signaling, roadway and intersection improvements and reinstitution of vehicle inspections.	City of Gulfport Comprehensive Plan
City of St. Pete Beach	Future Land Use Plan Element: Objective Policy 1.3.2 -Encourage and facilitate mass transit ridership subsidies for employees.	Comprehensive Plan
City of Tarpon Springs	Action 16 - Draft a Climate Action Plan with actions to transition the city toward clean energy goals including increasing on-site renewable energy production and the use of electric vehicles and alternative fuels. Create staff incentives to encourage the use of alternatives modes of transportation and the transition to electric vehicles.	Sustainable Tarpon Springs
	Action 17 - Create incentives to encourage community members to utilize alternative modes of transportation and low-emission vehicles	
Town of Indian Shores	Policy 1.5.1 - The Town shall encourage the increased use of available public transportation through the distribution of schedules and senior citizen transit passes.	Comprehensive Plan
Town of Redington Beach	Policy 1.5.1 - The Town shall encourage and provide incentives for the increased use of available public transportation through the distribution of bus schedules and senior citizen transit passes.	Comprehensive Plan
City of Zephyrhills	Policy TRA-1-4-1 - The city shall support and encourage through site plan review alternative modes of transportation/transit friendly design features along roadways to accommodate the needs of pedestrians, cyclists, and handicapped persons, and promote ridesharing by public and private sector employees	Comprehensive Plan
	Policy TRA-1-4-5 - In conjunction with the Pasco MPO and FDOT, the City shall participate in transportation demand management (TDM) measures such as alternate transportation modes (i.e., bicycle, pedestrian, transit) telecommuting, and ridesharing, etc to reduce peak hour travel demand on US 301 and SR 54.	
	Policy TRA 1-5-7 - The City shall attempt to increase public awareness regarding PCPT transit schedules, services, and route information	
	Bicycle and Pedestrian Culture 35G - Place a multi-modal map on the city's website to inform residents of pedestrian and bicycle trails, transit routes and stops, parking lots and garages and locations of bike racks.	Sustainability Plan
Town of Redington Shores	Policy 1.5.1 - The Town shall encourage, by distributing transit schedules at the Town Hall, the increased use of available public transportation.	Comprehensive Plan
City of Belleair Bluffs	Policy 1.4.1 - The city shall distribute Pinellas Suncoast Transit Authority bus schedules at City Hall to promote available public transportation.	Comprehensive Plan
Town of St. Leo	CON Policy 2.1.3. - Ensure future land use patterns promote reduction in greenhouse gas emissions.	Comprehensive Plan
City of Indian Rocks Beach	Policy 1.5.1 - The City shall encourage, by distributing bus schedules at appropriate public places, the increased use of available public transportation.	Comprehensive Plan
City of Madeira Beach	Objective 5.1.9 - Continue to work with the Pinellas Suncoast Transit Authority (PSTA) to increase the efficiency of the fixed-route system by encouraging mass transit use through the site plan review process of the land development regulations in accordance with this Comprehensive Plan and the Pinellas County Mobility Plan.	Comprehensive Plan
Town of Belleair	Policy 1.5.1 - The town shall encourage the increased use of available public transportation by distributing bus schedules at the Town Hall.	Comprehensive Plan

City of Pinellas Park	Policy T.1.6.11 - Assist the MPO/PPC and PSTA in encouraging mass transit ridership and other alternative modes of travel through the development of corridor management studies and transit development analyses.	Comprehensive Plan
City of Tarpon Springs	Policy 122.11.03, 8.- Mass transit initiatives. A project may implement a plan to encourage transit (e.g., employer-issued bus passes). Other mass transit initiatives may include, but are not limited to, direct route subsidies, provision of feeder service or the construction of bus stop amenities, bus pull-off areas and dedication of park and ride parking spaces.	Comprehensive Plan
City of Oldsmar	Policy 1.11.1 - The City shall continue to participate in MPO sponsored corridor management studies, compiling and analyzing information on existing land use, future land use plans, existing traffic patterns, bus stops and sidewalk location to determine where opportunities exist to implement strategies to encourage mass transit ridership as well as other alternative modes of travel.	Comprehensive Plan
City of Treasure Island	Policy 1.7.1 - The City shall work to reduce the potential for automobile emissions pollution by the following measures: ... Promote multi-modal transportation, consistent with the Multimodal Transportation Element of this comprehensive plan, modes such as transit, carpooling, pedestrian and bicycle paths;	Comprehensive/Sustainability Policies
City of Port Richey	Policy C.1.7.1 d. - Promoting public transit and car pooling	Comprehensive Plan
City of Pinellas Park	Policy T.1.5.3 - Coordinate with PSTA to provide for efficient and effective mass transit service as well as opportunities for multi-passenger vehicle travel that accommodates the transportation needs of the service area population and the transportation disadvantaged while reducing single-occupant vehicle.	Comprehensive Plan

Development of EV Mapping and Installation of Regional Charging Hubs

Jurisdiction	Policy	Source
Hillsborough County	Action C13.2 - Facilitate communitywide electric vehicle charging stations	HC Sustainability Action Plan
	Action G13.2 - Build Electric Vehicle Charging Stations for County Operations	
	Action C13.1 - Drive electric discovery and education center pilot project - "include a hands-on, no sales pressure, educational exhibit with free test drives, in order to inform and introduce Tampa Bay residents to electric vehicles and their charging infrastructure".	
	Objective 6.7.2 - Create a more connected traffic network through emerging technologies	Unincorporated Hillsborough County Comprehensive Plan
	Objective 6.7.5 - Prioritize safety where different modes of transportation, particularly electric-powered options, share the same facility	
	Objective 1.2.2 - Promote the use of alternative energy technology for existing, new, and renovated County facilities and vehicles	

Hillsborough County	Guided by the Smart Cities goal, deployed NEVI (National Electric Vehicle Infrastructure program) funds in a project on US 41 at SR 60; 2024 investment amounts to $900,000, and 2025 funding is $1,500,000 for a total of $2,400,000.	Transportation Improvement Program (TIP)
Pasco County	Policy TP 5.2. - The County shall continuously assess emerging transportation trends reliant on advanced technology and promote development that utilizes advanced infrastructure. While trends are constantly changing, the County shall plan for emerging transportation advances that are known... The Land Development Code should address infrastructure and/or facility needs for electric vehicles.	2025 Comprehensive Plan Pasco County, Florida
Pinellas County	Strategy 1.1.1.1. - Utilize the Land Development Code to promote sustainability, including: Encourage and incentivize electric vehicle charging station infrastructure development	PLANPinellas
	NRC Strategy 1.1.2.6 - Develop and implement a phased plan to transition the County fleet to electric vehicles and other alternatives that increase fuel efficiency, reduce emissions, and minimize dependency on fossil fuels.	
	NRC Strategy 4.2.1.3 - Promote and incentivize electric vehicle infrastructure in public and private development	
City of Treasure Island	Policy 1.7.1 - The City shall work to reduce the potential for automobile emissions pollution by the following measures: Evaluate the feasibility of converting the City's fleet to electric or hybrid vehicles.	Comprehensive/Sustainability Policies
	Policy 1.15.2 e. - Implementing expedited permitting for the installation of renewable energy sources, alternative fuel and electric vehicle charging infrastructure.	
	Policy 1.7.1: The City shall work to reduce the potential for automobile emissions pollution by the following measures: Support efforts to expand electric vehicle infrastructure within the City.	
City of Zephyrhills	Action 30 - Develop land use policies designating lands that are suitable for renewable energy power generation and transmission systems (e.g., solar farms and electric vehicle charging stations	Sustainability Plan
City of Dunedin	1.2.10. - The City will continue to explore and enhance other modes of transportation including golf carts, autonomous vehicles (AV), water-borne transportation, electric vehicles, and other sustainable innovative vehicles to provide more options for the citizens to travel throughout the City.	Comprehensive Plan
	Sustainability Map - Develop an interactive digital story map that showcases the sustainable projects, programs, and goals the City is working on by using a geographic platform. This map may include locations of electric vehicle charging station infrastructure, recycling drop-offs, parks, bike trails, water trails for kayaking, stormwater infrastructure, and community resource locations.	Dunedin DREAM
City of St. Petersburg	Action 3.3 - Introduce building code provisions that support energy improvements, efficiency and EV readiness	Integrated Sustainability Action Plan
City of Safety Harbor	Goal 1 Action II - Explore options for installing EV charging stations in public City owned parking areas.	City of Safety Harbor Sustainability and Resiliency Plan 2023

	Goal 1 Action III - Conduct study for EV charging station feasibility with all newly constructed City owned public parking areas.	
City of Tampa	MBY Policy 1.10.1 – Examine evidence-based practices and methods for implementation of autonomous, connected, and electric charging vehicle technology and shared mobility and micromobility solutions, such as electric scooters and bicycles.	Comprehensive Plan
City of Gulfport	Policy 1.5.5 - The City shall continue to investigate alternative funding sources for infrastructure improvements and to improve any deficiencies.	City of Gulfport Comprehensive Plan

Public/Private Partnership for EV Charging

Jurisidction	Policy	Source
Hillsborough County	Environmental & Sustainability Objective 3.1.2 - Support public and alternative transportation programs and actions intended to reduce motor vehicle emissions	Unincorporated Hillsborough County Comprehensive Plan
Pinellas County	NRC Strategy 1.1.1.1. - Utilize the Land Development Code to promote sustainability, including: Encourage and incentivize electric vehicle charging station infrastructure development	PLANPinellas
City of Dunedin	"Duke Energy Park & Plug Pilot Program - EV Charging Stations - The City partnered with Duke Energy to install electric vehicle (EV) infrastructure stations around Dunedin. A range of Level 2 chargers and DC fast chargers were installed to serve various needs, adding ten new charging locations to the map. City staff has tested these stations with the three electric vehicles the City owns. "	Dunedin DREAM

Converting School Buses to EV

Jurisdictions	Policy	Source
Hillsborough County	Under the project Transit SGR - HART has requested $25 million for Electric Bus and Electric Bus Infrastructure; received $5.48 million via a matching federal grant, and $4million is recommended for additional funding	Transportation Improvement Program (TIP)
City of Madeira Beach	Policy 14.1.4.1 - Share information on sustainable design and green building practices with the School District, and take advantage of opportunities to incorporate demonstration projects and technologies onsite, so that local schools can serve as community models of environmental efficiency.	Comprehensive Plan
City of Dunedin	Safe and Clean Routes to Schools -Partner with local schools to implement safer biking routes, maps for students and parents, and explore ways to encourage schools to obtain and maintain electric school buses. High schools students and parents voiced their concern for safe routes to school during public community forums. The MTMP has identified that Pinehurst Road should have a multi-use trail to accommodate for the high level of walking, biking, and alternative forms of student transportation. The proposed trail could accommodate both bicyclists and pedestrians.	Dunedin DREAM
City of Tampa	MBY Policy 3.4.3 - Embrace low carbon mobility solutions that result in reduced carbon emissions and improved air quality such as electric vehicle (EV) readiness, electrification of the City's fleet, and infrastructure planning and investment to support electrification of partner agencies' fleets, such as HART and the School District.	Comprehensive Plan

City of New Port Richey	Policy CON 2.1.3 - The City shall develop an energy-saving incentive program to encourage efficiency in City government by returning a portion of the money saved to the participating bureaus and for other energy projects.	Comprehensive Plan: Conservation Element

Incentivize EV Purchases

Jurisdictions	Policy	Source
Hillsborough County	Mobility Objective 6.7.7 - Incentivize the use of electric vehicles through the implementation and expansion of electric vehicle charging stations	Unincorporated Hillsborough County Comprehensive Plan
City of Tampa	Action 3.1.3 - Promote Full Electrification of Municipal Operations Vehicles and Regional Transit Fleets. "In addition, the City will work to ensure that Tampanians can leverage incentives, rebates, and financing for the purchase of electric vehicles and the installation of charging stations at home."	Resilient Tampa
City of Tarpon Springs	Action 16 - Draft a Climate Action Plan with actions to transition the city toward clean energy goals including increasing on-site renewable energy production and the use of electric vehicles and alternative fuels. Create staff incentives to encourage the use of alternatives modes of transportation and the transition to electric vehicles.	Sustainable Tarpon Springs

Alternative Fuels (CNG, Ethanol, & Hydrogen)

Jurisdiction	Policy	Source
Hillsborough County	Objective 58 - Hillsborough County shall provide for an Energy Industrial Park (EIP) Future Land Use Category (which includes alternative energy, resource recovery, industrial, processing, manufacturing, warehousing, distribution, educational/institutional, research, ancillary Retail/Commercial and Office uses, and utility uses) that is located within an area that promotes sustainable development and that is within close proximity to areas that will support the agricultural product needs of renewable energy production facilities within the development.	Future Land Use Element
	Action G13.1 - Facilitate implementation of green fleet policy "The County's green fleet policies work to reduce petroleum use, minimize idling, right size vehicles, plan for alternative fuels, streamline purchasing rules, and plan for driver training and telematics".	HC Sustainability Action Plan
	Objective 1.2 - Support the development, and consider use, of alternative energy/fuel	Unincorporated Hillsborough County Comprehensive Plan
	The Hillsborough Transportation Planning Organization (TPO) prioritizes investments that address transit state of good repair in the areas of: Bus Replacement with Compressed Natural Gas (CNG) Conversion, and CNG vehicle purchases.	Transportation Improvement Program (TIP)
City of Tampa	ENV Policy 1.2.4 -Transition to alternative energy technology for existing, new, and renovated municipal facilities.	Comprehensive Plan
City of Seminole	Policy 2.2.1 - Consistent with the State's initiative to improve the sustainability of Florida's energy production and consumption pattern, the City shall identify opportunities and funding for local implementation of renewable energy options that apply to the built environment, infrastructure, utilities and transportation sectors, using the FGBC Green Local Government Standard as a guide.	Comprehensive Plan
City of St. Pete Beach	FLU Plan Element; Community Redevelopment District: c. Transportation Management Plan. All new development, excluding single-family and duplex residential, shall be required to prepare and submit a Transportation Management Plan (TMP) to the City... that includes one or more strategies to reduce external trip generation, improve flow, reduce greenhouse gas emissions, and/or emphasizes safe and comfortable pedestrian, bicycle and mass transit mobility, will be required. TMP strategies may include, but are not limited to: (xii) monetary contributions towards a City-owned and operated Looper Trolley fleet operated solely within the City limits and fueled by alternative fuels or electrically-charged batteries.	Comprehensive Plan
City of St. Petersburg	T17.8 - The City shall continue to support the conversion of transit and other public/private agency vehicle fleets to alternative fuels such as compressed natural gas and battery-powered systems.	Comprehensive Plan
City of Temple Terrace	LU Policy 1.4.9 - Explore options in its future expansion areas of opportunity, where alternative energy production and solar energy possibilities may be present in the form of well-situated vacant land.	Imagine 2040: Temple Terrace Comprehensive Plan
	HSG Policy 1.9.5 - Develop ways to stimulate economic growth of new business, business expansion and development of technology in alternative energy and alternative fuel.	

City of Zephyrhills	Action 40a - Explore feasibility of storage and use of biodiesel or other alternative fuels for the city fleet, including opportunities for public/private partnership	Sustainability Plan
City of Treasure Island	Policy 1.15.2 - The City shall encourage sustainable, energy-efficient and climate resilient construction practices by ...e) Implementing expedited permitting for the installation of renewable energy sources, alternative fuel and electric vehicle charging infrastructure.	Comprehensive/Sustainability Policies
City of Plant City	ENV Objective 2.3.4 - Seek to stimulate economic growth of new business, business expansion and development of technology in alternative energy and fuels.	imagine 2040: Plant City Comprehensive Plan
City of Largo	Policy 1.1.3 - Encourage the use of clean alternative energy sources and technologies to reduce dependency on fossil fuels and conserve energy	Comprehensive Plan
City of Dunedin	Policy 5.2.1. - The City will research biodiesel, hybrid, and electric options for the vehicle fleet.	Comprehensive Plan
City of Safety Harbor	Goal 10 Hybrid/Alternative Fuel Vehicles by 2030 - Actionable Item: explore options for purchasing hybrids and AFV [alternative fuel vehicles] to replace current gas vehicles... If a Hybrid of AFV can be acquired that offers the equivalent or improved LOS over the gas equivalent, the Hybrid of AFV should be given priority for purchase.	City of Safety Harbor Sustainability and Resiliency Plan 2023
Tarpon Springs	Action 16 - Draft a Climate Action Plan with actions to transition the city toward clean energy goals including increasing on-site renewable energy production and the use of electric vehicles and alternative fuels. Create staff incentives to encourage the use of alternatives modes of transportation and the transition to electric vehicles.	Sustainable Tarpon Springs
Plant City	ENV Policy 1.1.7 - Promote, through appropriate land development regulations and development order conditions, energy conservation measures and the use of alternative energy sources.	imagine 2040: Plant City Comprehensive Plan

Regional Hydrogen Hubs

Jurisdictions	Policy	Source
Hillsborough County	FLU, Policy 59.1: Minimum of 40 percent of the gross land area within the EIP shall be specifically for Alternative energy production, resource recovery facilities, agricultural, processing, research facilities supporting such uses or the manufacture and/or distribution of such technologies (Collectively the Energy Uses). The Park will include Facilities that generate energy from renewable (i.e. sustainable) energy technologies which may include Biomass-to-energy, Wind, Solar, or Aquaculture and Municipal Solid Waste to Energy. Because this field is ever changing, other renewable alternative energy technologies shall also be permitted as they are deemed feasible and become available	Future Land Use Element
	FLU 59.2 - Renewable alternative energy production or research includes but is not limited to the following uses: agriculture, aquaculture, solar technology, windmills or similar machines designed for the capture of wind power, renewable energy research facilities and supporting structures and facilities such as greenhouses, silos, barns, warehouses, classrooms, research laboratories, etc.	
	Environmental & Sustainability Objective 1.2.1 - Support domestic production of environmentally safe energy sources.	Unincorporated Hillsborough County Comprehensive Plan
Temple Terrace	ENV Objective 3.3 - Support the development of and consider use of alternative energy/fuel in order to achieve energy supplies that are secure, sustainable, and not harmful to the environment	Imagine 2040: Temple Terrace Comprehensive Plan
	Objective 3.3.2 - Seek to diversify its fuel supply and reduce its use of fossil fuels by using alternative energy technologies where feasible.	
	Objective 3.3.4 - Seek to stimulate economic growth of new business, business expansion and development of technology in alternative energy and alternative fuel.	

Energy

Regional Solar Feasibility and Installation

Jurisdictions	Policy	Source
Hernando County	Strategy 1.04I(15) - In planning for the transition of Mining Category FLUM designations to other uses, the County may consider and encourage green or clean industry uses that take advantage of the large disturbed site acreages of these properties. Examples include wind/solar energy farms and "extreme" sports parks.	Hernando County Comprehensive Plan: 2040 Plan
	Strategy 1.04I(7): The County shall identify and provide for mining-supporting related uses or industrial uses which consume mining products in the Mining Category. Mining-support uses serve the extraction process and include heavy equipment servicing and sales; industrial equipment services, fabrication and sales; explosives and drilling services; steel suppliers and fabrication; machine shops; raw materials suppliers; truck terminals serving mining purposes; co-generation facilities; and other similar uses. Industries that consume mining products include ready-mix plants; asphalt plants; brick and block manufacturers; concrete pre-stress and pre-cast producers; roofing and shingle producers; and other similar uses. Other industrial uses may include power plants, solar or wind farms and industrial parks that have been approved by master plan through the Planned Development Project (PDP) process.	
Hillsborough County	Environmental & Sustainability Objective 1.2 - Support the development, and consider use, of alternative energy/fuel	Unincorporated Hillsborough County Comprehensive Plan
Hillsborough County	Action C2.2 - Microgrid neighborhood resilience hubs	HC Sustainability Action Plan
Pasco County	SEC.4 Land Use & Design - Wherever practical, the SPA [Special Planning Area] zones shall encourage Net Zero Energy Buildings.	2025 Comprehensive Plan Pasco County, Florida
	Policy 4.2.3. - Energy Partnership; Pasco County shall promote an active partnership between the County and the Florida Solar Energy Center.	
	Policy NRC 6.7.- Promote renewable energy use. Renewable energy such as wind, solar, geothermal and biomas provide substantial benefits to the climate, and public health... The Connected City shall provide a built environment that capitalizes on these economic opportunities, maximizes energy tecnologies, and encourages reliance on renewable energy sources. The LDC shall require a minimum percentage of new development to utilize renewable energy	
Pinellas County	NRC Strategy 1.1.1.1.: Utilize the Land Development Code to promote sustainability, including: Encourage and incentivize the use of renewable energy sources	PLANPinellas
	FLU Objective 6.5.1 Encourage the use of clean and renewable alternative energy sources to reduce dependence on fossil fuels and conserve energy	
	FLU Objectives 6.5.1.1 Assess and update the Land Development Code to facilitate the implementation of localized alternative energy solutions.	

	FLU Objectives 6.5.1.2. Consider implementing density/intensity bonuses for (re)development that provides on-site power generation.	
City of Tarpon Springs	Action 20 - Conduct a solar feasibility study for City facilities. Create a policy to encourage the City to progressively source its energy consumption from renewable energy sources	Sustainable Tarpon Springs
City of Pinellas Park	Policy H.1.10.3 - The City will promote the use of alternative forms of energy uses such as photovoltaic cells or solar heating.	Comprehensive Plan
City of Safety Harbor	Goal: Increase Resiliency for City Infrastructure: Action II. Ensure, as part of the Emergency Management Plan, that all solar battery systems are elevated above the 100-year storm surge levels and fully charged before the storm.	City of Safety Harbor Sustainability and Resiliency Plan 2023
	Goal: 75kW Total Capacity by 2030, Action I - Install Solar + Storage systems on City buildings that meet the criteria based off the Solar Feasibility Study.	
City of Safety Harbor	Goal: 75kW Total Capacity by 2030, Action II. All new, non-residential, [sic] construction projects conduct a Solar Feasibility Study as part of their building process and conditions of permits.	City of Safety Harbor Sustainability and Resiliency Plan 2023
	Goal: 0 GHG Emissions by 2035, Action I - Transition from fossil fuel energy sources to renewable, zero emission sources.	
	Goal: 0 GHG Emissions by 2035, Action II. Conduct Solar Analysis for all new City buildings and major remodels.	
City of Clearwater	Strategy 13 - Resilient Infrastructure Explore grant opportunities for municipal solar photovoltaic and energy storage for critical building infrastructure (e.g., emergency shelters, schools, cooling centers, and nursing or assisted-living homes) to protect vulnerable populations and reduce GHG emissions.	Sustainability Greenprint 2.0
City of Temple Terrace	ENV Policy 3.3.3 - Investigate the use of alternative energy technology for existing, new and renovated City facilities.	Imagine 2040: Temple Terrace Comprehensive Plan
	ENV Policy 3.1.3 - Study the potential for incorporating alternative energy sources at City-owned facilities and will continue to pursue energy-saving options for exterior lighting of City buildings and facilities.	
	LU Policy 1.2.5: Give high priority to making the CIty a "green" community by exploring, considering, and providing for such emerging green practices as diverse recycling, adjusting building codes, to allow for green building materials and energy-efficient construction and structures, the use of passive and active solar energy or other green alternative energy-conserving or energy-generating technologies, and similar practices, including but not limited to water conservation and reuse, community gardens, and/or produce co-ops and markets, and such other activities in which the City can set the local standard for being first or among the first most green and energy-efficient communities.	
	HSG [Housing] Policy 1.9.4: Initiate the use of alternative energy technology for retrofitting existing and renovated City facilities and in the construction of new ones.	

City of St. Pete Beach	FLU: Objective 1.2 - Transform the City's development and permitting regulations into a Smart Growth and Quality Development code, promoting flexibility, mixed use, incorporating economic and environmentally sustainable standards and pilot Green practices program incentives	Comprehensive Plan
City of Zephyrhills	Action 18a - Amend the Land Development Code to provide for energy production in the city and to include related standards for permitted, accessory, or conditional use in zoning districts; heights, setback, visibility, and coverage standards for roof-mounted and ground-mounted systems; provision of solar-oriented lots; provision of solar-ready construction; provision of grid-connected and off-grid systems; and solar instillations.	Sustainability Plan
	Action 18j - Amend the Land Development Code to allow solar energy systems as permitted accessory uses in all zoning districts and modest encroachments into building setbacks areas to facilitate placement of solar equipment	
City of Zephyrhills	Policy LU-1-6-1 i. - Energy efficiency building design and the use of renewable energy sources	Comprehensive Plan
City of Tampa	ACTION 3.1.1 - Amplify Existing and Develop New Renewable Energy Financing Options and Programs	Resilient Tampa
City of Dunedin	Objective 3.6.2. - Construction and major additions of any City-owned or sponsored new building(s) and affordable housing units shall be certified by the Florida Green Building Coalition (FGBC) or the US Green Building Council (USGBC) as described in Land Development Code Section 105-28.3.3 Green Building Standards or equivalent certifying authority similar to the FGBC or the USGBC, and shall function as a net-zero energy building through the use of solar and/or innovative building techniques.	Comprehensive Plan
City of Dunedin	Clean Energy Installations and Retrofits Continue to install solar power in alignment with the City's Net-Zero Ordinance (19-19) for new government buildings. To increase energy from clean sources, retrofit existing City buildings best suited for solar power. Assess which buildings can switch water heaters and backup generators from fossil fuel energy sources to clean energy sources.	Dunedin DREAM
City of St. Petersburg	C16.5 - The City shall continue its commitment to alternative energies, which provide environmental sustainability and improvement through the use of solar power, methane gas and power provided by the County's Waste-to-Energy Plant.	Comprehensive Plan
City of Indian Rocks Beach	Policy 1.12.3: The City shall encourage development projects that use techniques which reduce heat absorption, including green roofs, solar orientation, and other similar strategies to reduce energy usage and greenhouse gas emissions.	Comprehensive Plan
City of Treasure Island	Policy 1.15.1 -The City shall develop building standards that promote the increased use of solar electricity in the community and shall monitor the initiatives of the County and other agencies in the development of renewable energy sources.	Comprehensive/Sustainability Policies
	Policy 1.5.3 - The City will consider and implement, if appropriate, a plan that prioritizes specific parks and open space in which to install renewable energy infrastructure.	

Solar Storage for Public Facilities

Jurisdictions	Policy	Source
City of Safety Harbor	Goal: 15% reduction in kWh by 2030; Action II. Assess the solar potential and feasibility of all City owned buildings.	City of Safety Harbor Sustainability and Resiliency Plan 2023
	Goal: 75kW Total Capacity by 2030, Action I - Install Solar + Storage systems on City buildings that meet the criteria based off the Solar Feasibility Study.	
	Goal: 75kW Total Capacity by 2030, Action II. All new, non-residential, [sic] construction projects conduct a Solar Feasibility Study as part of their building process and conditions of permits.	
City of Clearwater	Strategy 13: Resilient Infrastructure - Explore grant opportunities for municipal solar photovoltaic(Show info) and energy storage for critical building infrastructure (e.g., emergency shelters, schools, cooling centers, and nursing or assisted-living homes) to protect vulnerable populations and reduce GHG(Show info) emissions.	Sustainability Greenprint 2.0
City of Dunedin	Battery Storage - The City will research solar energy battery storage and other forms of alternate energy storage. Staying up to date on current or emerging technology will be key in finding best solutions for City operations and community projects.	Dunedin DREAM

Waste to Energy – Carbon Capture

Jurisdictions	Policy	Source
Hernando County	Goal 10.06 - Environmental Health Hazards; The County shall properly control and regulate necessary activities that may present an environmental or health hazard. / Objective 10.06A: The County shall protect its air quality through review and mitigation of potential air pollution sources.	Hernando County Comprehensive Plan: 2040 Plan
Hillsborough County	Environmental & Sustainability Objective 3.1.1 - Collaborate with the EPC [Environmental Protection Commission] to promote energy conservation measures and alternative energy sources to reduce the demand for electricity and to minimize power plant emissions from the burning of fossil fuels	Unincorporated Hillsborough County Comprehensive Plan
	Objective 1.2.3 - Research alternatives for beneficial reuse of materials and gas generated by waste to energy, landfilling and the recovery processes.	
	Objective 1.2.4 - Continue to monitor emerging technologies and beneficial uses for waste, as well as applicability to overall solid waste management.	

Energy Efficiency Program for Fire Stations, Schools, and Community Facilities

Jurisdictions	Policy	Source
Hernando County	Strategy 4.03A(4) - Hernando County should consider programs that promote convenience, low-maintenance and economic resilience, including, but not limited to energy-efficient "green" buildings, energy-saving building codes, architectural features, Florida-Friendly landscaping features, and other features that lead to a modern housing stock.	Hernando County Comprehensive Plan: 2040 Plan
Hillsborough County	Environmental & Sustainability Objective 1.1.1 - Engage in and promote practices that result in energy conservation and efficiency.	Unincorporated Hillsborough County Comprehensive Plan
	Objective 1.1.2 - Continue to offer energy conservation and efficiency information to enable residents, businesses, and County employees to reduce electrical loads and demands on the electrical utility system.	
	Objective 1.1.3 - Conserve energy and become more energy efficient within operations by developing and adopting a comprehensive energy management plan.	
	Objective 1.1.4 - Promote energy efficient and sustainable development practices.	
	Environmental & Sustainability Objective 3.1.1 - Collaborate with the EPC [Environmental Protection Commission] to promote energy conservation measures and alternative energy sources to reduce the demand for electricity and to minimize power plant emissions from the burning of fossil fuels	
	Action C1.1 - Increase energy efficiency and weatherization updates	HC Sustainability Action Plan
	Livable Communities Element, Wimauma Village: Goal 8. Health, Wellness, and Safety - Encourage the use of energy efficient street lights and down-lighting to preserve the rural character	Livable Communities Element
Pasco County	Chapter 14: Connected City, SEC.4 Land Use & Design - All SPA [Special Planning Area] zones, wherever possible, shall demonstrate examples of energy efficiency, such as on-site renewable energy (solar/wind/other). // Wherever practical, the SPA zones shall encourage Net Zero Energy Buildings.	2025 Comprehensive Plan Pasco County, Florida
	Chapter 14: NRC 6.6 - The Connected City shall reduce energy consumption. Energy conservation is essential to establish an economically and environmentally sustainable and resilient community. The Land Development Code shall address energy conservation techniques in new construction to reduce annual average daily energy consumption kwh per ERU. All new construction within Connected City shall meet (or exceed) Energy star or similar program standards. These standards address energy efficient appliances, lighting fixtures, heating/cooling systems, tankless water heaters, higher overall insulation rating, and other energy efficient systems and construction techniques. Alternative conservation methods shall be considered as new techniques become available that can be supported by available advanced technology.	

	Chapter 14: Connected City, SEC 7. - Public Facilities. Policy PF 7.4. The Connected City Park System shall utilize techniques that protect natural resources, habitats, and biodiversity...Energy conservation techniques should be utilized in all parks... Energy conservation techniques shall be incorporated into the layout, design, and construction of all parks, such as the use of green building materials, and passive lighting.	
Pinellas County	NRC Polic 1.1.2.3. - All new or redeveloped County properties shall: evaluate back up power sources; evaluate renewable energy options; Evaluate the inclusion of infrastructure for electric vehicle charging	PLANPinellas
Town of St. Leo	CON Policy 3.2.1. - Implement future land use patterns and development review criteria that promote mixed-use development, and ensure energy efficient and conserving site plan design and building construction.	Comprehensive Plan
City of Indian Rocks Beach	Objective 1.12 - The City shall encourage development projects that are energy efficient and support action by the county, regional, state, and federal agencies to reduce greenhouse gas emissions.	Comprehensive Plan
City of Tarpon Springs	Action 28 - Make green infrastructure a core goal of the City's Infrastructure Master Plan. Create green building standards and sustainability practices for City facilities that include considerations for improved energy efficiency, GHG emissions reduction, and which promote sustainable landscapes as well as public health and safety.	Sustainable Tarpon Springs
City of St. Petersburg	Action 3.3 - Implement deep energy retrofits and retro-commissioning of City facilities	Integrated Sustainability Action Plan
	Action 3.7 - Establish Property Assessed Clean Energy (PACE)	
	Action 3.7 - Create a retrofit accelerator program	
City of St. Petersburg	Objective C16 - The City shall continue to implement energy conservation initiatives.	Comprehensive Plan
City of St. Pete Beach	FLU Goal 1: Support rebuilding and maintaining a sustainable carbnon-neutral community by adopting and implementing land development and building regulations that: protect and conserve water resources; promote energy efficient buildings	Comprehensive Plan
	FLU: Objective 1.2 - Transform the City's development and permitting regulations into a Smart Growth and Quality Development code, promoting flexibility, mixed use, incorporating economic and environmentally sustainable standards and pilot Green practices program incentives	
Town of Redington Beach	Policy 3.1.4 - The land development regulations shall contain specific and detailed provisions required to implement this comprehensive plan, which, at a minimum:... Promote green building techniques and materials	Comprehensive Plan
City of Plant City	LU Policy 7.2.2 - Locate public facilities and utilities so as to Locate public facilities and utilities so as to: (a) maximize the efficiency of services provided; (b) minimize their cost; (c) minimize their impacts upon the natural environment; and (d) to promote energy conservation within Plant City.	imagine 2040: Plant City Comprehensive Plan
	ENV Policy 1.1.7 - Promote, through appropriate land development regulations and development order conditions, energy conservation measures and the use of alternative energy sources.	

	ENV Policy 2.1.4 - Continue to pursue energy-saving options for exterior lighting of City buildings and facilities.	
City of New Port Richey	Policy CON 2.1.2 The City shall identify energy-saving measures including opportunities for use of renewable resources in municipal buildings and facilities and seek funding (e.g. state and federal grants) for implementation	Comprehensive Plan: Conservation Element
	Policy CON [Conservation] 2.1.3 The City shall develop an energy-saving incentive program to encourage efficiency in City government by returning a portion of the money saved to the participating bureaus and for other energy projects.	
	Policy CON 2.1.4 - The City shall promote the use of energy-efficient street lighting systems, and continue to convert street lights to be more energy efficient.	
City of New Port Richey	Policy LIV 1.4.7 - Consider implementation of a Dark Sky Initiative as a means of reducing light pollution and energy consumption.	Comprehensive Plan: Livable City Element 2
City of Clearwater	A.6.9.1 Pursue Green City Certification from the Florida Green Builder's Coalition(FGBC).	Comprehensive Plan
	A.6.9.2 - Support the construction or renovation of buildings consistent with US Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) principles or the (FGBC) Florida Green Building Coalition's Green Land development and building standards.	
City of Clearwater	Strategy 9 - Energy-Efficient Streetlights Request conversion of all Duke Energy-owned electric streetlights to LED.	Sustainability Greenprint 2.0
City of Zephyrhills	Action 15c Sponsor energy efficiency seminars during Energy Awareness Month (October) in partnership with the Pasco County Cooperative Extension to provide information on best practices for saving energy in homes and businesses. A giveaway, such as a starter kit of energy efficiency products, would provide an incentive for seminar participation and immediate action to save energy.	Sustainability Plan
	Action 18A - Consider use of solar photovoltaic (PV) and solar thermal of city buildings, grounds, and equipment (e.g., street and cross-walk lighting and hot water heating).	
	Action 18c Implement a sustainable building permit expedite program for buildings that employ energy efficiency and clean energy technologies	
	Action 28 Partner with the Greater Zephyrhills Chamber of Commerce, Pasco County, Pasco County Economic Council, and the Tampa Bay Partnership to identify and attract green business clusters to the greater Zephyrhills area and region. A green business cluster is a geographically concentrated and self-sustaining network of buisness, specialized suppliers, service providers, and associated institutions for mnay disicplines, including green building, energy efficiency, and clean technology.	
City of Zephyrhills	Objective LU-1-12: The City will promote energy efficiency, energy conservation, renewable energy resources and reduction of greenhouse gas emissions in the implementation of its growth management policies	Comprehensive Plan
	Policy LU-1-12-1: By July 2011, the City will evaluate its plans, policies, regulations and programs with regard to energy efficiency, energy conservation, the use of renewable energy resources and the reduction of greenhouse emissions. To implement this evaluation, this City will consider amendments to this comprehensive plan including the addition of an Energy Element.	

	Policy-LU-1-12-2: Nothing in this Comprehensive Plan shall be construed or interpreted to prevent the City from considering and promoting energy efficiency, energy conservation or the reduction of greenhouse gas emissions in its review of new development and redevelopment.	
City of Zephyrhills	Policy LU-1-12-3: Nothing in this Comprehensive Plan shall be construed or interpreted to prevent the City from amending its land development regulations to address energy efficiency, energy conservation or the reduction of greenhouse gas emissions	Comprehensive Plan
City of Tampa	LU Policy 1.3.1: Continue encouraging and promoting developments and redevelopments exceeding the Florida Building Code's minimum energy efficiency requirements.	Comprehensive Plan
	ENV Objective 1.1: Actively participate in the U.S. Environmental Protection Agency (EPA) 's Energy Star for Buildings program, which promotes energy conservation in major public and private structures and facilities.	
	ENV Objective 1.2: Support a transition to 100% clean, renewable energy.	
	LU Policy 1.3.1: Continue encouraging and promoting developments and redevelopments exceeding the Florida Building Code's minimum energy efficiency requirements.	
	LU Policy 1.3.3: Encourage new and renovated City-owned facilities, at a minimum, will meet the most current United States Green Building Council (USGBC) "Leadership in Energy and Environmental Design" (LEED) Silver Standard program or meet similar standards.	
	LU Policy 3.1.4: Continue to encourage that all new buildings in the Central Business District be built to LEED (Leadership in Energy and Environmental Design) standards.	
City of Tampa	Ensure All Municipal Operations Are Powered by 100 Percent Renewable Energy	Resilient Tampa
City of Safety Harbor	Goal: 0 GHG Emissions by 2035; Action I - Increase energy efficiency in City buildings; Implement smart technology to increase energy efficiency	City of Safety Harbor Sustainability and Resiliency Plan 2023
	Goal: 0 GHG Emissions by 2035 Action II Implement energy efficient building control technology in all City buildings.	
	Goal: 15% reduction in kWh by 2030, Action II - Continue to participate in Clean Energy Partnerships with Energy Provider.	
	Goal: 15% reduction in kWh by 2030, Action III. Commitment to purchasing Energy Star products when available for City buildings and operations. Building Energy Assessment every 5 years to continuously improve and maintain efficiency.	
City of Safety Harbor	Policy 2.3.1 - The City of Safety Harbor and the School District will share information on sustainable design and green building practices, and take advantage of opportunities to incorporate demonstration projects and technologies onsite, so that local schools can serve as community models of environmental efficiency.	City of Safety Harbor Comprehensive Plan
City of Gulfport	Policy 1.1.7 - The City shall encourage the decrease of energy consumption, using more renewable energy, and reducing the impact of built structures on the environment.	City of Gulfport Comprehensive Plan
	Policy 1.7.3 - The City shall cooperate with energy companies to encourage and promote energy conservation measures and alternative energy sources to reduce demands upon electrical power generating facilities, thereby minimizing plant emissions.	

Madeira Beach	Policy 14.1.4.1 - Share information on sustainable design and green building practices with the School District, and take advantage of opportunities to incorporate demonstration projects and technologies onsite, so that local schools can serve as community models of environmental efficiency.	Comprehensive Plan
City of Treasure Island	Policy 1.8.4 - Public facilities and utilities shall be located and designed to maximize the efficiency of services provided; to balance their cost with resilience, and to minimize their impacts on the natural environment.	Comprehensive/Sustainability Policies
Town of Kenneth City	Policy 1.8.2 - The Town shall encourage the use of energy conservation methods in new developments and redevelopments.	Comprehensive Plan
City of Pinellas Park	Policy PR.1.2.13 - Planning of park and recreational facilities shall include concern for protection of environmental and natural resources, urban wildlife populations, energy efficiency and the orderly extension and expansion of other public facilities and services.	Comprehensive Plan
City of Largo	1.1.5 - Encourage greener, more efficient sustainable and climate resilient construction practices and building standards, such as the Leadership in Energy and Environmental Design (LEED) and Florida Green Building, for public and private buildings as well as city-funded housing projects.	Comprehensive Plan
City of Temple Terrace	ENV Policy 3.1.3 - Study the potential for incorporating alternative energy sources at City-owned facilities and will continue to pursue energy-saving options for exterior lighting of City buildings and facilities.	Imagine 2040: Temple Terrace Comprehensive Plan

Street Light Conversions

Jurisdictions	Policy	Source
Pinellas County	FLU [Future Land Use] Objective 6.5.1 - Encourage the use of clean and renewable alternative energy sources to reduce dependence on fossil fuels and conserve energy	PLANPinellas
	NRC Strategy 1.1.1.1. - Utilize the Land Development Code to promote sustainability, including: Encourage and incentivize energy efficiency; encourage and incentivize the use of renewable energy sources	
City of Clearwater	Strategy 12 - Municipal Performance Standard Build all new municipal facilities to a nationally recognized high-level performance standard (e.g., Leadership in Energy and Environmental Design, Florida Green Building Coalition, and Energy Star).	Sustainability Greenprint 2.0
City of Dunedin	3.6.2.- Construction and major additions of any City-owned or sponsored new building(s) and affordable housing units shall be certified by the Florida Green Building Coalition (FGBC) or the US Green Building Council (USGBC) as described in Land Development Code Section 105-28.3.3 Green Building Standards or equivalent certifying authority similar to the FGBC or the USGBC, and shall function as a net-zero energy building through the use of solar and/ or innovative building techniques.	Comprehensive Plan
City of Dunedin	Green Government Certification - Maintain Green Government Certification through known organizations such as the Florida Green Building Coalition (FGBC) and LEED for Cities and Communities. Continuing to recertify the City will provide staff with data-driven reports to measure its actions	Dunedin DREAM

	Smart and Sustainable Building Practices - Weatherization and Energy Efficiency, Solar Energy and Energy Efficiency Education for Staff, Retrofit with Smart Building Technology (Internet of Things (IOT), Reflective and Light Colored Roofs, Florida Water Star Certification, Light Pollution Reduction, and Improve Ventilation	
City of St. Petersburg	Action 3.4 - Adopt a building energy benchmarking and disclosure policy	Integrated Sustainability Action Plan
City of St. Petersburg	C16.2 - The City shall convert all City-owned street lighting systems, as well as the lighting systems in City-owned multi-level parking garage facilities, to induction lighting systems which produce an annual savings of approximately 50 percent, with a payback period of less than five years.	Comprehensive Plan
Temple Terrace	ENV Objective 3.1: Engage in and promote practices that result in energy conservation and efficiency.	Imagine 2040: Temple Terrace Comprehensive Plan
City of New Port Richey	Objective 2.1 - Increase municipal energy efficiency by 10 percent by the year 2025 by reducing total energy use in City-owned buildings, facilities and fleet.	Comprehensive Plan: Conservation Element
City of Plant City	ENV Policy 2.1.3 - During the planning and design of new municipal buildings and facilities, and major renovations, evaluate alternative energy systems. Where these systems prove both cost effective during their initial installation and long term maintenance, they will be pursued. Based on knowledge gained from this ongoing process, promote alternative energy sources in other public and private development projects within Plant City.	imagine 2040: Plant City Comprehensive Plan
City of Seminole	Policy 2.1.4 - Continue to require energy efficiency in all of its operations and buildings, and will incorporate, to the extent practicable, non-traditional, sustainable energy options where feasible, so as to be a model for sustainability	Comprehensive Plan
City of Tarpon Springs	Action 21 - Make retrofits and upgrades to local government buildings and/or infrastructure systems that will increase energy and water efficiency Action 24 - Provide education and outreach to engage residents, businesses, and local government staff in topics which relate to city efforts regarding GHG reduction, energy and water efficiency, and waste education strategies	Sustainable Tarpon Springs
City of St. Pete Beach	1.2.5: Require energy efficient or solar lighting for all public improvements including LED traffic lights and pedestrian street lighting within the Community Redevelopment District; and strongly encourage energy efficient or solar lighting throughout the City for both private and public sectors.	Comprehensive Plan

Glossary

BAU- Business as usual

CO_2e – Carbon dioxide equivalent, the universal unit for measuring greenhouse gas emissions.

Climate Neutrality – the idea of achieving new zero greenhouse gas emissions.

CPRG – Climate Pollution Reduction Grant

EPA- U.S. Environmental Protection Agency

GHG- Greenhouse gas

LIDAC- Low-income and disadvantaged communities

MSA- Metropolitan Statistical Area

TBRPC- Tampa Bay Regional Planning Council

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