



Memorandum

TO: HONORABLE MAYOR AND
CITY COUNCIL

FROM: Toni J. Taber, MMC
City Clerk

SUBJECT: SEE BELOW

DATE: November 19, 2025

SUBJECT: Climate Smart San José Semi-Annual Status Report and Updated Plan

Recommendation

As recommended by the Transportation and Environment Committee on October 6, 2025:

(a) Accept the Climate Smart San José semi-annual update covering March to August 2025.

(b) Approve the updated Climate Smart San José plan.

(c) Approve the change from semi-annual to annual Climate Smart updates to the Transportation and Environment Committee and to the City Council.

CEQA: Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action. (Energy)

[Transportation and Environment Committee referral 10/6/2025 - Item (d)3]



Memorandum

TO: HONORABLE MAYOR
AND CITY COUNCIL

FROM: Lori Mitchell

SUBJECT: See Below

DATE: September 15, 2025

Approved

Date:

9/22/2025

COUNCIL DISTRICT: Citywide

SUBJECT: Climate Smart San Jose Semi-Annual Status Report and
Updated Plan

RECOMMENDATION

- (a) Accept the Climate Smart San José semi-annual update covering March to August 2025.
- (b) Approve the updated Climate Smart San José plan.
- (c) Approve the change from semi-annual to annual Climate Smart updates.
- (d) Cross-reference this report to the November 18, 2025, City Council meeting for consideration and approval.

SUMMARY AND OUTCOME

This memorandum presents the semi-annual update on *Climate Smart San José* ("Climate Smart") initiatives from March to August 2025 and the administrative update to the Climate Smart plan. The administrative update to the Climate Smart plan incorporates the City's carbon neutrality by 2030 goal and the previously approved Natural and Working Lands element. The update also streamlines and updates metrics to focus on core greenhouse gas (GHG) reduction strategies and align with current data, aligns with state and regional climate policies, and replaces the City Action Plans with annual departmental workplans to allow staff to use the most up-to-date data and to align with City priorities.

The semi-annual Climate Smart update highlights over 40 significant initiatives supporting Climate Smart goals that are being implemented by a variety of City Departments - Airport, Energy, Environmental Services, Office of Economic Development and Cultural Affairs, Public Works, and Transportation. In Fiscal Year (FY)

2024-2025, City staff executed over \$3.9 million in external funding agreements and resources. City staff applied for over \$3.6 million and was awarded over \$4.6 million in external grant funding or resources during the March through August 2025 reporting period. The *2023 Communitywide Greenhouse Gas Inventory* show that GHG emissions increased by 0.2 percent from 2021 to 2023. While the City is generally making progress towards its City Council-approved climate goals, we are currently not on track to meet the 2030 goals. Continued City investment and focus is necessary to accelerate its efforts towards its climate goals. This Fall, staff will convene a strategy session to take a closer look at the Climate Smart plan 2030 goals.

Staff recommends accepting the semi-annual update and the updated Climate Smart plan. With the approval of this memorandum, the June 2025 update of the Climate Smart plan will serve as the City's strategic guide for climate action and provide direction for City staff to move from semi-annual to annual Climate Smart updates going forward.

BACKGROUND

In 2018, the City Council approved the original Climate Smart San José ("Climate Smart") plan to align San José's GHG reduction efforts with the international Paris Climate Agreement. At the time of Council approval, City Council directed staff to return to Council with updates on a semi-annual basis.

In September 2019, San José City Council adopted a resolution declaring a climate emergency. In November 2021, the Council set a target for communitywide carbon neutrality by 2030, and in June 2022 approved the Pathway to Carbon Neutrality to accelerate implementation across four major areas: increased zero emission vehicle uptake, reduced vehicle miles traveled, increased building electrification, and carbon-neutral electricity.

The Climate Smart plan is planned for updates following the *Envision San José 2040 General Plan* major review cycle. The administrative update presented in this memo integrates new strategies, policy alignment, and refined metrics.

Since the approval of the Climate Smart plan, staff have prepared communitywide GHG inventories on a biannual basis to track progress towards Climate Smart goals. Beginning in FY 2024-2025 (when the GHG inventory for calendar year 2023 was developed), City staff now provide annual communitywide inventories to allow for more timely tracking of progress and more information for targeted GHG reduction efforts.

ANALYSIS

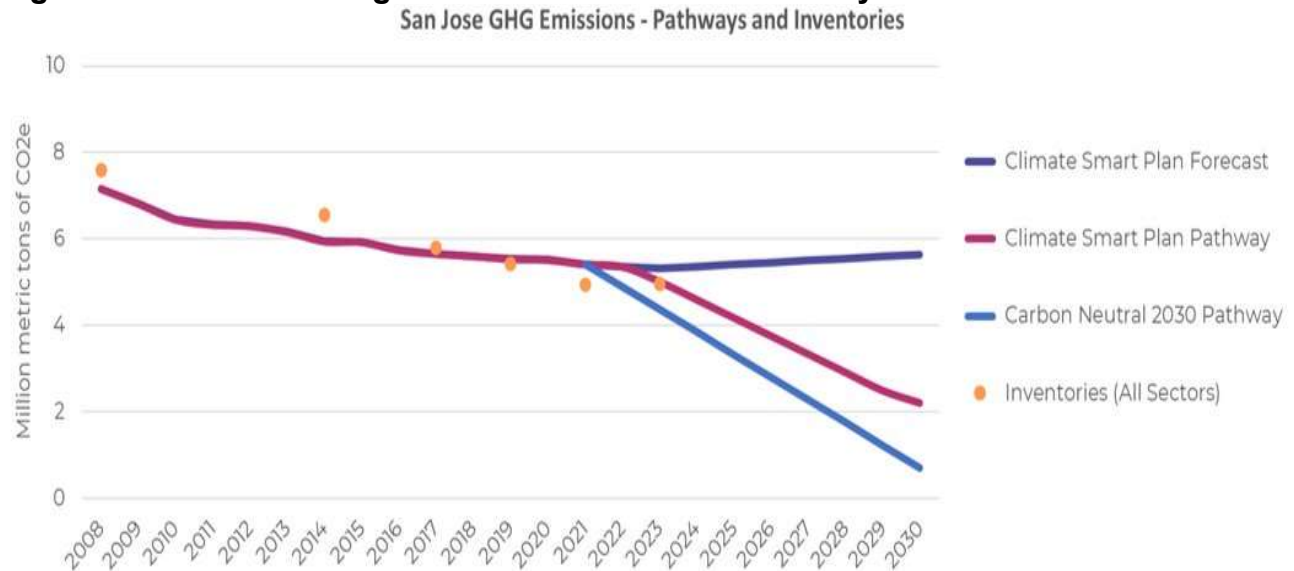
This memorandum provides an overview of the first update to the Climate Smart plan and a status report on the City's current Climate Smart initiatives, including external funding and resources acquisition and a look-ahead at planned Climate Smart activities.

Climate Smart Plan Update

The update to the *Climate Smart San José* plan (see Attachment A) includes the following key updates:

- Incorporation of the City's adopted carbon neutrality by 2030 goal and a strategic refocusing of City efforts on the most impactful actions for achieving carbon neutrality by 2030, in alignment with the City's approved *Pathway to Carbon Neutrality by 2030*;
- Strategies from the City's approved *Natural and Working Lands Element*;
- Updated metrics to better reflect core decarbonization efforts and align with data availability;
- Replacement of the previous City Action Plan with annual, up-to-date and priority-aligned departmental work plans;
- Alignment with state and regional policy, including Senate Bill 100 (100% clean electricity), California's Advanced Clean Cars II regulations, and Plan Bay Area 2050 regional mobility strategies;
- Adjusted and added Progress Milestones by interpolating interim 2027 and 2030 targets where the City has already surpassed 2030 goals to maintain a trajectory towards the original Climate Smart 2040 and 2050 goals; and
- Acknowledgement that San José is not currently on track to meet its 2030 carbon neutrality goal, underscoring the need for accelerated action.

These updates were informed by community engagement (detailed in the Public Outreach section of the memorandum) and the City's most recent communitywide GHG inventory (see Attachment B), which finds that transportation (51 percent) and buildings (29 percent) contribute the largest share of San José's GHG emissions. Although communitywide GHG emissions have declined by 16 percent since 2018 (see Figure 1), the slight increase (0.2 percent) in GHG emissions from 2021 to 2023 indicates that San José is currently not on track to meet its 2030 carbon neutrality goal. As an example, per the City's approved Pathway to Carbon Neutrality by 2030, to reach the goals San José would need to get between 79% and 88% EV adoption rate (depending on level of vehicle miles traveled reduction). As of the 2024 data, San Jose has an approximately 8% EV adoption rate.

Figure 1. San José's Progress Towards Carbon Neutrality Goals

Sustained focus and funding, and accelerated policy and/or program execution will be critical to reverse the current trajectory and try to align with the City's adopted climate targets.

Climate Smart Initiatives Update

The City has over 40 significant initiatives across multiple City departments – Airport, Energy, Environmental Services, Office of Economic Development and Cultural Affairs, Public Works, and Transportation – that support the City's climate goals. A summary of Climate Smart initiatives, lead department, and work completed during the reporting period is included in Attachment C.

Funding and Resources for Climate Smart Initiatives

In addition to these cross-departmental initiatives, Climate Smart Division staff collaborate across City divisions and departments to track and pursue private, state, and federal funding opportunities to support Climate Smart initiatives. Table 1 provides a summary of Climate Smart external resources submitted, awarded, and executed for the reporting period and through FY 2024-2025.

Table 1. Value of External Resources Requested and Awarded to Support Climate Smart Goals

	Total Amount of Grants Submitted in Reporting Period (Mar. – Aug. 2025)	Total Amount of Grants Awarded in Reporting Period (Mar. – Aug. 2025)	Total Amount of Awards Executed in FY 2024-2025
Direct Funding	\$687,755	\$4,595,000	\$3,995,000 ¹
In-Kind Resources	\$2,963,383	\$35,000	\$0
Total	\$3,651,138	\$4,630,000	\$3,995,000¹

¹ The City was originally awarded a \$1,000,000 grant through the Environmental Protection Agency's Environmental Justice Government-to-Government Program, which was executed on 1/1/25 and subsequently rescinded on 1/28/25. This amount was reported in the previous update to City Council but has been removed in this update.

Total funding awarded from granting agencies in FY 2024-2025 includes support for initiatives to further transit station access and circulation planning, the adoption and implementation of the City's Transit Oriented Communities policy, East San José public electric vehicle (EV) charging infrastructure, EV charging ports design and construction, and extreme heat resiliency in the community. The Departments of Energy, Environmental Services, Public Works, Planning, Building, and Code Enforcement, and Transportation are recognizing and implementing these grants.

City staff directly applied for over \$3.6 million in external funding and received notification of grant awards worth over \$4.6 million in the March through August 2025 reporting period, with some award negotiations or notices pending. City staff are closely monitoring and preparing for external funding opportunities to support Climate Smart goals such as building electrification, EV charging infrastructure, transportation mode shifting, and climate resiliency. City staff also continue to leverage and promote available external resources, incentives, and programs that align with Climate Smart goals. The hold and reduction of some federal funding continues to have a significant impact on the ability of the City to progress on major climate initiatives supporting EV charging infrastructure and building energy policy development.

Looking Ahead

Highlighted items that City staff expects to complete in the next six-month period (September 2025 - February 2026) are below:

- Launch EV Instant Rebates which will provide income-qualified San José Clean Energy (SJCE) customers up to \$4,000 to purchase or lease a new or used EV, applied at point-of-sale;
- Launch SJCE's Go Electric Advisor to answer residential customer questions about EVs, home electrification, solar and batteries, and related clean energy

upgrades via phone or email, as well as provide free whole home electrification plans;

- Expand Peak Rewards for Smart Homes to manage home charging and battery usage in the most cost-efficient way for SJCE residential customers with EVs and batteries;
- Release of the Climate Adaptation and Resilience Plan Public Review Draft;
- Installation of new bikeways through the pavement program and Downtown Better Bikeways project;
- Launch of community engagement for the San José Mobility Hubs project;
- Rollout of Bike Escuela training, installation of new bikeshare stations, launch of Mobility Wallet recruitment, and start of Promotoras Academy — all as part of the East San José Mobility Project; and
- Complete and adopt the Connect North San Jose Multimodal Plan.

Staff also expects to bring the following Climate Smart items to City Council in the next six months (starting September 2025):

- SJCE Workforce Development Programs (September 9, 2025, complete)
- Single-family Existing Building Reach Code (September 9, 2025, complete)
- Climate Smart Zero Waste Element (November 2025, tentative)
- Climate Adaptation and Resilience Plan (February 24, 2026)
- Energy and Water Building Performance Ordinance Evaluation (Spring 2026, Transportation and Environment Committee)"

In FY 2025-2026, City staff are scheduled to provide an annual update to the Transportation and Environment Committee. Staff recommend an annual report to better align with recent changes to council committee meetings which limited the number of meetings. City staff will provide annual Climate Smart updates to City Council going forward.

Despite the challenge of meeting its aggressive climate goals, the City continues to make measurable progress through initiatives like San José Clean Energy's clean power offerings, building electrification incentives, and expanded EV infrastructure. Continued City investment and focus will be necessary to reach those goals.

This Fall, staff will convene a strategy session to take a closer look at the Climate Smart Plan 2030 goals. While the goals remain an important guidepost, we recognize the need to refine our strategies to ensure stronger, more achievable outcomes. The session will focus on identifying where adjustments are needed and exploring new approaches that can help us deliver meaningful progress while staying aligned with the plan's overall vision

Racial Equity Impact Analysis

Historically marginalized communities of San José are already experiencing and are more likely to be burdened by the impacts of climate change while also being the least able to, due to financial and other constraints, take advantage of climate initiatives which can bring significant health and financial benefits with them.

Many Climate Smart initiatives are leading in the effort to develop City policies and programs more equitably by using a community co-creation approach. Some of these approaches include employing outreach tactics to better reach historically marginalized communities, and ensuring a portion of program benefits will go to these communities.

Climate Smart San José Analysis

Climate Smart initiatives detailed in this memorandum are helping to advance several City climate goals by facilitating:

- the reduction of energy or water use consumption, or increases in demand for renewable energy,
- the energy and water efficiency of homes and commercial buildings, and
- mobility choices other than single-occupancy, gas-powered vehicles.

EVALUATION AND FOLLOW-UP

Staff will provide progress updates to the Transportation and Environment Committee and City Council on Climate Smart activities on an annual basis.

COORDINATION

This memorandum was coordinated with the Departments of Airport, Environmental Services, Public Works, and Transportation, Office of Economic Development and Cultural Affairs, and the City Manager's Office.

PUBLIC OUTREACH

This memorandum will be posted on the City's website for the October 6, 2025, Transportation and Environment Committee meeting and November 18, 2025, City Council meeting.

For the administrative update to the Climate Smart plan, City staff conducted outreach via flyers distributed and promoted at community events, San José libraries, and community centers. Staff provided multilingual materials to ensure accessibility for diverse audiences. In addition, advertising campaigns ran on Google and Nextdoor, while promotions were made through Meta, Instagram, and X social media platforms.

City staff sent out email blasts and the San José Climate Chronicles e-newsletter to further promote the public comment period for the draft plan update. During public comment, staff held two informational webinars that provided an overview of the draft plan update and the public comment platform, Konveio. The webinars had a total of 46 attendees. By the end of the public comment period, City staff received nearly 200 comments on the draft plan from 20 unique commenters.

COMMISSION RECOMMENDATION AND INPUT

At its meeting on September 18, 2025, the Climate Advisory Commission approved the following recommendation:

"The Climate Advisory Commission accepts staff's presentation on the Climate Smart San Jose semi-annual status report and updated plan and recommends adoption of the Climate Smart San José 2025 Update by City Council.

However, we are alarmed at the slow progress against the 2030 goals and urge the council to invest in more urgent actions.

We specifically recommend the inclusion, early in the report update document on pages 13 or 14, a section of at least one paragraph with the high-level heading and a graphic or bolding that reads "URGENCY REQUIRED TO MARKEDLY ACCELERATE HIGH IMPACT ACTIONS TO MEET CLIMATE GOALS" to highlight attention with clear language on how much we are off track from our climate goals and an acknowledgement that current efforts need to be scaled dramatically to meet these goals."

At its meeting on September 22, 2025, the Youth Commission approved the following recommendation:

"The San Jose Youth Commission accepts staff's presentation on the Climate Smart San Jose semi-annual status report and updated plan and recommends adoption of the Climate Smart San José 2025 Update by City Council.

However, we are alarmed at the slow progress against the 2030 goals and urge the council to invest in more urgent actions.

We specifically recommend the inclusion, early in the update document on pages 13 or 14, a section of at least one paragraph with the high-level heading and a graphic or bolding to highlight attention with clear language on how much we are off track from our climate goals and an acknowledgement that current efforts need to be scaled dramatically to meet these goals."

CEQA

Not a Project, File No. PP17-009, Staff Reports, Assessments, Annual Reports, and Informational Memos that involve no approvals of any City action.

PUBLIC SUBSIDY REPORTING

This item does not include a public subsidy as defined in section 53083 or 53083.1 of the California Government Code or the City's Open Government Resolution.

/s/
Lori Mitchell
Director
Energy Department

For questions, please contact Julie Benabente, Deputy Director, Energy Department, at Julie.Benabente@sanjoseca.gov.

ATTACHMENTS

Attachment A – Climate Smart San José: A People-Centered Plan for a Low-Carbon City (June 2025 Update)

Attachment B – 2023 Communitywide Greenhouse Gas Inventory

Attachment C – Climate Smart Initiatives



Attachment A – Climate Smart San José A People-Centered Plan for a Low-Carbon City (June 2025 Update)

Climate Smart San José

A PEOPLE-CENTERED PLAN FOR
A LOW-CARBON CITY

2025 UPDATE



LIVING BETTER TODAY FOR TOMORROW



MESSAGE FROM THE MAYOR **MATT MAHAN**



Dear Neighbors,

As the Capital of Silicon Valley, San José is leading the nation's clean energy transition with practical, results-driven solutions that improve the quality of life for all our residents. Our Climate Smart update is another step in creating a cleaner, greener, and more sustainable city.

Over five years ago, we became the first major city to pledge to be carbon neutral by 2030 by launching the Climate Smart San José plan — an innovative effort to demonstrate how it is possible to live both comfortably and sustainably — while also fighting climate change. We called this concept 'The Good Life 2.0'. By living in compact, walkable, and transit-served neighborhoods, we could reduce greenhouse gas emissions, enhance livability, increase safety, and create more community cohesion while addressing inequities. Installing rooftop solar and creating San José Clean Energy allows us to shift quickly and justly to a renewable energy future while also improving public health.

Since 2018, we've been working hard toward a sustainable future. San José Clean Energy is supplying energy citywide. The Building Performance Ordinance is helping property owners understand the value of energy and water efficiency upgrades. We have charted a Pathway to Carbon Neutrality by 2030 and created the first-ever plan to protect and enhance our Natural and Working Lands to further our climate mitigation and resiliency efforts. Since the adoption of Climate Smart San José, our greenhouse gas emissions have decreased 16%, exceeding our reduction goals.

“ Since the adoption of Climate Smart San José our greenhouse gas **emissions have decreased 16%**, exceeding our reduction goals. ”

This update to Climate Smart sharpens our focus on reducing greenhouse gas emissions through the measures that have the largest effect between now and 2030. These strategies include energy efficiency and electrification retrofits to existing buildings, accelerating the adoption of zero-emission cars and alternative ways to get around, and powering our buildings and transportation with 100% carbon-neutral power.

According to the Intergovernmental Panel on Climate Change, “Human-induced climate change is already affecting many weather and climate extremes in every region across the globe.” Being climate smart means preparing for a changing climate, building both sustainability and resilience, and ensuring clean, reliable power alongside continued economic growth.

Thank you for your continued support of Climate Smart San José and the 'Good Life 2.0'. Together, we're creating a sustainable, resilient future that benefits all San José residents and builds a stronger community that can better adapt to the impacts of climate change.

Matt Mahan
Mayor, City of San José



Members of the San José Community,

San José is a city of opportunity, innovation, and resilience. From our history as the “Valley of Heart’s Delight” to our position today as the fifth greenest city in the United States, as recognized by WalletHub in 2024, we remain committed to delivering high-quality services that create a safe, livable, and vibrant community for our diverse residents, businesses, and visitors.

Since its inception in 2018, the Climate Smart San José plan has guided our efforts to reduce greenhouse gas emissions and build a more sustainable and resilient City. Over the past several years, we have operationalized Climate Smart goals with meaningful achievements, including expanding the electrification of our municipal fleet, enhancing energy efficiency in public facilities, constructing all-electric City buildings, adding 150 new charging stations, and reducing communitywide greenhouse gas emissions by 16% since the launch of Climate Smart. These efforts not only reflect our environmental values but also advance our equity commitments by increasing access to cleaner air, safer infrastructure, and more sustainable services for all communities.

As we move forward, we are sharpening our focus on actionable strategies to meet the City’s ambitious carbon neutrality goals. Our work supports San José’s broader infrastructure strategy — ensuring disaster readiness, clean and sustainable energy, and a thriving natural environment — while also enhancing the livability of our neighborhoods and expanding access to climate solutions, mobility options, and economic opportunities for all residents.

San José’s approach combines bold policy leadership with effective operational execution. Guided by a commitment to equity, sound fiscal management, and excellent customer service, the City is dedicated to delivering impactful outcomes through partnerships, innovation, and accountability.

I look forward to our continued collaboration with our community to address climate change and building a cleaner, safer, and more resilient City for all.

Jennifer A. Maguire
City Manager, City of San José



ACKNOWLEDGMENTS

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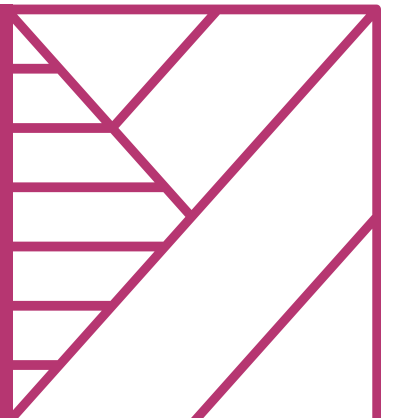
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KEY

DOT: Department of Transportation
ED: Energy Department
ESD: Environmental Services Department
PW: Public Works Department
OEDCA: Office of Economic Development and Cultural Affairs
PBCE: Planning, Building and Code Enforcement
PRNS: Parks, Recreation, and Neighborhood Services





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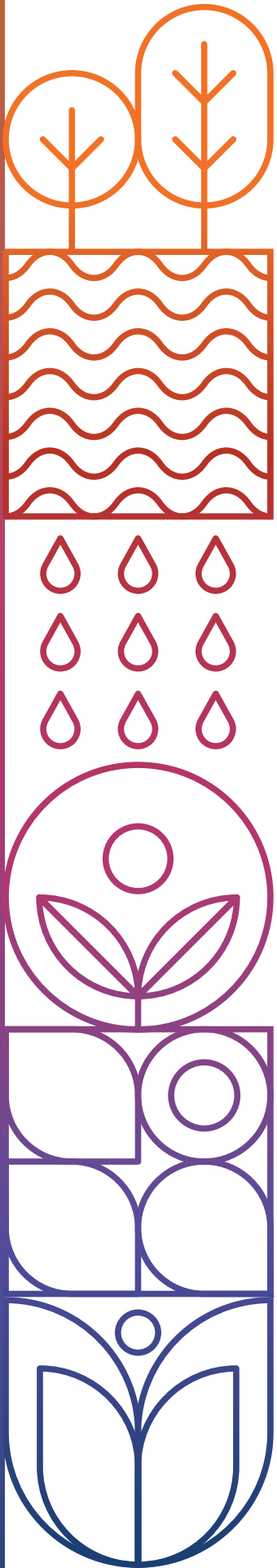
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INTRODUCTION

In 2018, the City of San José (City) approved Climate Smart San José (Climate Smart), a bold plan to address climate change while enhancing quality of life. Since then, the City has made significant progress – launching San José Clean Energy (SJCE), advancing zero-emission transportation infrastructure, and reducing communitywide greenhouse gas (GHG) emissions¹ by 16%.

At the same time, the latest full climate assessment by the Intergovernmental Panel on Climate Change warns that without immediate and significant reductions in GHG emissions, global warming is likely to exceed 1.5°C, leading to irreversible impacts on ecosystems and communities². As we approach

2030, reaching carbon neutrality will require an even sharper focus on the most impactful strategies. In addition, data from our most recent communitywide GHG emissions inventory shows that San Jose is not currently on track to reach the carbon neutrality by 2030 goal.

As outlined in the original Climate Smart plan, this administrative update was intended to align with the Envision San Jose 2040 General Plan’s³ four-year review cycle, but the current General Plan update is on a later timeline (the last review was completed in 2020/21, and the current review is underway through 2026). In the meantime, this update reflects the progress made, lessons learned, and evolving priorities since the adoption of Climate Smart.

Core aspects of the original plan remain unchanged:



Commitment to reducing GHG emissions in alignment with the Paris Agreement⁴



A people-centered approach, the “Good Life 2.0,” which links climate action with quality of life



Data-informed strategies and network activation to unlock the power of our people



This 2025 update tracks progress and incorporates key changes, including:

- Major milestones and progress since 2018
- Alignment with the Pathway to Carbon Neutrality by 2030⁵ (Pathway)
- Integration of the Natural and Working Lands (NWL) element
- Updates to metrics to focus on core GHG reduction strategies
- Identification of topics for future consideration, including replacing the City Action Plan with annual department work plans

By retaining its core principles while incorporating new insights and priorities, Climate Smart continues to serve as the City’s roadmap for reducing communitywide GHG emissions while providing continued flexibility in annual planning and operations to respond to our ever-changing context.

Climate Smart San José Update

This Climate Smart update reflects changes in state and regional climate policy, City priorities, and implementation progress on Climate Smart, as detailed in the sections that follow.



Our Progress

Since the City's approval of Climate Smart in 2018, City staff have completed biennial communitywide GHG inventories and tracked progress on Climate Smart metrics annually via the online data dashboard at SJEnvironment.org/CSDashboard. San José City Council has also taken many landmark actions and City departments have put several precedent-setting programs into place, as noted in Figure 1.

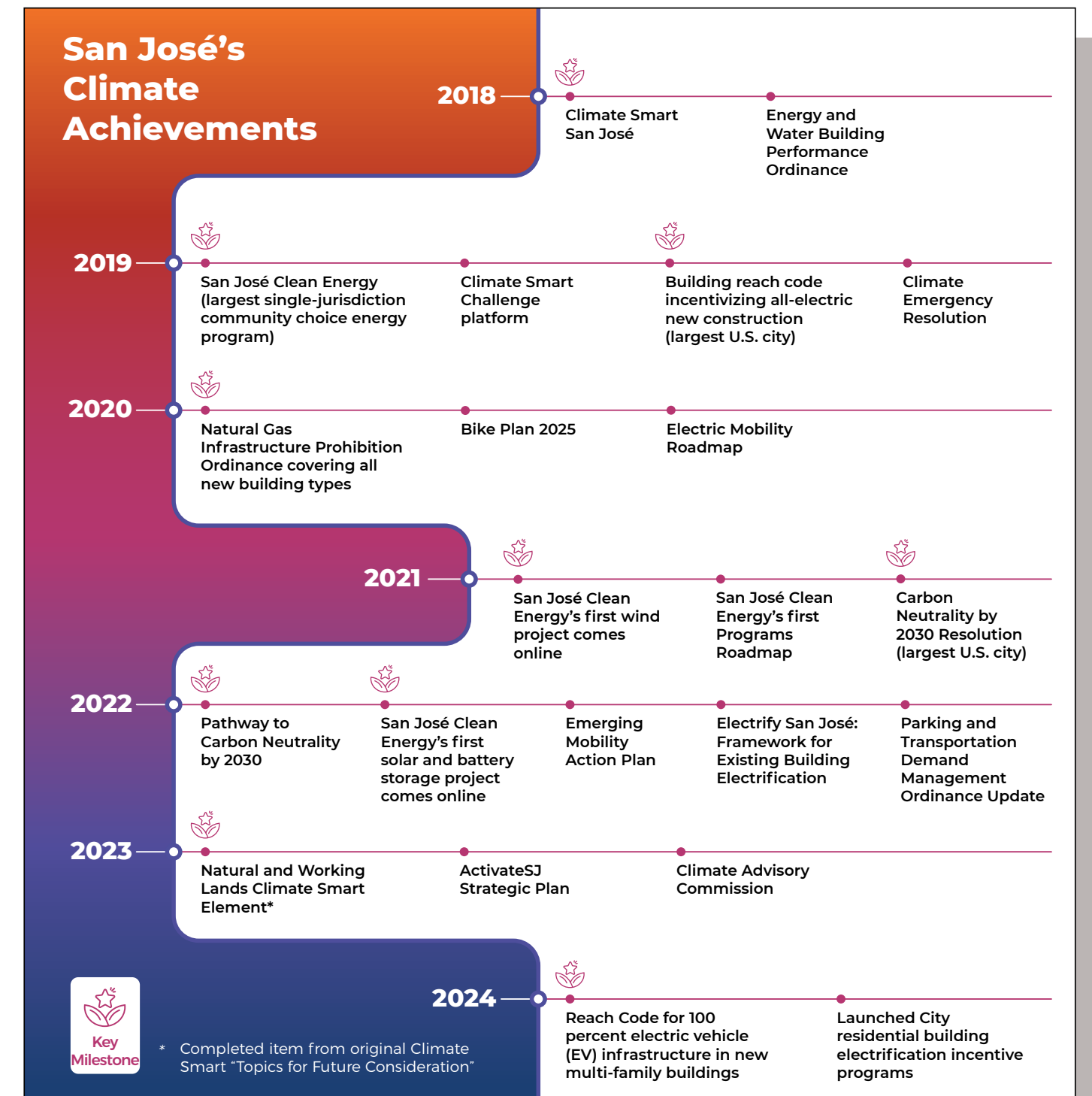


Figure 1: San José's Milestone Climate Achievements

Awards and recognition for the City's climate work include:

- San José earned Mitigation and Adaptation badges from the Global Covenant of Mayors for Climate & Energy (2024 and 2022).
- San José Clean Energy ranked sixth on the National Renewable Energy Lab's Green Power Program (2024)
- San José Mineta International Airport received Level 2 Airport Carbon Accreditation (2024)
- San José ranked fifth greenest city in the U.S. by WalletHub (2024); among the top 10 since at least 2016.
- San José ranked ninth on the American Council for an Energy-Efficient Economy's City Clean Energy Scorecard (2024)
- San José ranked 18th on the ENERGY STAR® Top Cities list for the most ENERGY STAR® certified buildings (2024)
- San José was named to the CDP A List, one of only 120 cities worldwide recognized for climate leadership (2023 and 2024)
- San José received the Climate Registry's Climate Leadership Award (2023), and former Chief Sustainability Officer Kerrie Romanow was honored with Assemblymember Gail Pellerin's Women of the Year Award for climate work (2024).
- San José ranked fifth in the nation for solar power per person and eighth for total solar capacity in the Shining Cities Report (2022).

These milestone achievements and recognition reflect the City's strong commitment to sustainability. But reaching carbon neutrality by 2030 will require accelerated action, continued innovation, and collaboration to meet the challenges ahead.



Understanding Our Challenge

San José's journey to communitywide carbon neutrality demands a clear understanding of the challenges ahead and a focused approach to addressing them. Figure 2, below, illustrates both the GHG emissions reductions needed to achieve carbon neutrality by 2030 and the emissions reductions we could expect if we achieve the strategies in the Climate Smart plan. This provides us with a roadmap for how San José can make significant progress towards its climate targets if fully implemented. Appendix A further details the Plan's goals for emissions avoided in 2027 and 2030, broken down by strategy. The goals in this plan are ambitious by design, intended to reflect the scale of the climate crisis and the level of action needed to reach carbon neutrality.

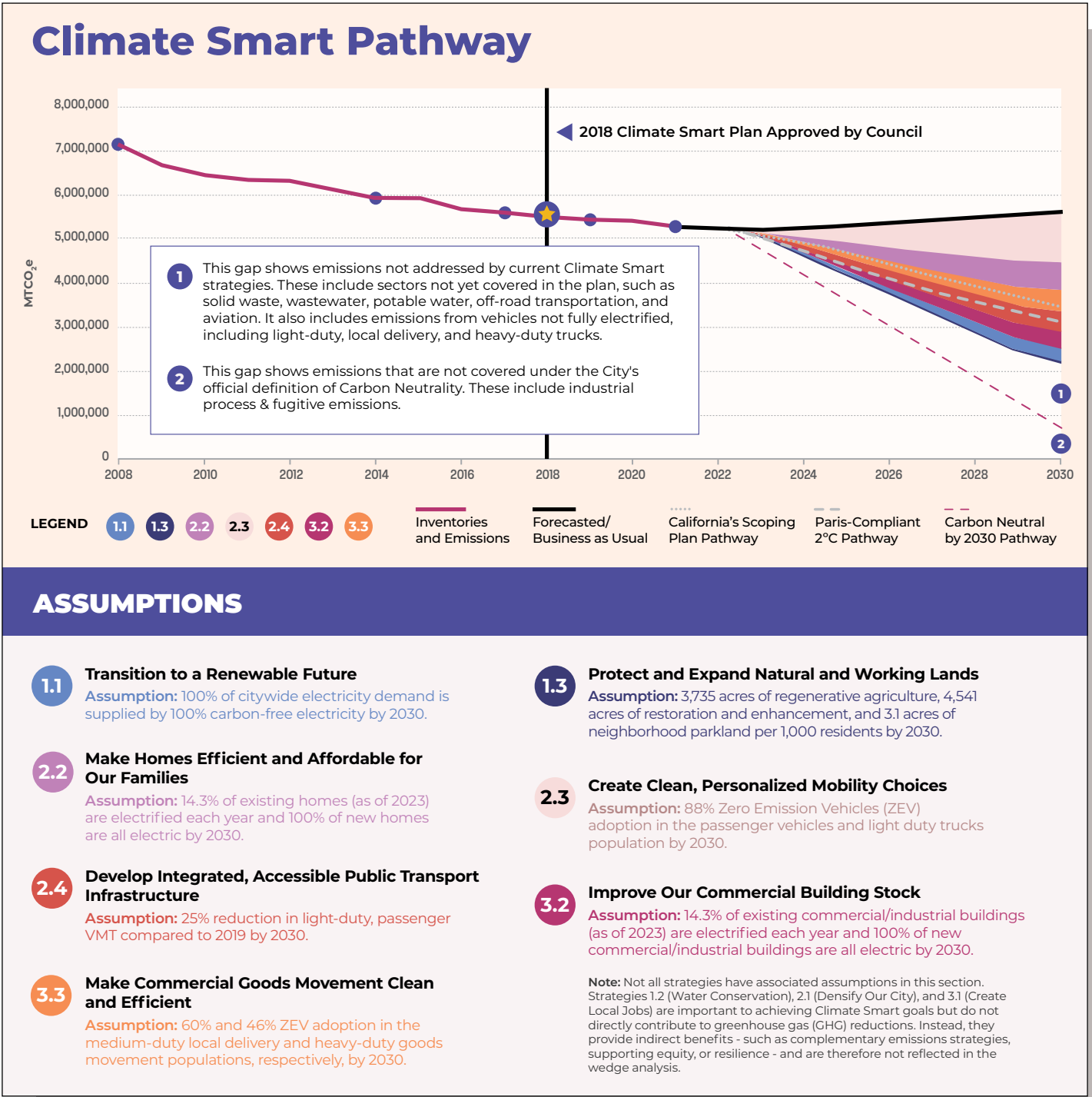


Figure 2: Communitywide emissions reductions needed to meet San José's climate goals

While Figure 2 shows how Climate Smart strategies can significantly reduce emissions, it also reveals a remaining gap between these reductions and the City’s 2030 carbon neutrality target. This gap includes emissions from sectors not yet addressed by the plan (such as solid waste, aviation, and wastewater). The gap underneath the carbon neutrality line is from emission sources not included in the City’s definition of carbon neutrality (such as process and fugitive emissions). These areas may be explored in future plan updates or addressed through complementary initiatives.

Climate Smart prioritizes strategies that reduce emissions from energy, transportation, and buildings, as these sectors contribute the most to communitywide greenhouse gas emissions. However, fully achieving carbon neutrality will require addressing additional emissions sources not yet included in this plan and expected to be explored in future updates. These include emissions from solid waste, wastewater, water, offroad transportation, aviation, and freight rail, as well as process and fugitive emissions.

The City acknowledges that despite meaningful progress, we are not currently on track to reach carbon neutrality or meet several strategic climate goals.⁶ Achieving our targets will require significantly accelerating decarbonization efforts across the City, stakeholders, and the community. The data in this update highlights where the most urgent progress is needed to help guide and inform future action.

How We Plan to Address the Gap

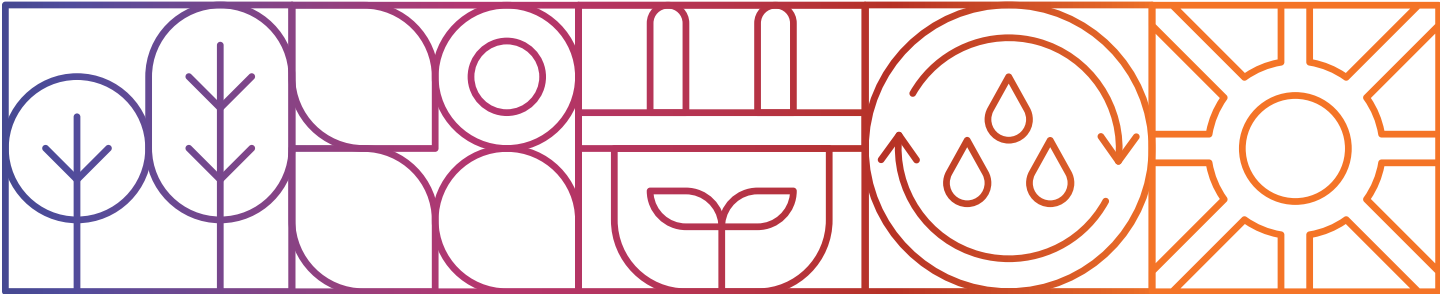
Future updates will include policies and technologies to further reduce emissions from waste, industrial processes, and other sectors. The "Topics for Future Consideration" section highlights areas where additional strategies will be developed over time.

An Evolving Practice

City actions to address climate change both shape and are shaped by broader state and regional policies. These frameworks help reinforce local efforts, accelerate progress, or set a foundation that allows the City to adopt more stringent measures.

These policies shape how the City plans, funds, and implements climate programs—by introducing new standards, enabling partnerships, or requiring adjustments to meet evolving priorities.

Recent advances in regional climate policy have not only supplemented, and in some circumstances accelerated, the targets set in the *Pathway* but have also provided direction for local actions. The following policies, passed since 2018, are the most significant pieces of state and regional direction that have advanced the climate movement and influenced how the City is responding to climate change:



State Policies

Executive Order N-79-20 (2020): ZEV Car Sales. Requires all new passenger vehicles sold in CA to be zero-emission by 2035 and commercial trucks/vans by 2045.⁷

AB 1279 (2022): Carbon Neutrality. Establishes a statewide carbon neutrality goal by 2045 with an 85% emissions reduction.⁸

Regional Policies

Plan Bay Area 2050 (2021): Sustainable Planning. A long-term plan focused on housing, the economy, transportation, and the environment.⁹

Bay Area Air District Rule 9-4 and Rule 9-6 (2023): Zero nitrogen oxides (NOx) Appliances. Bans sale of NOx-emitting water heaters and furnaces starting in 2027–2031.¹⁰

Additional key state, regional, and City plans, policies, and programs contributing directly to greenhouse gas emissions reductions or supporting related sustainability actions in San José are summarized in Appendix B.

Pillars and Strategies

Focused Climate Smart Strategies

With the adoption of the City's carbon neutrality by 2023 goal and the *Pathway*, the City identified three focus areas — **transportation, buildings, and energy** — which together accounted for approximately 85% of San José's communitywide GHG emissions in 2019. To address these sources, the plan focuses on four key strategies that collectively target approximately 73% of current emissions:

- 1

Move to zero-emission vehicles.
- 2

Reduce the miles we travel in our vehicles by at least 20%.
- 3

Switch our appliances from fossil fuel to electric.
- 4

Power our community with 100% carbon-neutral electricity.

While these are the core focus areas for the City's climate efforts, the City also recognized – through its adoption of an NWL element¹¹ (2022) – the important role that San José's Natural and Working Lands¹² play in removing, or “sequestering” carbon.¹³

The City's updated Climate Smart pillars are shown in Figure 3.

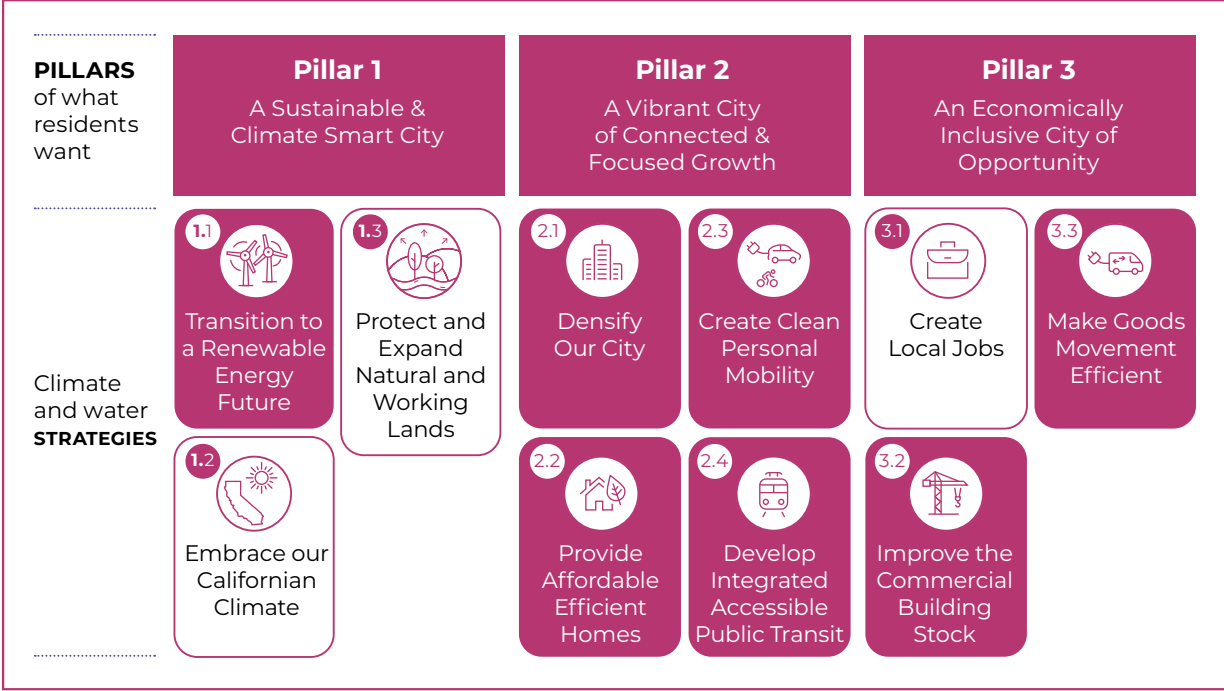


Figure 3: Climate Smart pillars and strategies. Strategies in pink align with the acceleration strategies set forth in the *Pathway*.

Please note: This is an administrative update to the 2018 Climate Smart San José Plan. While previously adopted goals remain in place for most metrics, select goals have been recalculated where the City has surpassed original goals. In these cases, the 2030 (and, if applicable, 2040) goal has been re-set by linearly interpolating between the most recent actual value (2023) and the next long-term, not yet achieved goal (2040 or 2050). For the NWL Preservation and Expansion metric—where all future targets have been exceeded—the goal has been updated to maintain the current actual value. For some metrics, baseline values have been updated to reflect improved data or methodologies (see Appendix D).

This update focuses on 2030 targets aligned with the City's carbon neutrality goal, but you can find longer-term goals through 2040 and 2050 in Appendix C. In the milestone tables, “Baseline” reflects the original Climate Smart or Natural and Working Lands Element baseline (unless updated where applicable), “2023” reflects the most recent actual performance, and “2027” and “2030” represent adopted or recalculated goals (see Appendix D for methodology).

The strategies outlined in the following sections build directly on the roadmap presented in Figure 2 and in the *Pathway*, targeting the key areas with the greatest potential for GHG reductions.

Pillar 1: A Sustainable & Climate Smart City

San José has the ingredients to be a sustainable and climate smart city with its abundant renewable resources, a skilled workforce, and a willingness to innovate. San José has shown leadership in its climate initiatives and can continue to be a model for other U.S. cities and throughout the world as it works to achieve its carbon neutrality by 2030 goal.

STRATEGY 1.1
Transition to a Renewable Energy Future

STRATEGY 1.2
Embrace our Californian Climate

STRATEGY 1.3
Protect and Expand Natural and Working Lands



1.1 Transition to a Renewable Energy Future

Good Life 2.0 Benefits for Our City

SJCE, San José's primary electricity generation service provider, is a not-for-profit that is locally controlled, operated, and governed by the City. SJCE provides San José residents and businesses with clean energy at competitive rates and promotes affordability, equity, and GHG reductions through customer programs. Through SJCE, the people of San José have more control over how much they pay and the source of their electricity, including the percent renewable content. Households generating energy through on-site solar panels receive additional benefits by generating energy credits and cost savings through net metering.¹⁴

SJCE is committed to offering 100% carbon-free electricity as the default service citywide by 2030.

Our Leadership to Date

In the 2007 *San José Green Vision* (Green Vision), the City committed to receiving 100% of its electrical power from clean, renewable sources. In May 2017, the City Council voted unanimously to establish SJCE.

SJCE makes San José the largest city with a Community Choice Aggregation (CCA) program in the country — a model where local governments purchase cleaner electricity for residents and businesses. With a commitment to provide cleaner power to our community and an option to choose 100% renewable

power, SJCE empowers residents to reduce their emissions through their energy choices. Since launching citywide in 2019, SJCE has contracted over \$3 billion for more than 900 megawatts (MW) of new renewable energy and battery storage — enough to power approximately 675,000 homes.

SJCE aims to provide carbon-neutral base power by 2030. Combined with 313 MW of distributed solar capacity already in the city — roughly the output needed to power another 235,000 homes — San José is well-positioned to transition to a renewable energy future.

Low-Carbon Growth Milestones

Indicators	Renewable Energy	Carbon Free Electricity	Local Renewables
Metrics	Share of eligible renewable energy generation in SJCE's portfolio	Portion of electricity generation in SJCE's portfolio that is carbon-free	Amount of renewable energy capacity installed in San José (MW)
Baseline	N/A*	N/A*	131.0
2023	55.0%	95.6%	313.4
2027 Goal	65.0%	98.0%	516.0
2030 Goal	65.0%	100.0%	668.0

*San Jose Clean Energy was established after Climate Smart was published; therefore, we don't have initial values.

1.2 Live with the California Climate

Good Life 2.0 Benefits for Our City

Embracing our California climate means having an authentic relationship with our natural resources and curating our open spaces, both private and shared, to be not just low-water use, but also beautiful and enjoyable, with enhanced biodiversity and natural systems.

San José will effectively employ sustainable use practices of local water and green infrastructure to achieve a 30% reduction in residential water consumption to 42 gallons per day per capita by 2030.

During this last period of drought, both the State of California and Santa Clara County officially declared water conservation as a way of life — in 2022 and 2023 respectively — and enforced new regulations to limit outdoor water use. Maintaining a pattern of low water consumption is possible with continued efforts and incentives.

San José also brought “purple pipe” recycled water to the city in 1998 through a partnership with South Bay Water Recycling. The amount of recycled water distributed in San José has been added as a Climate Smart metric and reduces the community’s potable water demand, while enhancing resiliency.

Our Leadership to Date

San José continues to face unprecedented drought conditions. In each instance, the City and community have shown resilience by implementing and responding to water conservation measures.

California’s historic drought began in 2012 and, despite brief wet periods in 2017 and 2019, persisted through 2022. During this time, San José reduced water consumption by 6% compared to pre-COVID levels, even as stricter sanitation practices led to an overall increase in water use.

Smart Water Use Milestones

Indicators	Total Water Consumption	Residential Water Use	Reused and Recycled Water Sources
Metrics	Total volume of water used in the city per day (million gallons per day)	Residential water use per capita per day (gallons per capita per day)	Portion of total water demand met by recycled water
Baseline	116.0	60.0	5.0%
2023	95.9	64.6	5.8%
2027 Goal	91.2	51.7	10.5%
2030 Goal	87.7	42.0	14.0%

Values for select metrics have been recalculated; see endnote 17 for details.

1.3 Protect and Expand Natural and Working Lands

Good Life 2.0 Benefits for Our City

Preservation of our natural and working lands helps prevent urban sprawl, resulting in less driving, lower energy use and more efficient use of water resources. Green spaces mitigate the urban heat island effect¹⁵, capture stormwater, and provide habitat that supports biodiversity. Additionally, protecting and expanding open spaces provides opportunities for respite, relaxation, and recreation for members of the San José community.

Our Leadership to Date

As of 2024, San José has nearly 95,800 acres of Natural and Working Land in its sphere of influence, an over 2% increase since 2011. Natural and Working Lands are defined by the *General Plan* as land designated as Open Hillside, Agriculture, or Open Space, Parklands and Habitat.

These land use designations include hillsides and productive farmland, public parks, trails and waterways. The City operates 10 regional parks and 213 neighborhood and community parks, with a variety

As the City plans for growth, San José will aim to minimize the loss of City-designated NWLs and increase the carbon sequestration potential of City-designated NWLs through land management practices.

of uses and design features ranging from playing fields and riparian areas to protected endangered species habitat. The City currently provides 66.9 linear miles of Class I Trails citywide.

The City adopted the ActivateSJ Strategic Plan in 2020 to guide the Department of Parks, Recreation and Neighborhood Services. It includes a nature goal to “cultivate a park and recreation system that preserves nature, supports wildlife and enhances community well-being.”

San José’s leadership also includes the preservation of Coyote Valley, where a landmark public-private partnership has protected over 1,500 acres of open space and farmland. With voter-approved Measure T funding and the 2021 General Plan land use change, the City helped permanently conserve Northern Coyote Valley—protecting wildlife corridors, reducing flood risks, and avoiding 10 million miles of future vehicle travel. These efforts serve as a model for how land conservation can deliver climate and community benefits.

Natural and Working Land Milestones

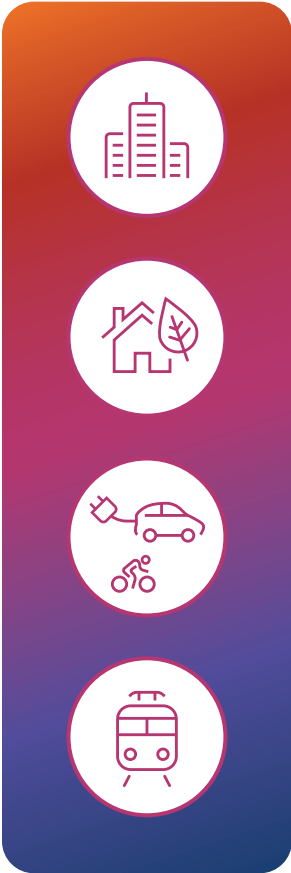
Indicators	NWL Preservation and Expansion	Regenerative Agriculture	NWL Restoration & Enhancement	Urban Greening
Metrics	Acres of land with a <i>General Plan</i> Land Use Designation specified in the NWL element ^{16, 17}	New acres of land with regenerative agriculture practices applied	New acres of NWLs with restoration or enhancement practices applied	Acres of neighborhood / community serving parkland within San José city limits
Baseline	94,027	N/A	N/A	2,938
2023	95,790 (2024)	0	10	2,812
2027 Goal	95,790	2,114	2,566	3,319
2030 Goal	95,790	3,700	4,500	3,700

For more information on indicator and metrics, refer to the Natural and Working Lands Element endnote 11.

Pillar 2:

A Vibrant City of Connected & Focused Growth

By combining intelligent planning with carbon-free mobility options, San José can grow in a way that is compact, smart, and connected.



STRATEGY 2.1
Densify Our City to Accommodate Our Future Neighbors

STRATEGY 2.2
Make Homes Efficient & Affordable for Our Residents

STRATEGY 2.3
Create Clean, Personalized Mobility Choices

STRATEGY 2.4
Develop Integrated Accessible Public Transport Infrastructure

2.1 Densify Our City

Good Life 2.0 Benefits for Our City

Densifying San José in anticipation of expected population growth is a means to reduce emissions by creating more walkable and bikeable neighborhoods and by reducing single-occupancy vehicle (SOV) trips. It also makes neighborhoods more vibrant, convenient, and enjoyable. A mix of land uses that allows for neighborhood-serving services and businesses can make trips shorter, support active modes of transportation, and help reduce vehicle miles traveled (VMT).

Our Leadership to Date

The City’s forward-looking *General Plan* anticipates San José’s projected population growth and outlines a plan of proactive densification clustered around focused “Growth Areas.”¹⁸ The City is undertaking efforts to integrate these areas with future public transit and active transportation infrastructure and to encourage development that will catalyze and activate these areas.

In addition, the City is working to improve the quality and safety of streets to improve walking and cycling. To achieve this vision, in 2022, the City adopted a new mobility strategy, *Move San José*. This plan establishes a new decision-making process that joins citywide policies, neighborhood improvements, and the reinvention of city streets. The goal is a San José that is easier and more convenient to get around without a car while being safer to travel in.

2.2 Provide Affordable Efficient Homes

Good Life 2.0 Benefits for Our City

There are more than 230,000 existing buildings in San José. These buildings typically use two energy sources: electricity and natural gas. San José’s primary electricity provider, SJCE, is rapidly increasing the proportion of renewable energy sourced for San José’s electricity supply, ensuring that electricity use keeps getting cleaner and results in fewer GHG emissions. Transitioning to efficient and electric-powered homes can also lower energy costs; these homes are also often more comfortable, quieter, and have improved indoor air quality.²²

Our Leadership to Date

In 2022, the City approved *Electrify San José: Framework for Existing Building Electrification* to encourage and incentivize the electrification of homes and businesses in San José.²³ This plan provides a framework for implementing the recommended actions and guidance on how to co-develop and implement building electrification policies and solutions with the San José community.

Furthermore, the City continues to incentivize building improvements through programs such as *Electric Home San José* and the *EcoHome* program, which provide energy-efficiency and electrification rebates, with targeted outreach in environmental justice communities where adoption of clean energy technologies has historically been lower.



San José will embrace an expected 450,000 additional residents by 2040 through managed, mixed-use densification around its planned Growth Areas.

Low-Carbon Growth Milestones

Indicators	Complete Streets	Transit-Oriented Development	City Density in Growth Areas
Metrics	Percentage of streets that meet San José Complete Streets criteria ¹⁹	Commercial space located within 1/2 mile of a high-quality transit stop ²⁰ (millions of square ft)	Density of new residents in planned growth areas
2018	N/A	59 ²¹	5,402 ²¹
2023	36%	67	5,303
2027 Goal	39%	69	5,706
2030 Goal	41%	70	6,008

Values for select metrics have been recalculated; see endnote 17 for details.

Low-Carbon Growth Milestones

Indicators	Household Energy Use (Natural Gas)	Household Energy Use Intensity (Natural Gas)
Metrics	Household natural gas use (therms)	Average natural gas use per dwelling unit (therms/du)
Baseline	112,098,302	333
2023	115,569,241	348
2027 Goal	49,529,675	149
2030 Goal	0	0

2.3 Support Clean Personal Mobility

Good Life 2.0 Benefits for Our City

This strategy helps to eliminate the dependence on fossil-fuel powered SOVs and to reduce the time spent on congested streets and highways. Benefits of this strategy include healthier outdoor air quality, reduced traffic and congestion, less land devoted to housing cars instead of people, and safer streets for active modes of transportation such as walking, biking, and scooting.



San José encourages use of clean, personalized, and shared mobility choices to reduce single-passenger, gasoline car use. This is accomplished through a combination of bike- and ride-sharing and passenger EVs.

Our Leadership to Date

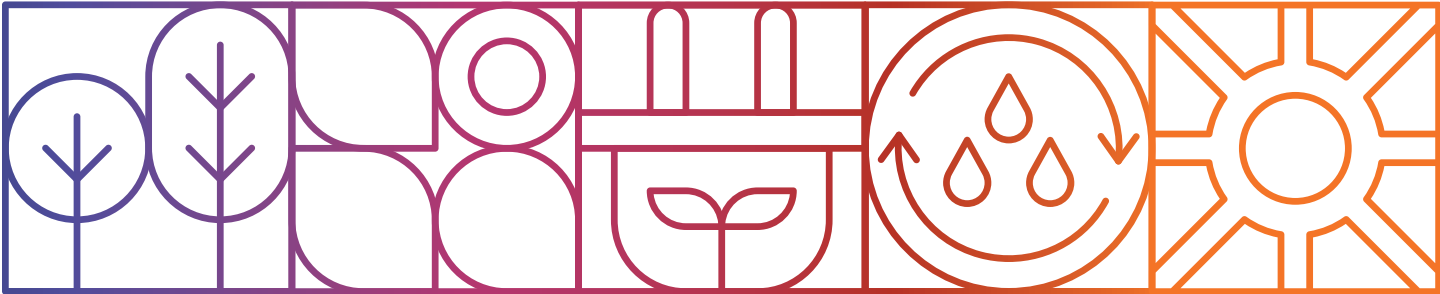
In 2007, San José committed to ensuring that 100% of public vehicles run on alternative fuels by 2022. In 2016, the City transitioned all of its medium/heavy duty fleet and offroad equipment to use 100% renewable diesel. The City has also helped increase EV use by installing 53 public charging stations, primarily in downtown public parking garages, as well as incentivizing the installation of over 150 more. The City continues to pursue funding to install more public EV chargers in underserved neighborhoods to support EV adoption.

The City has also expanded micromobility efforts, including Bay Wheels bike share, which will be built out to eventually feature 1,000 shared bikes and 1,000 e-bikes across the city. The City also participated in one of the first autonomous vehicle pilot programs in the nation. This work positions San José to be a leader of a new mobility paradigm that integrates these technologies in a manner beneficial to the community.

Low-Carbon Growth Milestones

Indicators	Zero-Emission Vehicles	Reduced Car Dependency
Metrics	Percentage of passenger vehicles (including SUVs) that are zero emission	Percentage of trips taken in single-occupancy vehicles (SOVs)
Baseline	1.4%	74.4% ²¹
2023	6.2%	70.5%
2027 Goal	53.0%	63.9%
2030 Goal	88.0%	59.0%*

***Note:** The 59% SOV mode split target is derived from the Move San José mode split target of 60% trips taken by walk/bike/transit and shared rides by 2040.²⁴



2.4 Develop Integrated and Accessible Public Transit

Good Life 2.0 Benefits for Our City

Public transport in San José is an affordable way for people to move around the city each day. High-frequency, rapid transit can be faster, more enjoyable, and more reliable than driving an SOV and being stuck in traffic. Supporting high-quality public transit infrastructure that is clean, interconnected with multiple modes, and located near to where people live and work will bring the benefits of accessibility, safety, and convenience to a larger population.



San José will continue supporting public transit infrastructure as a means of getting around the city, particularly the integration of multiple transport modes and transit-oriented development to reduce VMT.

Our Leadership to Date

San José has been part of numerous regional initiatives to support the expansion and enhancement of public transit infrastructure such as the Caltrain electrification project, Santa Clara Valley Transportation Authority (VTA), High-Capacity Transit (HCT), and bringing Bay Area Rapid Transit (BART) to San José.²⁵ The City's involvement in these initiatives allows us to ensure the fruition of these projects and maximize the climate and Good Life 2.0 benefits of those in our city.



Low-Carbon Growth Milestones

Indicators	VMT Reduction	Public Transit	Accessible Transit
Metrics	Vehicle miles traveled per capita per day	Percentage of trips taken on public transit	Percentage of households within ½ mile of a high-quality transit stop
Baseline	15.2 ²¹	1.8% ²¹	28.6% ²¹
2023	16.4	0.7%	29.0%
2027 Goal	13.5	6.0%	30.6%
2030 Goal	11.4	10.0%	32.0%

Values for select metrics have been recalculated; see endnote 17 for details.



Pillar 3:

An Economically Inclusive City of Opportunity

Economic development and sustainability are mutually reinforced in San José. Local job creation can lead to reduced GHG emissions because it can allow people to live where they work, and thus reduce commute distances and the associated emissions from VMT.

High-performing logistics and real estate can also be attractive to companies looking to do business in the city. Considering economic development and including realistic requirements for businesses to operate sustainably will make attaining a sustainable city even more feasible.

3.1 Create Local Jobs

Good Life 2.0 Benefits for Our City

Creating local jobs²⁶ in our city makes it possible for our workforce to have economic opportunity, work close to where they live, and unlock the hours they currently spend commuting in congestion each year to do more productive and enjoyable things. Furthermore, reducing commutes reduces GHG emissions and improves air quality. Local jobs make it possible to walk, bicycle, and take a bus or shared mobility vehicle to work. They are ultimately healthy for our economy and expand the tax base in San José.

Low-Carbon Growth Milestones

Indicators	Jobs to Employed Resident Ratio	Commuting	Transit Accessible Jobs
Metrics	Jobs to employed resident (J/ER) ratio	Percentage of commute journeys by non-SOV modes, including remote work	Number of jobs within 1/2 mile of a high-quality transit stop ¹⁸
Baseline	0.80	21.9% ²¹	237,059 ²¹
2023	0.79	23.0%	245,437
2027 Goal	0.91	40.7%	319,473
2030 Goal	1.00	54.0%	375,000

*Note: See also related land use and transportation metrics under Strategy 2.1 – Densify Our City, which support progress on low-carbon commuting.



STRATEGY 3.1
Create Local Jobs in Our City to Reduce Vehicle Miles Traveled

STRATEGY 3.2
Improve Our Commercial Building Stock

STRATEGY 3.3
Make Commercial Goods Movement Clean & Efficient

Our Leadership to Date

San José's vibrant economy is comprised of small-, medium-, and large-sized businesses across various sectors. As of 2023, we have brought over 63,000 jobs (since 2008) to San José at different income tiers in order to create inclusive and accessible middle-income pathways for our residents.²⁷ This includes our efforts to locate new commercial development and new jobs near transit modes.



San José will work to create an additional 362,000 local jobs in our city by 2040.

3.2 Improve the Commercial Building Stock

Good Life 2.0 Benefits for Our City

Nonresidential buildings that are all-electric eliminate GHG emissions from the use of fossil fuels when powered by renewable energy. Generating power from rooftop solar in combination with net energy metering provides a way for building owners to stabilize long-term energy costs and increase energy resilience.

Our Leadership to Date

The City continues to be an enabler of energy efficiency and carbon-free power through policy adoption and by connecting businesses with technical resources and financial support for energy efficiency and electrification projects. In 2018, the City established the Energy and Water Building Performance Ordinance (BPO) that requires reporting of annual energy and water use for buildings larger than 20,000 square feet as well as upgrades over time. The BPO allows property owners to track and manage their energy and water use and identify cost-effective retrofit strategies.

Low-Carbon Growth Milestones²⁸

Indicators	Distributed Generation	Commercial/Industrial Building Energy Use (Natural Gas)	Commercial/Industrial Building Energy Use Intensity (Natural Gas)
Metrics	Rooftop solar generation on commercial and industrial buildings (MW)	Commercial and industrial natural gas use (therms)	Natural gas use per square foot (therms/sq ft)
Baseline	52	60,670,602	0.33
2023	79	58,054,345	0.30
2027 Goal	166	24,880,434	0.13
2030 Goal	231	0	0



New commercial buildings built in San José will be encouraged to be all-electric and powered by 100% carbon-free energy from SJCE. Existing commercial buildings will be retrofitted to reduce energy consumption and eliminate the use of natural gas.

SJCE supports energy retrofits by offering various rebates and incentives to commercial customers. SJCE has dispersed over \$1 million to more than 775 businesses for energy efficient upgrades, which has also resulted in savings on customer energy bills. Commercial customers are also eligible for SJCE's Peak Rewards demand response program, which pays them to save energy on critical days when electricity supply on the grid is strained.

3.3 Make Goods Movement Efficient

Good Life 2.0 Benefits for Our City

Supporting our commercial and industrial sectors in becoming cleaner will enhance our economy’s efficiency and unit productivity, strengthening our attractiveness as a place to do business and demonstrating San José’s leadership as the capital of a more sustainable Silicon Valley.

Our Leadership to Date

With the *Green Vision* in 2007, the City of San José began to transition its vehicle fleet, including many service vehicles, to alternative fuels. The City adopted a Green Fleet Policy in 2007 to manage fleet replacement in a way that minimizes GHG emissions and considers life-cycle economics.²⁹

As a part of the Delivering Zero Emissions Communities grant program, from 2021



San José will support its commercial and industrial sectors in reducing the carbon impact from goods movement by transitioning to clean and efficient logistics.

to 2023 the City organized interviews with small and large freight and delivery companies operating in San José to gain a better understanding of the barriers to fleet electrification. The City also worked with San José State University to analyze freight data and publish a report containing key strategies and recommendations for reducing freight-based emissions. Furthering this work, the City selected the Santee neighborhood to conduct a last mile delivery pilot, and is continuing community engagement to identify ideas and locations for implementation. The pilot remains in development, with timing to be determined.



Low-Carbon Growth Milestones

Indicators	Local Delivery Vehicles	Heavy Duty Vehicles
Metrics	Percentage of local delivery vehicles that are electric	Percentage of heavy goods vehicles that use alternative fuel
Baseline	0.1%	1.6%
2023	1.1%	3.5%
2027 Goal	34.7%	27.8%
2030 Goal	60.0%	46.0%

GETTING IT DONE

Implementation of the Plan

The City will need to inspire action on a citywide scale by the entire San José community – individuals, developers, government, and businesses – in order to combat climate change and make the Good Life 2.0 attainable.

A Network Activation Approach

Climate Smart continues to be centered on **activating community networks** to take climate action. The City will need to continue to develop partnerships and activate the community around climate action through guidance, policy, programs, and resources provided by the City. To successfully implement Climate Smart, a coordinated and collaborative effort among all City departments and the community at large is required.

Funding the Plan

Since the adoption of Climate Smart in 2018, the City has acquired over \$80 million in external funding and resources to support Climate Smart initiatives. The City will need to continue to allocate funding, to explore and implement viable funding mechanisms, and to acquire external funding³⁰ to support significant infrastructure upgrades (e.g. building assessments and capital improvements, EV charging, and biking), outreach and engagement campaigns, incentives, policy development, and more towards the City’s ambitious climate goals.

To inform future investment, a cost-benefit analysis for each Climate Smart strategy was developed and included in Section 3.2 of the original plan. The analysis considers both capital and operational costs and long-term avoided costs, and shows that Climate Smart implementation yields net savings over time.

The Climate Smart team also provides semi-annual updates to City Council, which include details on external funding received and the specific projects supported. The most recent updates are available on the Climate Smart San José website³¹, and earlier reports are available upon request.

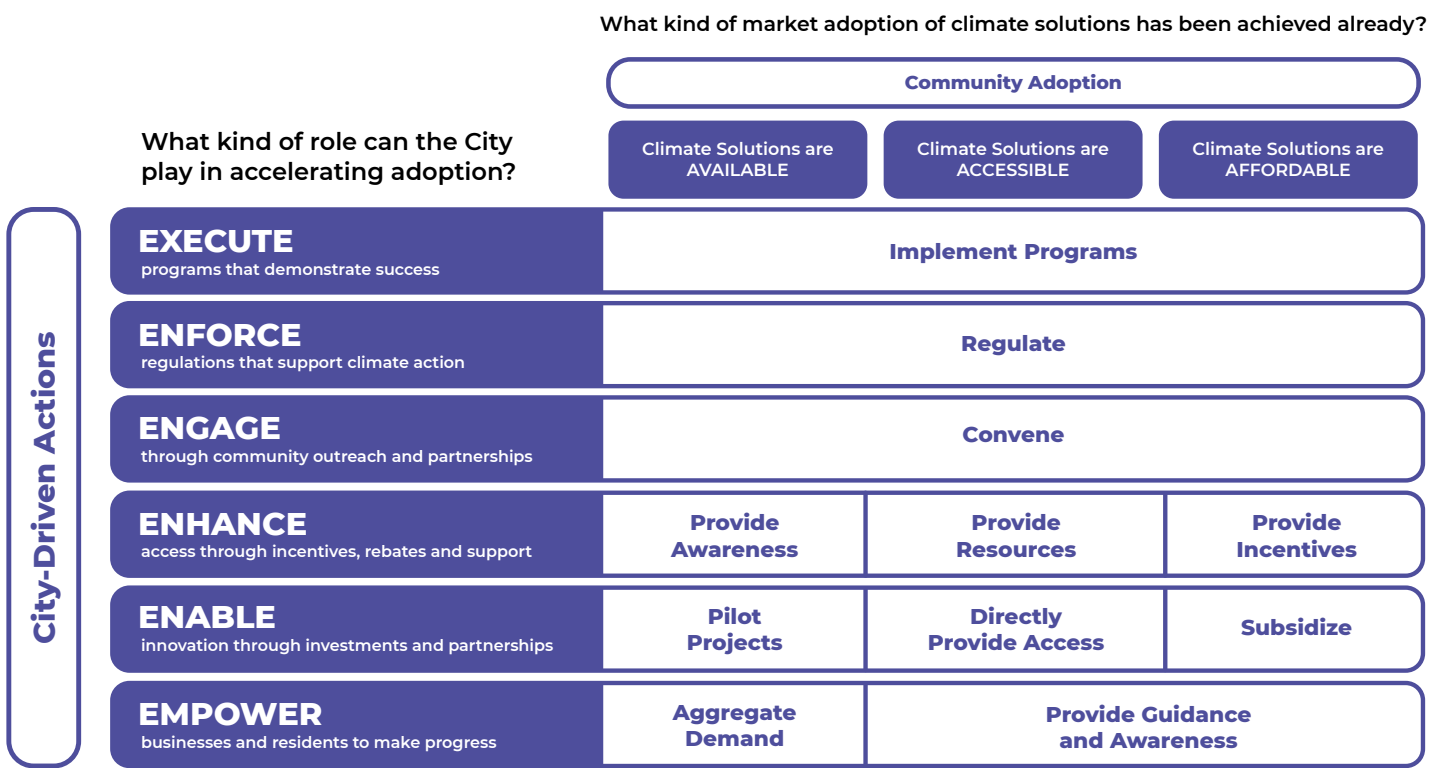
City Action Plan

The Enabling Role of the City

The successful implementation of Climate Smart San José relies on a layered and collaborative approach between the Climate Smart Division, City departments, decision-makers, and the broader San José community. While the Climate Smart team leads the plan's development and oversight, its success depends on alignment across City priorities, the coordination of implementing departments, and adoption by residents and businesses.

The graphic below illustrates the roles the City can play in accelerating climate solution adoption—from direct implementation to enabling and empowering others, depending on how available, accessible, and affordable a solution is.

City-driven actions range from executing programs and enforcing regulations to engaging communities and enabling innovation. These actions are not limited to the Climate Smart Division—departments across the City play a role in creating the conditions necessary for successful climate action. Instead of static Climate Smart “Playbooks” and “City Action Plans,” City departments facilitating Climate Smart initiatives will continue to generate **community engagement** and **outreach plans** to support community climate action.



In addition, the City can accelerate the implementation of Climate Smart through the integration of its strategies and goals into City policies, programs, and processes, including annual departmental workplans and budgeting. Through annual workplan development, departments will have better flexibility to reflect changes (e.g., in City priorities and tactics, funding, technologies, etc.) that may occur between Climate Smart plan updates. Workplans can also quantify the cost and planned impact of City activities on GHG emissions reductions.

Ultimately, Climate Smart San José serves as a connector and catalyst—helping shape policies, support programs, and guide adoption across the City, but not implementing all solutions directly. Climate action in San José requires collective effort at every level of City operations and across the community.

Tracking Progress

Since 2018, Climate Smart San José has used a set of indicators to measure progress toward reducing greenhouse gas emissions and achieving co-benefits such as improved air quality, mobility access, and energy savings. As the City's climate goals have evolved, so too have the metrics used to track them. This 2025 update refines and streamlines the original metrics to align more closely with the strategies in the *Pathway* and recent updates to Climate Smart San José.

Some indicators from the 2018 plan have been revised to better reflect available data or evolving priorities. Others have been removed, replaced, or newly added to ensure the most effective tracking of the City's progress. These changes improve the City's ability to focus on high-impact strategies while maintaining transparency and consistency over time. For a full explanation of these changes—including the rationale behind each update and a summary of how indicators have evolved—see Appendix D.

The City will continue to maintain the **Climate Smart Dashboard**, which tracks key indicators across the plan's ten strategies (see Table 1). The dashboard provides an accessible and transparent way to monitor progress on Climate Smart metrics.

Table 1 summarizes the updated indicators, showing current and historical values where available, along with each metric's status (e.g., new, revised, unchanged, or removed).

City staff recognize that the metrics and goals in this plan are ambitious. Some are carried over from the original Climate Smart San José plan; others have been updated using the Pathway to Carbon Neutrality analysis. All reflect where San José needs to be to achieve carbon neutrality. These goals are intended to highlight urgency, spark necessary conversations, and accelerate meaningful action—within City government and across our community."

Table 1: Climate Smart Dashboard Tracking Metrics

Pillar and Strategy	Indicator	Metric	Status	Baseline	2023 ²⁸	2027	2030
1.1 Transition to a Renewable Energy Future	Renewable Energy	Share of eligible renewable energy generation in SJCE portfolio	Unchanged	N/A	55%	65%	65%
	Carbon-Free Electricity	Portion of electricity generation in SJCE's portfolio that is carbon-free	New	N/A	95.6%	98%	100%
	Local Renewables	Amount of renewable energy capacity installed in San José (MW)	Revised	131	313.4	516	668
1.2 Embrace our Californian climate	Total Water Consumption	Total volume of water used in the city per day (Mgal/day)	Unchanged	116	95.9	91.2	87.7
	Residential Water Use	Residential water use per capita per day (gpcd)	Unchanged	60	64.6	51.7	42
	Reused & Recycled Water Sources	Portion of total water demand met by recycled water	Unchanged	5%	5.8%	10.5%	14%
1.3 Protect and Expand Natural and Working Lands	NWL Preservation & Expansion	Acres of land with a General Plan Land Use Designation specified in the NWL element ²⁹	New	94,027	95,790 (2024)	95,790	95,790
	Regenerative Agriculture	New acres of land with regenerative agriculture practices applied	New	N/A	0	2,114	3,700
	NWL Restoration & Enhancement	New acres of NWLs with restoration or enhancement practices applied	New	N/A	10	2,566	4,500
	Urban Greening	Acres of neighborhood / community serving parkland within San José city limits	New	2,938	2,812	3,319	3,700

Table 1: Climate Smart Dashboard Tracking Metrics (continued)

Pillar and Strategy	Indicator	Metric	Status	Baseline	2023 ²⁸	2027	2030
2.1 Densify our city	City Density in Growth Areas	Density of new residents in planned growth areas	Unchanged	5,402 ²¹	5,303	5,706	6,008
	Complete Streets	Percentage of streets that meet San José Complete Streets criteria ³³	Revised	N/A	36%	39%	41%
	Transit-Oriented Development	Commercial space located within ½ mile of a high-quality transit stop (millions of sq ft)	Revised	59 ²¹	67	69	70
2.2 Make homes efficient and affordable	Household Energy Use (Natural Gas)	Household natural gas use (therms)	Revised	112,098,302	115,569,241	49,529,675	0
	Household Energy Use Intensity (Natural Gas)	Average natural gas use per dwelling unit (therms/du)	New	333	348	149	0
2.3 Create clean, personalized mobility choices	Zero-Emission Vehicles	Percentage of passenger vehicles (including SUVs) that are zero emission	Revised	1.4%	6.2%	53%	88%
	Reduced Car Dependency	Percentage of trips taken in SOVs	Revised	74.4% ²¹	70.5%	63.9%	59.0%
2.4 Develop integrated, accessible public transport infrastructure	VMT Reduction	Vehicle miles traveled per capita per day	Revised	15.2 ²¹	16.4	13.5	11.4
	Public Transit	Percentage of trips taken on public transit	Revised	1.8% ²¹	0.7%	6%	10%
	Accessible Transit	Percentage of households within 1/2 mile of a high-quality transit stop ¹⁸	Revised	28.6% ²¹	29%	31%	32%

Table 1: Climate Smart Dashboard Tracking Metrics (continued)

Pillar and Strategy	Indicator	Metric	Status	Baseline	2023 ²⁸	2027	2030
3.1 Create local jobs in our city	Jobs to Employed Resident Ratio	Jobs to employed resident (J/ER) ratio	Unchanged	0.8	0.79	0.91	1.0
	Transit-accessible Jobs	Number of jobs within 1/2 mile of a high-quality transit stop ¹⁸	Revised	237,059 ²¹	245,437	319,473	375,000
	Commuting	Percentage of commute journeys by non-SOV modes	Revised	21.9% ²¹	23%	41%	54%
3.2 Improve our commercial building stock	Distributed Generation	Rooftop solar generation on commercial and industrial buildings (MW)	Revised	52	79	166	231
	Commercial/Industrial Building Energy Use (Natural Gas)	Commercial and industrial natural gas use (therms)	New	60,670,602	58,054,345	24,880,434	0
	Commercial/Industrial Building Energy Use Intensity (Natural Gas)	Natural gas use per square foot (therms/sq ft)	New	0.33	0.30	0.13	0
3.3 Make commercial goods movement clean and efficient	Local Delivery Vehicles	Percentage of local delivery vehicles that are electric	Unchanged	0.11%	1.1%	35%	60%
	Heavy Duty Vehicles	Percentage of heavy duty vehicles that use alternative fuels	Unchanged	1.6%	3.5%	28%	46%

Topics for **Future Consideration**

Through its approval of the *Pathway* (2022), San José City Council directed that the City's climate efforts focus on three key areas – buildings, onroad transportation, and power source – representing about 73% of San José's GHG emissions. While Climate Smart can provide the community with a clear pathway to meeting Paris Agreement goals with its planned approach, there are a number of areas that may be valuable to consider in future iterations, as they can provide additional opportunities to progress towards the City's carbon neutrality³⁴ goal.

City staff **have completed or have in progress** the following areas identified as Topics for Future Consideration in the 2018 Climate Smart plan:

Completed:

- **Natural and Working Lands:** The NWL Element was adopted in 2023, aligned with the General Plan goals, and incorporated as a key Climate Smart strategy.
- **Spatially-Explicit Analysis of NWL and Carbon Sequestration Potential:** Approved in 2023, this analysis informed the NWL Element, identifying opportunities to enhance carbon sequestration and ecosystem benefits.
- **Alignment with California's Climate Scoping Plan:** Climate Smart strategies now align with the state's 2022 Scoping Plan for Achieving Carbon Neutrality , ensuring consistency with California's latest climate priorities.

Under Development:

- **Zero Waste:** Solid waste sector strategies under development with estimated completion in 2025.
- **Climate Adaptation and Resilience Plan (CARP):** In development, this plan will identify the foundational measures, policies, and procedures needed to reduce the community exposure to climate-related threats such as extreme heat, drought, and sea level rise. The CARP, expected to be completed in January 2026, will center equity by addressing the disproportionate climate impacts faced by vulnerable communities.

Topics for Future Consideration:

- **Offroad Transportation, Wastewater, Water, Aviation, and Freight Rail:** These sources account for approximately 14% of communitywide emissions (2023) and are not yet addressed by Climate Smart strategies. Future updates will consider approaches to reduce emissions from these sources.³⁵
- **Equity Metrics and Co-Benefits:** A future Equity Element could help ensure that climate actions reduce disparities and deliver co-benefits like improved health, air quality, and job access.
- **Innovative and Emerging Solutions:** As technologies evolve, future updates should explore carbon removal, time-based offsets, and other innovations identified in the Pathway's Appendix 4.

As Climate Smart evolves, these future focus areas offer new opportunities to further reduce emissions, advance equity, and amplify community co-benefits, ensuring San José remains at the forefront of climate leadership.

The plan is a living document which will continue to reflect best available data and technologies. Updates will follow the *General Plan's* four-year review cycle, and the City will continue working with the community to identify funding and partnerships that support research, pilots, and new programs. Together, we can continue making meaningful progress toward a carbon-neutral San José.



APPENDIX A.

The table below details the Climate Smart strategies and the emissions that will be avoided under each strategy, per year, for 2027 and 2030.

Table A1: Strategies and associated emissions avoided with implementation of Climate Smart

Strategy	2027 Avoided Emissions (MTCO2e)	2030 Avoided Emissions (MTCO2e)	Percent of Total 2030 Avoided Emissions
1.1 Transition to a Renewable Energy Future	162,516	305,662	9%
1.3 Protect and Expand Natural and Working Lands	29,175	29,175	1%
2.2 Provide Affordable Efficient Homes	379,192	628,502	18%
2.3 Support Clean Personal Mobility	788,394	1,158,318	34%
2.4 Develop Integrated Accessible Public Transit	301,204	456,126	13%
3.2 Improve the Commercial Building Stock	214,613	354,636	10%
3.3 Make Goods Movement Efficient	290,640	494,194	14%
TOTAL	2,165,161	3,426,613	100%

Data in this table is based on the Carbon Neutral by 2030 assumptions listed in Figure 2.

APPENDIX B.

The tables below summarize new influential climate-related legislation passed at the state, regional, and city level since the adoption of the original Climate Smart Plan in 2018. Although this is not an exhaustive list, these plans, policies, and programs have transformed the way San José is responding to climate change.

Table B1: Statewide climate-related legislation

Sector	Plans	Policies	Programs
General Climate and Cross-Area	CARB Scoping Plan (2022) Updated every 4-5 years, assesses progress on the State’s GHG reduction goals and lays out a path to achieve them	AB 1279 (2022): Established a statewide goal of achieving carbon neutrality no later than 2045 and ensures an 85% emissions reduction as part of that goal.	Various
		SB 253 (2023): Requires large businesses in California with annual revenues over \$1 billion to publicly disclose their direct, energy-related, and value chain greenhouse gas emissions, with phased reporting beginning in 2026 and independent third-party verification.	
		SB 261 (2023): Requires large companies operating in California, with annual revenues exceeding \$500 million, to publicly disclose climate-related financial risks and report on their strategies for climate resilience starting in 2026.	

Table B1: Statewide climate-related legislation (continued)

Sector	Plans	Policies	Programs
Transportation	California Zero Emission Vehicle Market Development Strategy (2021)	Executive Order N-79-20 (2020): Requires all new vehicles sold in CA to be zero-emission by 2035 for passenger vehicles and 2045 for commercial trucks/vans	CARB California Clean Fuel Reward (2021; ongoing) Offers point-of-sale rebate, in partnership with electric utilities, up to \$750 depending on battery capacity for purchases or leases of new EVs
	Electric Vehicle Charging Station Permitting Guidebook (2019)	CARB Advanced Clean Cars II regulations (2022): Would require 35% of all new car purchases by 2026 and 100% by 2035 to be electric, hydrogen-powered, or plug-in hybrids	CARB Drive Clean Assistance Program (ongoing) Offers up to \$5,000 as a point-of-sale incentive for purchase or lease of new or used EVs by income qualified households. Also offers grants for at home charging and portable chargers
	CalSTA The Climate Action Plan for Transportation Infrastructure (2021)	CARB Mobile Source Strategy: Identifies the pathways for mobile source reductions needed to meet CARB's air quality, climate, and community risk reduction goals	CARB California E-Bike Incentive Project (2024; ongoing) Offers up to \$2,000 of point-of-sale incentives to support the purchase of a new electric bicycle
		Caltrans' DP-37 policy (2021) and DIB-94 design guidance (2024) mandate the inclusion of complete streets elements in transportation projects to facilitate the design of roadways that accommodate all users	
Buildings		California Building Standards Code Building Energy Efficiency Standards ("Title 24, Part 6 and Part 11; 2022; updated every three years) Regulations for energy efficiency, water efficiency and conservation, material conservation and resource efficiency, environmental quality, and more.	Building Initiative for Low-Emissions Development (BUILD; 2021) CEC program provides building electrification incentives for low-income residential projects that build new housing, repurpose existing buildings for housing, or do major renovations on existing housing through 2023.

Table B1: Statewide climate-related legislation (continued)

Sector	Plans	Policies	Programs
Buildings (continued)		AB 2446 (2022): Requires CARB to establish a framework to monitor and reduce GHG emissions of building materials. It also requires all new residential projects with at least 5 units and non-residential buildings overs 10,000 square feet to submit life cycles assessments and building product-specific Environmental Product Declarations	Technology and Equipment for Clean Heating (HEAT; 2021) Provides building electrification incentives for existing homes through 2023
			Switch is On campaign (2020, ongoing) Encourages building electrification and provides online tools to find available all-electric products, rebates and incentives, and qualified contractors
Energy		SB 1020 (2022): creates clean energy targets of 90% by 2035 and 95% by 2040, advancing the state's trajectory to 100% clean energy by 2045.	
Solid Waste		AB 1201 (2021): Set standards that products must meet in order to be labeled as "compostable" or "biodegradable"	
		SB 343 (2021): Set standards that products must meet in order to be labeled as "recyclable" or use the chasing arrows symbol	
		AB 1276 (2022): Single-use foodware accessories and condiments upon request	
		AB 1857 (2022): Removed the provision in California law that allowed jurisdictions to count a portion of solid waste that undergoes transformation as diverted instead of disposed	
		SB 54 (2022): Established a new extended producer responsibility (EPR) program to manage packaging and single-use plastic foodware. Producers must ensure that these items are recyclable or compostable by 2032 and must reduce the amount of single-use plastic packaging and foodware distributed in the state by 25% by 2032.	

Table B1: Statewide climate-related legislation (continued)

Sector	Plans	Policies	Programs
Solid Waste (continued)		SB 244 (2023): Established the first Right to Repair law in California. Requires electronics and appliance manufacturers to provide parts, tools, and documentation to independent repair shops and product owners.	
		SB 707 (2024): Created an EPR program for textiles. Producers must establish collection sites for consumers to return textiles and manage textiles in alignment with the waste hierarchy, which prioritizes reuse and repair.	
Water		AB 1572 (2023): restricts the use of potable water for irrigating “nonfunctional turf,” defined as grass that is purely decorative and includes grass located within street rights-of-way and parking lots. The restriction applies to commercial, industrial, municipal, institutional properties, and HOA common space starting in 2027.	
Land Management		AB 1889 (2024): The Room to Roam Act directs cities to consider and protect wildlife connectivity in the Conservation Elements of General Plans.	
		Pathways to 30x30 California: Accelerating Conservation of California’s Nature (2021): This strategy describes how the State will reach Executive Order N-82-20’s goal of conserving 30% of state lands and coastal waters by 2030.	

Table B2: Regional climate-related legislation

Sector	Plans	Policies	Programs
Transportation	Santa Clara VTA Sustainability Plan (2020) Sets goals to reduce GHG emissions 60% from 2009 levels by 2035 and 90% by 2040	VTA zero-emission fleet goal (2022) Aim to have 100% zero-emissions buses by 2036	BAAQMD Clean Cars for All (2019; ongoing) Allows turn-in of old vehicles for a rebate toward a new or used hybrid, plug-in hybrid, battery, or hydrogen fuel EV, prepaid card for public transit or e-bikes, and/or EV charger

Table B2: Regional climate-related legislation (continued)

Sector	Plans	Policies	Programs
Transportation	Plan Bay Area 2050 (2021) Long-range plan charting the course for the future of the nine-county San Francisco Bay Area focused on four key elements – housing, the economy, transportation and the environment	Metropolitan Transportation Commission’s (MTC’s) Complete Streets Policy (2022) promotes safe and accessible transportation options for all users	Silicon Valley Regional Intelligent Transportation Systems (ongoing)
	VTA Transit Oriented Communities Playbooks (2019)		Various. Including Acterra’s Karl Knapp CoEV Program (ongoing). Supports the transition to EVs. Also, Bay Wheels Bike Share, Bike Link, BayPass, etc. (ongoing). Supports mode shift.
Buildings		Bay Area District Rule 9-4 and Rule 9-6 (2023) These amendments ban the sale of NOx-emitting furnaces (as of 2029) and water heaters/boilers (as of 2027 for small water heaters and 2031 for large water heaters), meaning that only all-electric equipment could be sold	BayREN Energy-efficiency and Electrification Incentives (2020; ongoing)
			PG&E rebates, financing, and resources to support energy efficiency (ongoing)
Water	Valley Water One Water Plan (2021): This plan integrates the water supply, flood protection, and stream stewardship at the watershed scale.		BayREN Energy-efficiency and Electrification Incentives (2020; ongoing)

Table B3: City of San José climate-related plans, policies, and programs

Sector	Plans	Policies	Programs
General Climate and Cross-Area	Pathway to Carbon Neutrality by 2030 (2022)		City Council memo template update to include evaluation of Climate Smart conformance (2019)
	Envision San José 2040 General Plan (last updated 2022)		Zero-Emissions Neighborhood pilot (ZEN; 2021, ongoing)
	Greenhouse Gas Reduction Strategy (within General Plan; last updated 2020)		Electrification Expo (2019)
	Natural & Working Lands Element – Climate Smart San José (2022)		Climate Smart Challenge online platform (2020, ongoing)
	Zero Waste Element – Climate Smart San José (2025, ongoing)		Go Green Teams Pilot (2021, ongoing)
Transportation	Electric Mobility Roadmap (2019)	Parking and Transportation Demand Management Ordinance Update (2023)	Drive Electric (2021) Limited-time discount for four San José dealerships on the purchase of several EV models
	Better Bike Plan 2025 (2020)	Transit First Policy (2022)	Drive Forward (2021-2024) Program offering financial counseling and EV education
	Emerging Mobility Action Plan (2022)	One-Way Vehicle Sharing Policy (2021)	California Electric Vehicle Infrastructure Project (CALeVIP, 2020-2023) Offers incentives for EV charging infrastructure
	East San José Multimodal Transportation Improvement Plan (En Movimiento; 2021)	Council Policy 5-1 (Transportation Analysis) Update (2022)	Began amassing credits from the City's EV chargers via the state's Low Carbon Fuel Standard program (2021; ongoing)
	Move San José Plan (2022)	One-Way Vehicle Sharing Regulations (2022)	Walk n' Roll (ongoing) Program to increase the number of students who walk and bike to school
	Vision Zero Action Plan (2025)		Municipal: City Employee Smart Pass Program, Pre-tax Commuter Benefits Program, and Green Trip Challenge
	Downtown Transportation Plan (2022)		
	Commercial freight strategic planning (2021; ongoing)		

Table B3: City of San José climate-related plans, policies, and programs (continued)

Sector	Plans	Policies	Programs
Transportation (continued)	West San José Multimodal Transportation Improvement Plan (2022)		
	Walk Safe San José Plan (2024)		
Buildings		Building Reach Code (2019)	Heat Pump Water Heater Rebate Program (2019-2021)
		Natural Gas Infrastructure Prohibition (2020, 2021)	SJCE Energy Efficiency Programs (2022-2024)
		Building Electrification Framework (2022)	Beyond Benchmarking: starting in 2024 a subset of covered building owners must demonstrate either satisfactory building energy and water efficiency or undergo actions for efficiency improvement
			Beyond Benchmarking: starting in 2024 a subset of covered building owners must demonstrate either satisfactory building energy and water efficiency or undergo actions for efficiency improvement
Land Management	Green Stormwater Infrastructure (GSI) Plan (2019): guide for reducing the adverse water quality, flooding, and urban heat impacts of urbanization by using green stormwater infrastructure.		
	Community Forest Management Plan (2022): establishes standards and practices to help create and maintain a thriving community forest.		
Energy			San José Clean Energy CCA created in 2017 and began providing clean electricity to San José customers in 2019
	SJCE Programs Roadmap (2021)		

APPENDIX C.

Appendix C contains a table of Climate Smart metrics with 2040 and 2050 Progress Milestones included.

Table C1: Climate Smart Dashboard Tracking Metrics with Goals Through 2050

Pillar and Strategy	Indicator	Metric	Baseline	2023	2027	2030	2040	2050
1.1 Transition to a Renewable Energy Future	Renewable Energy	Share of eligible renewable energy generation in SJCE portfolio	NA	55%	65%	65%	100%	100%
	Carbon-Free Electricity	Portion of electricity generation in SJCE's portfolio that is carbon-free	NA	95.6%	98%	100%	100%	100%
	Local Renewables	Amount of renewable energy capacity installed in San José (MW)	131	313.4	516	668	1113	1430
1.2 Embrace our Californian climate*	Total Water Consumption	Total volume of water used in the city per day (Mgal/day)	116	95.9	91.2	87.7	76	-
	Residential Water Use	Residential water use per capita per day (gpcd)	60	64.6	51.7	42	20	-
	Reused & Recycled Water Sources	Portion of total water demand met by recycled water	5%	5.8%	10.5%	14%	23%	-

Table C1: Climate Smart Dashboard Tracking Metrics with Goals Through 2050 (continued)

Pillar and Strategy	Indicator	Metric	Baseline	2023	2027	2030	2040	2050
1.3 Protect and Expand Natural and Working Lands	NWL Preservation & Expansion	Acres of land with a General Plan Land Use Designation specified in the NWL element ²⁹	94,027	95,790	95,790	95,790	95,790	95,790
	Regenerative Agriculture	Acres of land with regenerative agriculture practices applied	0	0	2,114	3,700	7,500	11,200
	NWL Restoration & Enhancement	Acres of NWLs with restoration or enhancement practices applied	0	10	2,566	4,500	9,100	13,600
	Urban Greening	Acres of neighborhood/ community serving parkland per 1,000 people	2,938	2,812	3,319	3,700	4,500	5,200
2.1 Densify our city	City Density in Growth Areas	Density of new residents in planned growth areas	5,402	5,303	5,706	6,008	7,015	8,727
	Complete Streets**	Percentage of streets that meet San José Complete Streets criteria	NA	36%	39%	41%	-	-
	Transit-Oriented Development	Commercial space located within ½ mile of high-quality transit stop (millions sq ft)	59	67	69	70	74	78

Table C1: Climate Smart Dashboard Tracking Metrics with Goals Through 2050 (continued)

Pillar and Strategy	Indicator	Metric	Baseline	2023	2027	2030	2040	2050
2.2 Make homes efficient and affordable	Household Energy Use (Natural Gas)	Household natural gas use (therms)	112,098,302	115,569,241	49,529,675	0	0	0
	Household Energy Use Intensity (Natural Gas)	Average natural gas use per dwelling unit (therms/du)	333	348	149	0	0	0
2.3 Create clean, personalized mobility choices	Zero-Emission Vehicles**	Percentage of passenger vehicles (including SUVs) that are zero emission	1.4%	6.2%	53%	88%	-	-
	Reduced Car Dependency**	Percentage of trips taken in SOVs	74.4%	70.5%	63.9%	59%	-	-
2.4 Develop integrated, accessible public transport infrastructure	VMT Reduction	Vehicle miles traveled per capita per day	15.2	16.4	13.5	11.4	8.7	6.5
	Public Transit	Percentage of trips taken on public transit	1.80%	0.7%	6%	10%	20%	35%
	Accessible Transit	Percentage of households within ½ mile of a high quality transit stop	28.6%	29%	31%	32%	36%	50%

Table C1: Climate Smart Dashboard Tracking Metrics with Goals Through 2050 (continued)

Pillar and Strategy	Indicator	Metric	Baseline	2023	2027	2030	2040	2050
3.1 Create local jobs in our city	Jobs to Employed Resident Ratio	Jobs to employed resident (J/ER) ratio	0.8	0.79	0.91	1.0	1.1	1.1
	Transit-accessible Jobs	Jobs within 1 mile of rail and 1 mile of HCT	237,059	245,437	319,473	375,000	475,000	550,000
	Commuting	Percentage of commute journeys by non-SOV modes	21.9%	23%	41%	54%	76%	88%
3.2 Improve our commercial building stock	Distributed Generation	Rooftop solar generation on commercial and industrial buildings (MW)	52	79	166	231	430	636
	Commercial/Industrial Building Energy Use (Natural Gas)	Commercial and industrial natural gas use (therms)	60,670,602	58,054,345	24,880,434	0	0	0
	Commercial/Industrial Building Energy Use Intensity (Natural Gas)	Natural gas use per square foot (therms/sq ft)	0.33	0.30	0.13	0	0	0

Table C1: Climate Smart Dashboard Tracking Metrics with Goals Through 2050 (continued)

Pillar and Strategy	Indicator	Metric	Baseline	2023	2027	2030	2040	2050
3.3 Make commercial goods movement clean and efficient	Local Delivery Vehicles	Percentage of local delivery vehicles that are electric	0.1%	1.1%	35%	60%	100%	100%
	Heavy Duty Vehicles	Percentage of heavy duty vehicles that use alternative fuels	1.6%	3.5%	28%	46%	87%	100%

* 2050 goals were not included in the original Climate Smart San Jose Plan for the strategies under Pillar 1.2: Embrace our Californian climate. Staff will consider setting milestones for 2050 in future updates.

** For metrics that have been newly added to the Climate Smart plan and do not have existing milestones, only 2030 goals were set. Staff will consider setting milestones for 2040 and 2050 in future updates.

APPENDIX D.

Appendix D outlines the data used to calculate each of the metrics in this Climate Smart San José Plan Update. It also provides details on any metrics that have had baseline values or milestones re-calculated.

More details on data sources, methodologies and limitations will be added to (for new metrics) or updated on (for revised metrics) our online Climate Smart Data Dashboard in 2026. You can view details for existing metrics at SJEnvironment.org/CSDashboard.

1.1. Transition to a Renewable Energy Future

Renewable Electricity: Share of eligible renewable energy generation in SJCE’s portfolio

The share of renewable energy in San José Clean Energy (SJCE)’s power mix is calculated based on its power procurement. Renewable energy transactions are governed by and recorded in the Western Renewable Energy Generation Information System (WREGIS), which is an independent, renewable energy tracking system for the region covered by the Western Electricity Coordinating Council (WECC).

The California Energy Commission (CEC) annually publishes [Power Content Labels](#) for each California utility. They include information on the power mix and greenhouse gas emissions intensity associated with each electricity portfolio offered to customers.

This metric measures the portion of renewable electricity in SJCE’s base rate plan: Green Source. Only Eligible Renewable Energy Resources are considered for calculating the total portion of electricity generation that comes from renewable sources. This includes energy generated from biomass & biowaste, geothermal, eligible hydroelectric (excludes large hydroelectric), solar, and wind.

Carbon-Free Electricity: Portion of electricity generation in SJCE’s portfolio that is carbon-free

The share of carbon free energy in San José Clean Energy (SJCE)’s power mix is calculated based on its power procurement. The California Energy Commission (CEC) annually publishes [Power Content Labels](#) for each California utility. They include information on the power mix and greenhouse gas emissions intensity associated with each electricity portfolio offered to customers.

This metric measures the portion of carbon-free electricity in SJCE’s base rate plan: Green Source. The following Energy Resources are considered for calculating the total portion of electricity generation that is carbon free: eligible renewable (biomass & biowaste, geothermal, eligible hydroelectric (excludes large hydroelectric), solar, and wind); large hydroelectric; and nuclear.

Local Renewables: Amount of renewable energy capacity installed in San José (MW)

Renewable energy capacity in San José is pulled annually from the [California Distributed Generation Statistics \(CDGS\)](#) Interconnected Project Sites Dataset. The data are filtered to include only projects occurring in ZIP codes that lie entirely within San José’s city boundary. Technology Type is filtered to only include Solar PV and Photovoltaic projects. Data under System Size AC is summed for each year of interest and converted from kWh to MWh. Each year’s total includes all projects that were approved by December 31st of that year.

1.2. Live with the California Climate

Total Water Consumption: Total volume of water used in the city per day (Mgal/day)

Values for total citywide water use are sourced from the Santa Clara Valley Water District and represent the total amount of water produced in San José by the City Municipal Water System, SJWC, and the Great Oaks Water Company. The amount of water produced in San José by SJWC is estimated as 80 percent of the total amount of water produced by SJWC because approximately 80 percent of SJWC’s customers are within San José city limits.

Milestone re-set. A new 2030 milestone was set for this metric due to the original milestone being surpassed. The new milestone for 2030 was set by linearly interpolating between the most recent actual value (2023) and the next long-term, not yet achieved goal (2040).

Residential Water Use: Residential water use per capita per day (gpcd)

Data on annual total water use by residential customers of the San José Municipal Water System are provided by Municipal Water System staff for all years.

Data on annual total water use by residential customers of the other two water retailers that serve San José residents, San José Water Company (SJWC) and Great Oaks Water Company, are estimated based on [Urban Water Management Plan \(UWMP\)](#) data and observed water use trends from San José Municipal Water Systems data. Baseline data was estimated by linearly interpolating between 2015 and 2020 values for residential water use that were obtained from UWMPs. The total amount of water sold by SJWC to residential customers was multiplied by 80 percent because approximately 80 percent of SJWC’s customers are within San José city limits. 2023 data was estimated by assuming that water use changed from year to year along the same trends as residential water use by San José Municipal Water System customers.

To calculate residential water use per capita per day water usage, the total amount of water sold by all three retailers to residential customers in San José is summed and then divided by the number of residents in San José and the number of days in a year (365.25 to account for leap years.) Population data are from the California Department of Finance’s Demographics Unit (Table E-5).

Reused & Recycled Water Sources: Portion of total water demand met by recycled water

Data on recycled water use come from the South Bay Water Recycling (SBWR) program, which is administered and operated by the City of San José. SBWR receives consumption data quarterly from the recycled water retailers serving San José (City of San José Municipal Water System and San José Water Company (SJWC)).

Values for total water use are sourced from the Santa Clara Valley Water District and represent the total amount of water produced in San José by the City Municipal Water System, SJWC, and the Great Oaks Water Company. The amount of water produced in San José by SJWC is estimated as 80 percent of the total amount of water produced by SJWC because approximately 80 percent of SJWC’s customers are within San José city limits.

To calculate the portion of total water demand met by recycled water, consumption data provided by SBWR is divided by total water use sources from Santa Clara Valley Water District and multiplied by 100.

1.3. Protect and Expand Natural and Working Lands

Preservation and Expansion: Acres of land with a General Plan Land Use Designation specified in the Natural and Working Lands (NWL) element

Data on acres of NWL are provided by the City of San José’s Planning, Building and Code Enforcement department. Acreage totals include land within San José’s Sphere of Influence for the following Envision San José 2040 General Plan land use designations: Open Space, Parklands and Habitat (OSPH); Open Hillside (OH); and Agriculture (A).

Milestone re-set. New 2030, 2040 and 2050 milestones were set for this metric due to each of the original milestones being surpassed. Each of these goals have been updated to maintain the current actual value.

Regenerative Agriculture Practices: New acres of land with regenerative agriculture practices applied

Data on new acres of land utilizing regenerative agriculture practices are provided by local and regional agencies that lead and monitor relevant efforts. Agencies consulted for data collection included San José’s Parks, Recreation and Neighborhood Services Department, Santa Clara Valley Open Space Authority, Santa Clara County Cooperative Extension, and Santa Clara County Valley Water District.

The following regenerative agriculture practices are considered for this metric: cropland management, grazing land management, biosolids application (on croplands and grazing lands), compost application (on croplands and grazing lands), and mulching application (on croplands and grazing lands).

“New” acreage is defined as any land that started utilizing regenerative agriculture practices after 2021, when San José’s NWL Element was developed.

You can view more details on this metric in the linked [NWL Element](#).

Restoration and Enhancement Practices: New acres of NWLs with restoration or enhancement practices applied

Data on new acres of land utilizing restoration and enhancement practices are provided by local and regional agencies that lead and monitor relevant efforts. Agencies consulted for data collection included San José’s Parks, Recreation and Neighborhood Services Department, Santa Clara Valley Open Space Authority, Santa Clara County Cooperative Extension, and Santa Clara County Valley Water District.

The following restoration and enhancement practices are considered for this metric: riparian restoration, wetland restoration, urban forest expansion, oak woodland restoration, native grassland restoration, biosolids application (on non croplands and grazing lands), compost application (on non croplands and grazing lands) and mulching application (on non croplands and grazing lands).

“New” acreage is defined as any land that started utilizing restoration and enhancement practices after 2021, when San José’s NWL Element was developed.

You can view more details on this metric in the linked [NWL Element](#).

Urban Greening: Acres of neighborhood/community serving parkland within San José city limits

This metric is based on a service level objective under Envision San José 2040 General Plan Goal PR-1: Acres of neighborhood and community recreation lands per 1,000 population. Data is collected from [General Plan Annual Performance Reviews](#) and is based on “Actual Service Level” data, which is recorded at the end of San José’s fiscal year (June 30.) Mid-year data from these reports are used to estimate calendar year data in this Update.

Population data are from the [California Department of Finance’s Demographics Unit](#) (Table E-5).

Total acreage is calculated by dividing the Actual Service Level data by 1,000 and multiplying by the population in the year of interest.

2.1. Transition to a Renewable Energy Future

City Density in Growth Areas: Density of new residents in planned growth areas

Data on housing in Urban Villages and Growth Areas (number of housing units, year built) come from the [City of San José’s Housing Site Explorer](#), which utilizes data from the Santa Clara County Tax Assessor’s Office. Population density in Urban Villages and Growth Areas in each year is estimated by multiplying the number of housing units existing in Urban Villages and Growth Areas by the average household size in San José from the [California Department of Finance’s Demographics Unit](#) (Table E-5), and dividing by the total area of Urban Villages and Growth Areas within the city boundary (30.38 square miles).

Baseline value re-calculated. The baseline value for this metric was recalculated to match an updated, more accurate methodology that will be used going forward (as outlined above.)

Milestone re-set. A new 2030 milestone was set for this metric due to the original milestone being surpassed. The new milestone for 2030 was set by linearly interpolating between the most recent actual value (2023) and the next long-term, not yet achieved goal (2040).

Complete Streets: Percentage of streets that meet San José Complete Streets criteria

Data is pulled from the San José Department of Transportation’s Decision Support System (DSS) which measures and tracks a number of the City’s transportation KPIs. The Complete Streets metric in the Update is calculated based on a Complete Streets index that was custom developed for San José. It measures the proportion of street segments that have an index score greater than or equal to 1 out of 3, which indicates some level of presence of sidewalks on both sides of the street, Class II or better bikeways, and/or transit service on Grand Boulevard-designated rights-of-way (ROW ≥ 130’). Required datasets for calculating this metric include [San José Streets](#), [San José Sidewalks](#), San José Bike Network, [GTFS Networks](#) (BART, Caltrain, VTA), and the US Census.

Transit-Oriented Development: Commercial space located within ½ mile of a high-quality transit stop (millions of sq ft)

Data on commercial properties (location, square footage, year built) come from the Santa Clara County Tax Assessor’s Office. Commercial properties are defined as properties with Use Code Categories “Shopping Centers,” “Other Shopping Centers,” or “Other Urban.” Commercial properties described as “Parking,” “Residential Care Facilities,” or “Social Clubs, Fraternal Orders, Community Centers” are excluded.

Transit stop locations include both existing transit stops based on General Transit Feed Specification (GTFS) data and transit stops that are planned as part of Plan Bay Area 2050. High quality transit stops are defined as those where wait time is less than 15 minutes in the morning and nighttime.

Geospatial analysis is performed to filter County Tax Assessor data to only include commercial properties that are within ½ mile of high-quality transit stop locations. The square footage of building space in the resulting dataset is then summed.

Baseline value re-calculated. The baseline value for this metric was recalculated to match an updated, more accurate methodology that will be used going forward (as outlined above.)

Milestone re-set. New 2030 and 2040 milestones were set for this metric due to the original milestones being surpassed. The new milestones were set by linearly interpolating between the most recent actual value (2023) and the next long-term, not yet achieved goal (2050).

2.2. Make homes efficient and affordable

Household Energy Use (Natural Gas): Household natural gas use (therms)

Data on natural gas use by residential customers in San José are provided by PG&E. Data represents total citywide natural gas usage by residential customers for a given calendar year.

Household Energy Use Intensity (Natural Gas): Average natural gas use per dwelling unit (therms/du)

Data on natural gas use by residential customers in San José are provided by PG&E. Data represents total citywide natural gas usage by residential customers for a given calendar year.

Data on numbers of households in San José are from the [California Department of Finance’s Demographics Unit](#) (Table E-5).

EUI is calculated by dividing total residential customer natural gas use by total number of households to produce the average amount of natural gas use per household for a given year.

2.3. Create clean, personalized mobility choices

Zero-Emission Vehicles: Percentage of passenger vehicles (including SUVs) that are zero emission

Data on passenger vehicles registered in San José come from the Light-Duty Vehicle Population in California dataset from the [California Energy Commission Zero Emission Vehicle and Infrastructure Statistics Dashboard](#). Data are presented for passenger vehicles registered in ZIP codes that lie entirely within San José’s city boundary and that are categorized as Battery Electric (BEV.) Each year’s dataset includes all vehicles that were registered as of December 31st of that year.

To calculate the percentage of passenger vehicles that are zero emissions for a given year, the number of light-duty BEV that are registered in San José is divided by the total number of light-duty vehicles registered in San José.

Reduced Car Dependency: Percentage of trips taken in SOVs

Single occupancy vehicle (SOV) and total trip data are both derived from Replica. Replica mode share data is generated using a combination of mobile location data, land use information, and travel behavior models to estimate the number of trips taken in San José via various transportation modes (such as single occupancy vehicle) within a given region. The data is calibrated against “ground truth” observations—such as traffic counts, transit ridership, economic activity reports, and other public datasets—to improve accuracy.

SOV trips are calculated using US Census data. Replica reports data on auto person trips but does not differentiate between SOV and carpool trips. To reconcile this, US Census data on the average occupancy of carpool trips was used to separate SOV trips from carpool trips.

2.4. Develop integrated, accessible public transport infrastructure

VMT Reduction: Vehicle miles traveled (VMT) per capita per day

Data on daily VMT come from Replica. Replica VMT data is generated by modeling individual trip patterns using a synthetic population informed by US Census data, land use, mobile location data, and other “ground truth” observations—such as traffic counts, transit ridership, economic activity reports, and other public datasets. Each trip is assigned a travel mode and route, allowing Replica to simulate and calculate total vehicle miles traveled across time periods and geographies.

Population data are from the US Census.

VMT per capita per day is calculated in the DSS by dividing daily VMT by population data.

Public Transit: Percentage of total trips taken on public transit

Public transit ridership and total trip data are both derived from [Replica](#). Replica mode share data is generated using a combination of mobile location data, land use information, and travel behavior models to estimate the number of trips taken in San José via various transportation modes (such as public transit) within a given region. The data is calibrated against “ground truth” observations—such as traffic counts, transit ridership, economic activity reports, and other public datasets—to improve accuracy.

Accessible Transit: Percentage of households within 1/2 mile of a high-quality transit stop

Data on residential properties (location, number of units, year built) are from the Santa Clara County Tax Assessor’s Office. Only properties with Use Code Category “Residential (Classified by Dwelling Type)” are included, and properties with Use Code Description “Parking for Existing Apartment Complex” are excluded.

Total number of dwelling units in the city are from [California Department of Finance’s Demographics Unit](#) (Table E-5).

Transit stop locations include both existing transit stops based on General Transit Feed Specification (GTFS) data and transit stops that are planned as part of Plan Bay Area 2050. High-quality transit stops are defined as those where wait time is less than 15 minutes in the morning and nighttime.

To calculate the percentage of passenger vehicles that are zero emissions for a given year, the number of light-duty BEV that are registered in San José is divided by the total number of light-duty vehicles registered in San José.

Geospatial analysis is performed to filter County Tax Assessor data to only include properties that are within ½ mile of high-quality transit stop locations. The number of dwelling units in the resulting dataset is summed and then divided by the total number of dwelling units in the city.

Baseline value re-calculated. The baseline value for this metric was recalculated to match an updated, more accurate methodology that will be used going forward.

Milestone re-set. A new 2030 milestone was set for this metric due to the original milestone being surpassed. The new milestone for 2030 was set by linearly interpolating between the most recent actual value (2023) and the next long-term, not yet achieved goal (2040).

3.1. Create local jobs in our city

Jobs to Employed Resident Ratio: Jobs to employed resident (J/ER) ratio

This metric pulls directly from the Jobs-to-Employed-Resident (J/ER) Ratios that are reported under Envision San José 2040 General Plan. Jobs data are from the California Employment Development Department (workers that are not self-employed) and American Community Survey (self-employed workers). Data on the number of employed residents are also from the California Employment Development Department.

Transit-accessible Jobs: Number of jobs within 1/2 mile of a high-quality transit stop

Data on number of employees per business and business license begin and end dates come from the City’s Business License database. Data are included both for businesses that are currently active and those that are currently inactive.

Transit stop locations include both existing transit stops based on General Transit Feed Specification (GTFS) data and transit stops that are planned as part of Plan Bay Area 2050. High-quality transit stops are defined as those where wait time is less than 15 minutes in the morning and nighttime.

Geospatial analysis is performed to filter jobs data to only include employee counts for San José businesses that are within ½ mile of high-quality transit stop locations.

Baseline value re-calculated. The baseline value for this metric was recalculated to match an updated, more accurate methodology that will be used going forward.

Commuting: Percentage of commute journeys by non-SOV modes

Data on commute journeys come from [Replica](#). Replica mode share data is generated using a combination of mobile location data, land use information, and travel behavior models to estimate the number of trips taken via various transportation modes within a given region. The data is calibrated against “ground truth” observations—such as traffic counts, transit ridership, economic activity reports, and other public datasets—to improve accuracy.

SOV trips are calculated using US Census data. Replica reports data on auto person trips but does not differentiate between SOV and carpool trips. To reconcile this, US Census data on the average occupancy of carpool trips was used to separate SOV trips from carpool trips.

3.2. Improve our commercial building stock

Distributed Generation: Rooftop solar generation on commercial and industrial buildings (MW)

Renewable energy capacity in San José is pulled annually from the [California Distributed Generation Statistics \(CDGS\)](#) Interconnected Project Sites Dataset. For this metric, the data are filtered to include only projects categorized as “Commercial” or “Industrial” and occurring in ZIP codes that lie entirely within San José’s city boundary. Technology Type is filtered to only include Solar PV and Photovoltaic projects. Data under System Size AC is summed for each year of interest and converted from kWh to MWh. Each year’s total includes all projects that were approved by December 31st of that year.

Baseline value re-calculated. The baseline value for this metric was recalculated to match an updated, more accurate methodology that will be used going forward (as outlined above).

Commercial/Industrial Building Energy Use (Natural Gas): Commercial and industrial natural gas use (therms)

Data on natural gas use by commercial and industrial customers in San José are provided by PG&E. Data represents total citywide natural gas use by both commercial and industrial customers for a given calendar year. Natural gas use by institutional customers is not included.

Commercial/Industrial Building Energy Use Intensity (Natural Gas): Natural gas use per square foot (therms/sq ft)

Data on natural gas use by commercial and industrial customers in San José are provided by PG&E. Data represents total citywide natural gas use by both commercial and industrial customers for a given calendar year. Natural gas use by institutional customers is not included.

Data on commercial and industrial building square footage come from the Santa Clara County Tax Assessor’s Office.

EUI is calculated by dividing total commercial and industrial natural gas use by total square footage of commercial and industrial building space for a given year.

3.3. Make commercial goods movement clean and efficient

Local Delivery Vehicles: Percentage of local delivery vehicles that are electric

This metric uses vehicle population estimates for Santa Clara County from the California Air Resources Board’s [EMFAC2021 Emissions Inventory model](#). It assumes that the percentages of electric local delivery vehicles in both San José and Santa Clara County are the same.

The EMFAC2021 model provides data for a long list of different vehicle types (described in Appendix 4 of the [User’s Guide](#)). This metric is based on data for vehicle types that are often used as local delivery vehicles (LHD1, LHD2, MDV, and T6 Instate Delivery Class 4-7). For this metric, “electric” includes both battery electric vehicles (BEVs) and plug-in hybrid vehicles (PHEVs).

Heavy Duty Vehicles: Percentage of heavy duty vehicles that use alternative fuels

This metric uses vehicle population estimates for Santa Clara County from the California Air Resources Board’s [EMFAC2021 Emissions Inventory model](#). It assumes that the percentages of alternative-fuel heavy-duty freight vehicles in both San José and Santa Clara County are the same.

The EMFAC2021 model provides data for a long list of different vehicle types (described in Appendix 4 of the [User’s Guide](#)). This metric is based on data for heavy-duty vehicle types that are often used for moving freight (T6 CAIRP Class 4-7, T7 CAIRP Class 8, T6 Instate Delivery Class 4-7, T6 Instate Tractor Class 6-7, T6 OOS Class 4-7, T7 NNOOS Class 8, T7 NOOS Class 8, T7 Other Port Class 8, T7 POAK Class 8, T7 Tractor Class 8). For this metric, “alternative fuels” includes compressed natural gas (CNG) and electric vehicles.

APPENDIX E.

This appendix provides a detailed overview of the updates made to Climate Smart metrics, explaining what has changed and why. These refinements ensure the metrics remain aligned with San José’s carbon neutrality goals, are measurable, and reflect the most impactful strategies.

For each metric, this section highlights whether it is new, revised, or unchanged, along with the rationale for the update. These changes were informed by advancements in data availability, shifts in regulatory priorities, and the integration of the Natural and Working Lands (NWL) element. Together, they enhance the City’s ability to track progress transparently and focus on the strategies that drive the greatest impact.

Table E1: Detailed list of updates made to Climate Smart metrics

Pillar and Strategy	Indicator	Metric	Original metric (if revised)	Rationale
1.1 Transition to a Renewable Energy Future	Renewable Energy	Share of eligible renewable energy generation in SJCE portfolio	NA	Unchanged
	Local Renewables	Revised Metric: Amount of distributed renewable energy capacity installed in San José	Amount of renewable energy capacity installed in San José	Revised to specify “distributed” renewable energy capacity
	Carbon-Free Energy	New Metric: Portion of electricity generation in SJCE’s portfolio that is carbon-free	NA	Added to convey the carbon intensity of SJCE electricity and proportion of renewable sources in electricity mix
1.2 Embrace our Californian climate	Total Water Consumption	Total volume of water consumed in the city per day	NA	Unchanged
	Residential Water Use	Residential water use per capita per day	NA	Unchanged
	Reused & Recycled Water Sources	Percentage of water captured and reused or treated then recycled	NA	Unchanged

Table E1: Detailed list of updates made to Climate Smart metrics (continued)

Pillar and Strategy	Indicator	Metric	Original metric (if revised)	Rationale
1.3 Protect and Expand Natural and Working Lands	NWL Preservation & Expansion	New Metric: Acres of land with a General Plan Land Use Designation specified in the NWL element ²¹	NA	Added as part of the inclusion of NWL into this update.
	Regenerative Agriculture	New Metric: New acres of land with regenerative agriculture practices applied	NA	Added as part of the inclusion of NWL into this update.
	NWL Restoration & Enhancement	New Metric: New acres of NWLs with restoration or enhancement practices applied	NA	Added as part of the inclusion of NWL into this update.
	Urban Greening	New Metric: Acres of neighborhood/community serving parkland per 1,000 people	NA	Added as part of the inclusion of NWL into this update.
2.1 Density our city	City Density in Growth Areas	Density of new residents in planned growth areas	NA	Unchanged
	Complete Streets	Revised Metric: Percentage of streets that meet San José Complete Streets criteria ³⁰	Percentage of primary streets in San José that meet California Complete Streets Act standards	Changed to align with existing DOT metrics. San José uses a city-specific Complete Streets Index, which differs from state standards to reflect local priorities.
	Transit-Oriented Development	Revised Metric: Commercial space located within ½ mile of a high-quality transit stop ¹⁸ (millions of sq ft)	Commercial space located within ½ mile of transit	Changed to align with available data that has been used to calculate the metric.

Table E1: Detailed list of updates made to Climate Smart metrics (continued)

Pillar and Strategy	Indicator	Metric	Original metric (if revised)	Rationale
2.2 Make homes efficient and affordable	ZNE Homes	NA	Removed Metric: Number of Zero Net Energy (ZNE) homes	Removed due to lack of available data.
	All-Electric Homes	NA	Removed Metric: Percentage of homes that are all-electric	Removed due to lack of available data. Progress towards residential building electrification will be reflected in other metrics under Strategy 2.2.
	Household Energy Use	Revised Metric: Citywide natural gas use (therms)	Household energy use (gas and electricity)	Removed electricity use since natural gas use is a better indicator for progress towards electrification.
	Household Energy Use Intensity	New Metric: Average natural gas use intensity (EUI) per dwelling unit	NA	Added to better reflect progress toward GHG reduction goals. Overall energy use can fluctuate due to factors such as increases in population, building stock, and economic growth.
2.3 Create clean, personalized mobility choices	Zero-Emission Vehicles	Revised Metric: Percentage of registered passenger vehicles that are zero emission	Percentage of passenger vehicles (including SUVs) that are electric	Revised from “electric” to “zero-emission,” to better reflect GHG reduction goals.
	Reduced Car Dependency	Revised Metric: Proportion of total trips that are taken in single occupant vehicles (SOVs)	Reduction in passenger cars and SUVs from public or shared mobility	Consolidated with the Single Occupancy Vehicles indicator, which was changed from commuter trips to total trips to get a more holistic view of travel patterns.
	Single-Occupancy Vehicles	NA	Removed Metric: Percentage of commutes taken in single occupant vehicles (SOVs)	Updated from commuter trips to total trips to get a more holistic view of travel patterns and consolidated with the Reduced Car Dependency indicator. This indicator is still captured under Commuting, which now tracks the percentage of commute journeys by non-SOV modes.

Table E1: Detailed list of updates made to Climate Smart metrics (continued)

Pillar and Strategy	Indicator	Metric	Original metric (if revised)	Rationale
2.4 Develop integrated, accessible public transport infrastructure	VMT Reduction	Revised Metric: Vehicle miles traveled per capita per day	Vehicle miles traveled per capita per day reduction	Revised due to difficulty tracking old metric of “reduction.”
	Public Transit	Revised Metric: Percentage of total trips taken on public transit	Percentage of commute trips taken on public transit	Revised to get a more holistic view of travel patterns.
	Accessible Transit	Revised Metric: Percentage of households within ½ mile of high-quality transit stop ¹⁸	Percentage of households within ½ mile of high frequency (less than 15 min) transit 7am to 10pm	Changed to align with available data that has been used to calculate the metric.
3.1 Create local jobs in our city	Jobs to Employed Resident Ratio	Jobs to employed resident (J/ER) ratio	NA	Unchanged
	Transit-Accessible Jobs	Revised Metric: Number of jobs within ½ mile of high-quality transit stop ¹⁸	Removed Metric: Jobs within ½ mile of rail and ¼ mile of HCT	Changed to align with available data that has been used to calculate the metric.
	Commuting	Revised Metric: Percentage of commute journeys by non-SOV modes	Percentage of commute journeys by walking and cycling	Revised to capture more modes that are lower intensity, not just active transportation.

Table E1: Detailed list of updates made to Climate Smart metrics (continued)

Pillar and Strategy	Indicator	Metric	Original metric (if revised)	Rationale
3.2 Improve our commercial building stock	ZNE Commercial Buildings	NA	Removed Metric: Gross Internal Floor Area of ZNE commercial buildings	Removed due to lack of available data.
	Distributed Generation	Revised Metric: Distributed renewable energy capacity on commercial and industrial buildings	Rooftop solar generation on commercial and industrial buildings	Revised to specify “distributed renewable energy capacity” is being measured.
	Commercial and Industrial Building Energy	New Metric: Commercial and industrial natural gas usage (therms)	NA	Added to complement household energy use metric of Strategy 2.2.
	Commercial and Industrial Building Energy Intensity	New Metric: Natural gas use intensity per square foot (EUI)	NA	Added to complement household energy use intensity metric of Strategy 2.2.
3.3 Make commercial goods movement clean and efficient	Local Delivery Vehicles	Percentage of electric local delivery vehicles	NA	Unchanged
	Heavy Duty Vehicles	Percentage of alternative fuel heavy goods vehicles	NA	Unchanged



Endnotes

1. Based on the 2021 communitywide inventory. Discloses emissions from the following sectors not covered under the original Climate Smart plan: process and fugitive, aviation, and heavy rail.

2. Intergovernmental Panel on Climate Change (IPCC). (2023). Sixth Assessment Report: Synthesis Report. Retrieved from www.ipcc.ch/report/ar6/syr/

3. The Envision San Jose 2040 General Plan can be accessed here: www.sanjooseca.gov/home/showpublished-document/22359/637928744399330000

4. The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at the UN Climate Change Conference (COP21) in Paris, France, on 12 December 2015. It entered into force on 4 November 2016. Additional information: unfccc.int/process-and-meetings/the-paris-agreement

5. The Pathway to Carbon Neutrality by 2030 can be accessed here: www.sanjooseca.gov/home/showpublished-document/93082/638065452005070000

6. The City of San Jose 2023 Inventory of Communitywide Greenhouse Gas Emissions can be accessed here: www.sanjooseca.gov/home/showpublished-document/122510/638866287441830000

7. California Air Resources Board. (2022). Advanced Clean Cars II rule. Accessed from: ww2.arb.ca.gov/news/california-moves-accelerate-100-new-zero-emission-vehicle-sales-2035.

8. State of California. (2022). AB 1279. Accessed from: leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=202120220AB1279.

9. More information about Plan Bay Area 2050 and the full plan can be found at planbayarea.org/.

10. Bay Area Air District. (2023). Rule 9-4 and Rule 9-6 Building Appliances. Accessed from: www.baaqmd.gov/rules-and-compliance/rule-development/building-appliances.

11. The Natural and Working Lands Element can be accessed here: www.sanjooseca.gov/home/showpublished-document/91813/638223658589470000

12. Climate Smart defines NWLs as areas designated in the Envision San José 2040 General Plan as OpenSpace, Parklands, and Habitat, Agriculture, and Open Hillside.

13. Carbon sequestration is the process of capturing and storing carbon dioxide (CO2) from the atmosphere to reduce the amount of carbon in the atmosphere and slow climate change.

14. Learn more about SJCE, community choice energy, and available options at sanjosecleanenergy.org/.

15. A phenomenon where urban areas experience significantly warmer temperatures than surrounding rural areas due to the concentration of buildings, roads, and other heat-absorbing infrastructure that retain heat.

16. Envision San José 2040 General Plan designations of Open Hillside, Agriculture, and Open Space, Parklands, and Habitat.

17. Baseline values reflect the original Climate Smart or Natural and Working Lands Element baseline. 2023 values reflect the most recent actual performance. 2027, 2030, and where applicable 2040 targets are adopted or recalculated by interpolating a straight line from 2023 to the next long-term goal. Appendix C shows 2040 and 2050 goals; Appendix D provides methodology for any recalculations.

18. City of San José. (2024). Envision San José 2040 General Plan. Page 16. Retrieved from www.sanjooseca.gov/home/showpublished-document/22359/637928744399330000 Also see map on page 31 of the Envision San José 2040 General Plan.

19. Complete Streets Index score is between 0 and 3. A score of 1.5 would be equivalent to every street in the census tract having sidewalks on both sides and about half of the streets having either bike facilities or transit.

20. Climate Smart defines high-quality transit stops as those where wait time is less than 15 minutes in the morning and nighttime.

21. The baseline value for this metric was recalculated to match the updated, more accurate methodology. Information on methodologies can be found in Appendix D of this update and on the online Climate Smart Data Dashboard.

22. Rocky Mountain Institute. (2022). All-Electric Buildings are Healthy Buildings. Accessed from: rmi.org/wp-content/uploads/2022/02/all_electric_buildings_healthy_factsheet.pdf.

23. More information about building electrification in San José can be found at: www.sanjooseca.gov/your-government/departments-offices/energy/climate-smart-san-jose/building-electrification.

24. Move San José is the strategic plan for the City's Department of Transportation. The plan can be accessed from: storymaps.arcgis.com/stories/096082d53c5c4e5baf9eb6afe15alf0f.

25. More information about these transportation projects can be found at: www.sanjooseca.gov/your-government/departments-offices/transportation/transit.

26. The 362,000 jobs figure reflects the projected increase in local employment from 2008 to 2040, based on the City's GHG emissions forecast. The 2040 projection is aligned with updated land use and economic growth assumptions from the Envision San José 2040 General Plan 4-Year Review Report. This figure differs from the original Climate Smart plan due to updated planning assumptions and methodology.

27. The number of jobs in San José in 2022 data source: State of California Employment Development Department edd.ca.gov/

28. Although the city's 2030 goal and most of the programs related to Strategy 3.2 focus on commercial buildings, commercial building data consists of both commercial and industrial energy usage. Industrial energy use cannot be disaggregated from commercial.

29. The City's Green Fleet Policy can be accessed here: www.sanjooseca.gov/home/showpublished-document/17915/637164315982600000.

30. See original Climate Smart plan, Section 32, for a list of general funding mechanisms.

31. Recent Climate Smart Semi-Annual Updates can be accessed here: www.sanjooseca.gov/your-government/departments-offices/energy/climate-smart-san-jose and others are available upon request.

32. Envision San José 2040 General Plan designations of Open Hillside, Agriculture, and Open Space, Parklands, and Habitat.

33. The Complete Streets metric represents the percentage of streets in San José that accommodate all intended users—including pedestrians, cyclists, transit riders, and drivers—based on the presence of sidewalks, Class II or better bikeways in accordance with the Better Bike Plan, and transit service on Grand Boulevards.

34. The California Air Resource Board 2022 Scoping Plan for Achieving Carbon Neutrality can be accessed here: ww2.arb.ca.gov/sites/default/files/2023-04/2022-sp.pdf

35. Offroad transportation covers numerous types of mobile equipment such as boats, tractors, lawn equipment, and construction vehicles. Freight rail refers to emissions from goods-moving trains operating within San José, which are distinct from light rail used for public passenger transit.

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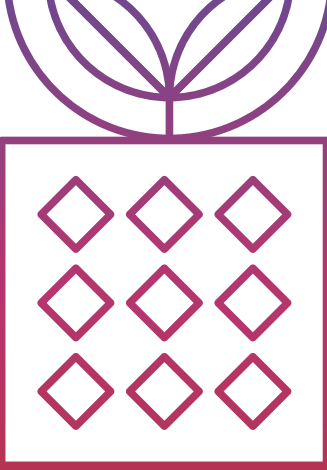
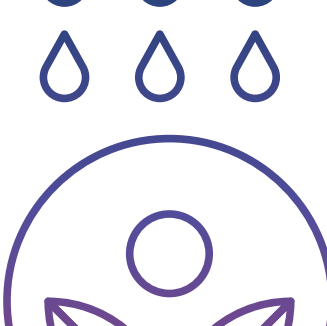
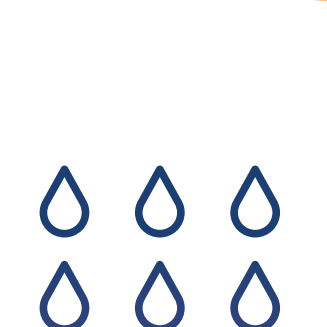
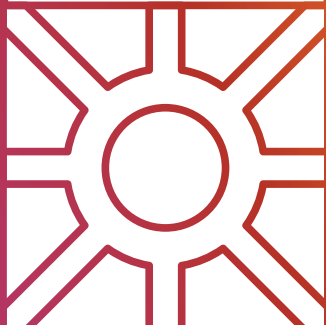
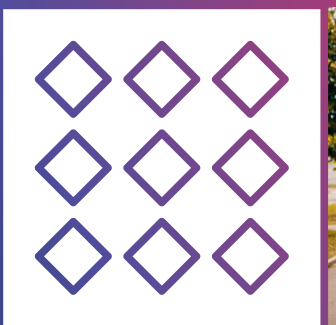
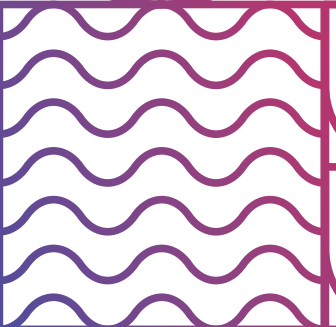
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SAN JOSÉ, CA

2023 Inventory of Communitywide Greenhouse Gas Emissions



Prepared For:

San José, CA

Produced By:

ICLEI - Local Governments
for Sustainability USA
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Abbreviations

ACE	Altamont Corridor Express
C	Carbon
Cal e-GGRT	CARB Electronic Greenhouse Gas Reporting Tool
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CARB OFFROAD	CARB Off-Road Emissions Inventory v1.1.0
City	City of San José
CH ₄	Methane
Climate Smart	Climate Smart San José
CNG	Compressed Natural Gas
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
CRF	Global Covenant of Mayors Common Reporting Framework
C&D	Construction & Demolition
DOT	San José Department of Transportation
eGRID	Emissions & Generation Resource Integrated Database
EIA	U.S. Energy Information Administration
EV	Electric Vehicle
FAA OPSNET	Federal Aviation Administration Operations Network
EPA FLIGHT	EPA Facility Level Information on Greenhouse Gases Tool
g	Grams
GGE	Gasoline Gallons Equivalent
GHG	Greenhouse Gas
GIS	Geographic Information System
Google EIE	Google Environmental Insights Explorer
GPC	Global Protocol for Community-Scale Greenhouse Gas Emission Inventories
GSE	Ground Support Equipment
GWP	Global Warming Potential
HFCs	Hydrofluorocarbons
ICLEI	ICLEI - Local Governments for Sustainability
IPCC	Intergovernmental Panel on Climate Change
IWM	Integrated Waste Management Division
kg	Kilograms
kWh	Kilowatt Hours
lbs	Pounds
LEARN	ICLEI Land Emissions and Removals Navigator
LPG	Liquified Petroleum Gas




MRR	California Regulation for the Mandatory Reporting of Greenhouse Gas Emissions
MSW	Municipal Solid Waste
MT	Metric Tons
MWh	Megawatt Hours
N ₂ O	Nitrous Oxide
PFCs	Perfluorocarbons
PG&E	Pacific Gas & Electric
RHV	Reid-Hillview County Airport
scf	Standard Cubic Feet
SF ₆	Sulfur Hexafluoride
SJC	San José Mineta International Airport
SJCE	San José Clean Energy
SJSU	San José State University
SUMC	Shared Use Mobility Center
USCP	U.S. Community Protocol for Accounting and Reporting of Greenhouse Gas Emissions
U.S. EPA	U.S. Environmental Protection Agency
VMT	Vehicle Miles Traveled
VTA	Santa Clara Valley Transportation Authority
Wastewater Facility	San José - Santa Clara Regional Wastewater Facility
WARM	EPA Waste Reduction Model
ZWED	Zero Waste Energy Development

Executive Summary

The City of San José (“City”) recognizes that greenhouse gas (GHG) emissions from human activity are catalyzing profound climate change, the consequences of which pose substantial risks to the future health, wellbeing, and prosperity of our community. Furthermore, acting quickly to reduce community GHG emissions can have many local benefits, such as reducing energy and transportation costs for residents and businesses, creating green jobs, improving the health of residents, and making the community a more attractive place to live and locate a business.

Since 2018, the City has been a leader among local governments in addressing the sources of climate change and adapting to its consequences. San José has been recognized internationally for its climate achievements, earning the Climate Registry’s Climate Leadership Award, a spot on CDP’s Cities A-List in 2023, and both the Mitigation and Adaptation badges from the Global Covenant of Mayors for Climate and Energy.

The City’s goals for reducing GHG emissions are laid out in the Climate Smart San José plan (“Climate Smart”) and more recent Pathway to Carbon Neutrality by 2030, which also contain strategies to guide the City in reducing communitywide GHG emissions by 2030. Both Climate Smart and the Pathway to Carbon Neutrality by 2030 lay out the City’s goals for reducing GHG emissions to meet and exceed the goals of the Paris Agreement. In alignment with these goals, the City has pursued a number of major initiatives to mitigate climate change and its impacts. These initiatives include (but are not limited to):

- 2018 - Approved the largest single jurisdiction community choice aggregation program to purchase cleaner power for the community
- 2019 - Adopted a building reach code incentivizing all-electric new construction, the largest city in California to do so
- 2020 - Prohibited natural gas infrastructure in all new construction with minimal exceptions
- 2022 - Removed minimum parking requirements for new developments

This report provides estimates of GHG emissions resulting from activities in San José as a whole in 2023. This GHG inventory, along with San José’s previously conducted 2008, 2014, 2017, 2019 and 2021 inventories, provide a benchmark for San José’s progress towards its carbon neutrality goal. This will help the City to evaluate the impact of its initiatives and programs, and to prioritize areas for new action or revision to existing climate action.

Key Findings: Total Emissions

Figure 1 shows San José's 2023 communitywide emissions by sector, totaling 5,045,659 MT CO₂e. This is almost equal to the gross emissions in 2021 - just 0.2% higher. The largest contributor is Transportation at 2,584,263 MT CO₂e (51%). The next largest contributors are Natural Gas with 1,057,228 MT CO₂e (21%) and Process & Fugitive Emissions at 608,304 MT CO₂e (12%). Actions to reduce emissions in all of these sectors will be a key part of a climate action plan. Solid Waste's 389,385 MT CO₂e (8%) and Electricity's 386,029 MT CO₂e (8%) also accounted for a significant portion of total emissions. Water & Wastewater and Non-utility Fuels made up the remaining 20,450 MT CO₂e (<1%).

Sequestration by forests & trees totaled 79,597 MT CO₂e, leading to net emissions of 4,966,062 MT CO₂e. With sequestration accounted for, emissions remain 0.2% higher in 2023 when compared to 2021.

The **Community Emissions Inventory Results** section of this report provides a detailed profile of emissions sources within San José - information that is key to guiding local reduction efforts. These data will also provide a baseline against which the city will be able to compare future performance and demonstrate progress in reducing emissions.

EMISSIONS AT A GLANCE

1 Transportation
51%

2 Natural Gas
21%

3 Process & Fugitive
12%

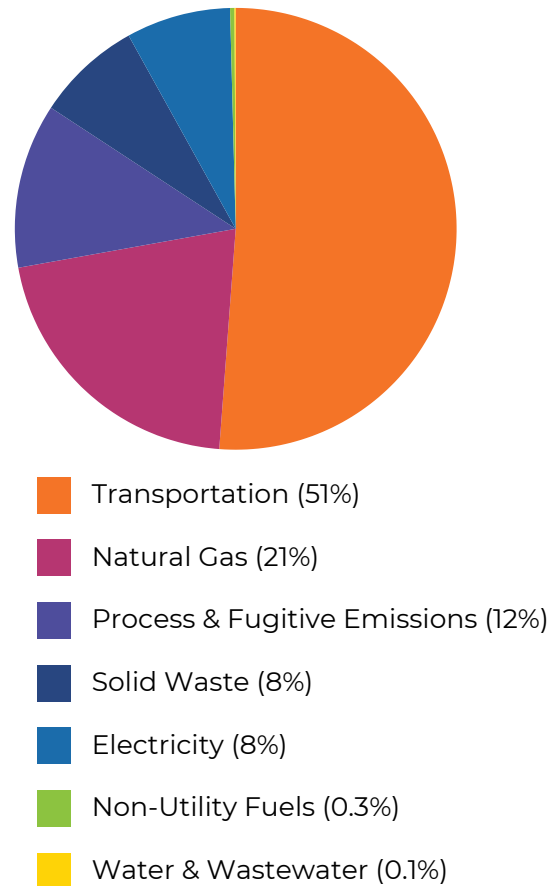


Figure 1: Communitywide Emissions by Sector

Introduction to Climate Change

Naturally occurring gases dispersed in the atmosphere are a major determinant in the Earth's climate by trapping solar radiation. This phenomenon is known as the greenhouse effect. Overwhelming evidence shows that human activities are increasing the atmospheric concentration of greenhouse gases 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 GHGs 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. Although the natural greenhouse effect is needed to keep the earth warm, a human-enhanced greenhouse effect with the rapid accumulation of GHGs in the atmosphere leads to too much heat and radiation being trapped. Globally, each of the last 10 years were individually the ten warmest years on record, with 2024 setting a new record [1]. The Intergovernmental Panel on Climate Change (IPCC) 6th Assessment Report confirms that human activities have unequivocally caused an increase in carbon emissions [2]. Many regions are already experiencing the consequences of global climate change, and San José is no exception.



[1] World Meteorological Organization. 2025. State of the Global Climate 2024. Retrieved from <https://wmo.int/news/media-centre/wmo-report-documents-spiralling-weather-and-climate-impacts#:~:text=In%20addition%20to%202024%20setting,the%20start%20of%20the%20year>

[2] IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

San José is expected to face multiple impacts of climate change over the coming decades, including more frequent and extreme heat events, water shortages and wildfires, as well as the disruption of ecosystems, habitats, and agricultural activities. In combination with factors such as housing affordability, these impacts are expected to increasingly affect migration patterns and contribute to the displacement of residents.

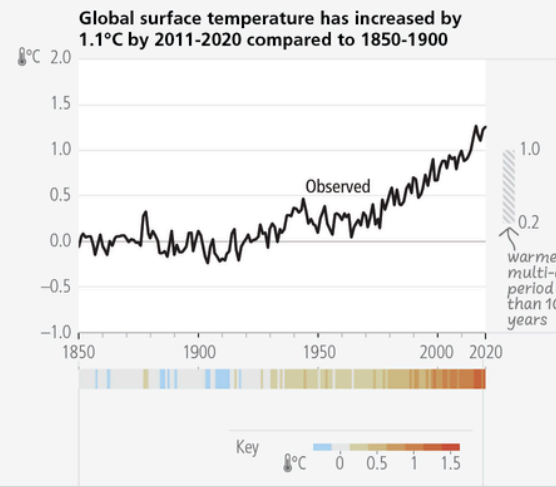
Over the past 120 years, California has become increasingly dry. In the Bay Area, annual rainfall is expected to decrease by 1 to 3 inches by 2050, and by 4 to 5 inches by 2090. The increasingly arid nature of California sparked two of the most destructive fires in state history in 2025: the Palisades and Eaton fires. These fires rampaged deep into the urban Los Angeles area, damaging billions of dollars of homes, infrastructure, and businesses. Though these wildfires struck further south, the Bay Area also faces vulnerabilities to such destruction, seeing 500 over the past 60 years [3]. The frequency of these fire events will only increase as climate change continues to foster the conditions suitable for their spread.

The increasing severity and longevity of drought has resulted in San José and other communities throughout the region imposing limits on water consumption. Limited availability of this precious resource could also reduce hydropower, which fuels low-carbon generation from our electricity providers.

In addition to the climate change impacts outlined above, San José and many other California coastal communities are threatened by sea level rise and its consequences. Sea levels on the California coast are projected to rise by 0.8 – 1.3 feet by 2050 and 3.1 – 6.6 feet by 2100. Flooding from sea level rise will impact several highways, railways and hazardous facilities in low-lying areas in the San José area such as Alviso [4].

Flooding can also damage the water and wastewater treatment facilities that support our community, cause saltwater intrusion that may infiltrate drinking water supplies, and increase the frequency of tropical cyclones, which could bring more occurrences of high winds and precipitation that floods and damage homes and businesses within the San José community. This would most

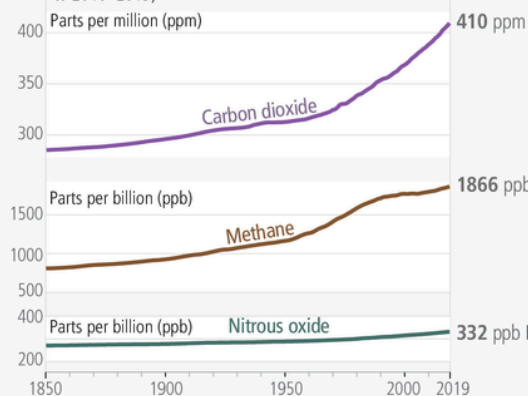
c) Changes in global surface temperature



b)

Increased concentrations of GHGs in the atmosphere

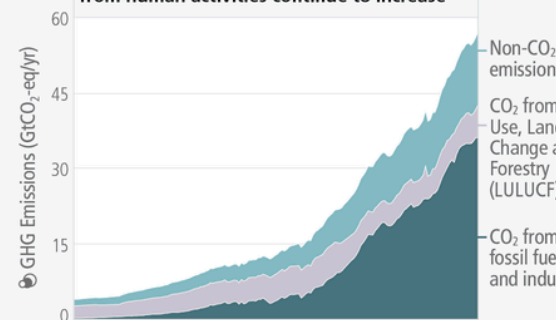
Concentrations of GHGs have increased rapidly since 1850
(scaled to match their assessed contributions to warming over 1850-1900 to 2010-2019)



a)

Increased emissions of greenhouse gases (GHGs)

Greenhouse gas (GHG) emissions resulting from human activities continue to increase



[3] Association of Bay Area Governments. Wildfire - Wildfire Risks and Resources. Retrieved from <https://abag.ca.gov/our-work/resilience/data-research/wildfire>

[4] U.S. Global Change Research Program. 2023. National Climate Assessment – Ch 28: Southwest. Retrieved from <https://nca2023.globalchange.gov/chapter/28/>

likely result in the displacement of residents that are directly impacted [5].

Many communities in the United States, including San José, have started to take responsibility for addressing climate change at the local level. Reducing fossil fuel use in the community can have many benefits in addition to reducing GHG emissions. More efficient use of energy decreases utility and transportation costs for residents and businesses. Retrofitting homes and businesses to be all-electric and more efficient creates local jobs. In addition, when residents save on energy costs, they are more likely to spend at local businesses and add to the local economy. Improving our active transportation and public transit infrastructure and densifying our city reduce the need to drive and reduce the distances of everyday trips, improving access to needed services and reducing the time spent sitting in traffic. Reducing fossil fuel use improves air quality, and increasing opportunities for walking and bicycling improves residents' health.

In order to address climate change and to achieve the benefits of reducing GHG emissions, communities must set science-based targets. [Science-Based Targets](#) are calculated climate goals, in line with the latest climate science, that represent a community's fair share of the global ambition necessary to meet the Paris Agreement commitment of keeping warming below 1.5°C [6]. To achieve this target, the IPCC has determined we must reduce global emissions by 50% by 2030 and reach climate neutrality by 2050. The City has established an aggressive target for San José that exceeds the global standard, intending to reduce emissions 100% by 2030.



[5] U.S. Global Change Research Program. 2023. National Climate Assessment - Ch 1: Overview. Retrieved from <https://nca2023.globalchange.gov/#overview>

[6] "Science Based Climate Targets: A Guide for Cities." Science Based Targets Network, November 4, 2021. <https://sciencebasedtargetsnetwork.org/>

Greenhouse Gas Inventory as a Step Toward Carbon Neutrality

Facing the climate crisis requires the concerted efforts of those that are closest to the communities directly dealing with the impacts of climate change, with local governments and their partners playing a crucial role.

Cities, towns and counties are well-placed to curate coherent and inclusive plans that address integrated climate action — climate change adaptation, resilience and mitigation. Existing targets and plans need to be regularly reviewed to bring in the necessary level of ambition and outline how to achieve the City's net-zero emissions goal by 2030. Creating a roadmap for carbon neutrality requires San José to identify priority sectors for action, while considering climate justice, inclusiveness, local job creation and other benefits of sustainable development.

To complete this inventory, the City utilized tools and guidelines from ICLEI - Local Governments for Sustainability (ICLEI). ICLEI provides authoritative direction for GHG emissions accounting and defines carbon neutrality as follows:

The targeted reduction of greenhouse gas (GHG) emissions and GHG avoidance in government operations and across the community in all sectors to an absolute net-zero emission level at the latest by 2050. In parallel to this, it is critical to adapt to climate change and enhance climate resilience across all sectors, in all systems and processes.

To achieve ambitious emissions reduction and move toward carbon neutrality, the City has set a clear goal and will need to continue to act rapidly following a holistic and integrated approach. Climate action is an opportunity for our community to experience a wide range of co-benefits sourced from meeting its goals, including core goals within the City's control (e.g. electrifying the fleet), partner-dependent goals that require coordination (e.g. improving public transit service), and aspiration goals with a broader impact (e.g. reducing VMT).

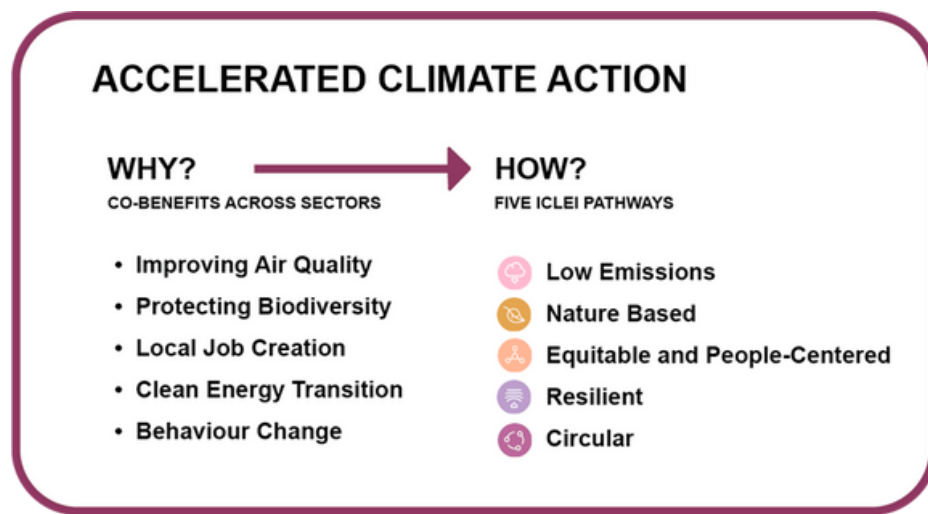


Figure 2: Co-Benefits and ICLEI Pathways to Accelerated Climate Action

ICLEI GreenClimateCities Framework

For this inventory, the City’s process is informed by ICLEI’s GreenClimateCities Framework for integrated climate action. The City follows the stepwise approach shown below in Figure 3, which involves collecting and analyzing climate data, action, implementation, leadership, and collaboration—always with an equity lens.

The Framework is organized into Analyze, Act, and Accelerate phases for communities pursuing integrated climate action. The Framework incorporates GHG emissions reductions, climate adaptation actions, and equitable, inclusive decision-making. San José’s 2023 inventory follows its 2021 inventory and supports the continued monitoring of emissions reduction progress under Climate Smart, serving as Step F in this cyclical process.

Over 600 U.S. communities have followed this basic Framework, previously known as ICLEI’s Five Milestones for Emissions Management, and today, it is represented through the streamlined Analyze-Act-Accelerate model shown below.

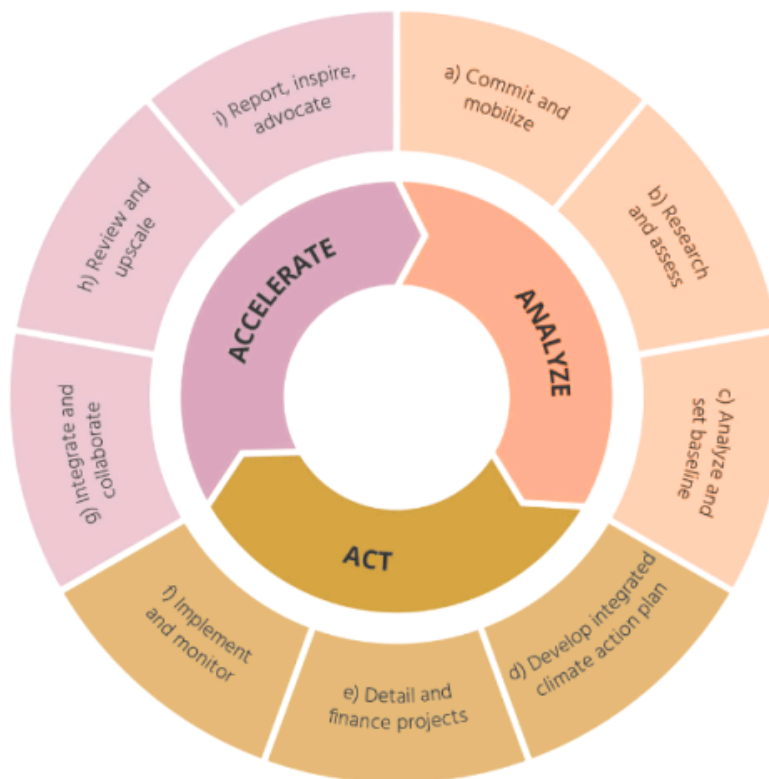


Figure 3: ICLEI GreenClimateCities Framework

Inventory Methodology

Understanding a Greenhouse Gas Emissions Inventory

The first step toward achieving tangible GHG emission reductions requires identifying baseline emissions levels and sources and activities generating emissions in the community. This report presents emissions from the San José community as a whole. This differs from a local government operations inventory, which focuses on activities that generate emissions under local government operational control. Government operation emissions are mostly a subset of the community inventory, as shown in Figure 4.

As local governments continue to join the climate protection movement, the need for a standardized approach to quantify GHG emissions has proven essential. This inventory adheres to the approach and methods provided by the U.S. Community Protocol for Accounting and Reporting GHG Emissions (USCP), Global Protocol for Community-scale Greenhouse Gas Inventories (GPC), and Common Reporting Format (CRF).



Figure 4: Relationship of Community and Government Operations Inventories

Three GHGs are included in this inventory: carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O). Many of the charts in this report represent emissions in “carbon dioxide equivalent” (CO₂e) values, calculated using the Global Warming Potentials (GWP) for methane and nitrous oxide from the IPCC 6th Assessment Report. GWP is a measure of how much heat a GHG traps in the atmosphere over a specific time period compared to carbon dioxide.

Table 1: Global Warming Potential Values (IPCC, 2021)

Greenhouse Gas	Global Warming Potential
Carbon Dioxide (CO ₂)	1
Methane (CH ₄) (Fossil Origin)	29.8
Methane (CH ₄) (Non-Fossil Origin)	27.2
Nitrous Oxide (N ₂ O)	273

Community Emissions Protocol

Version 1.2 of the U.S. Community Protocol for Accounting and Reporting GHG Emissions [7] was released by ICLEI in 2019, and represents a national standard in guidance to help U.S. local governments develop effective community GHG emissions inventories. It establishes reporting requirements for all community GHG emissions inventories, provides detailed accounting guidance for quantifying GHG emissions associated with a range of emission sources and community activities, and provides a number of optional reporting frameworks to help local governments customize their community GHG emissions inventory reports based on their local goals and capacities.

The community inventory in this report includes emissions from the five Basic Emissions Generating Activities required by the Community Protocol. These activities are:

- Use of electricity by the community
- Use of fuel in residential and commercial stationary combustion equipment
- On-road passenger and freight motor vehicle travel
- Use of energy in potable water and wastewater treatment and distribution
- Generation of solid waste by the community

The community inventory includes the following additional activities:

- Use of fuel in industrial stationary combustion equipment
- Public transit
- Off-road, rail, and water transportation and equipment use
- Aviation travel
- Biologic treatment of waste (composting)
- Wastewater treatment processes
- Hydrofluorocarbon and refrigerant emissions
- Fugitive emissions from natural gas distribution
- Electric power transmission and distribution losses

This community inventory also meets the requirements of the Global Protocol for Community-Scale Greenhouse Gas Inventories. Version 1.1 of the GPC [8] was released by a partnership of ICLEI, World Resources Institute, and C40 Cities Climate Leadership Group in 2019, and represents a robust framework for accounting for and reporting communitywide GHG emissions. The GPC Protocol offers two reporting levels: BASIC or BASIC+. The BASIC level covers scope 1 and scope 2 emissions from stationary energy and transportation, as well as scope 1 and scope 3 emissions from waste. Types of emission scopes are defined further in Table 2. BASIC+ involves more challenging data collection and calculation processes, and additionally includes emissions from IPPU and AFOLU and transboundary transportation. The community inventory in this report includes emissions required by the GPC Protocol BASIC sectors with limited BASIC+ sectors.

The activities included are as follows:

- All scope 1 emissions from stationary energy sources
- All scope 1 emissions from transportation sources
- All scope 1 emissions from waste sources (excluding imported waste)
- All scope 2 emissions from stationary energy and transportation sources
- Scope 3 emissions from the treatment of exported waste sources
- Scope 3 emissions from transportation sources

[7] ICLEI. 2019. US Community Protocol for Accounting and Reporting Greenhouse Gas Emissions. Retrieved from <http://www.icleiusa.org/tools/ghg-protocol/community-protocol>

[8] WRI, C40 Climate Cities Group, & ICLEI. 2014. Global Protocol for Communitywide Greenhouse Gas Inventories. Retrieved from <https://ghgprotocol.org/ghg-protocol-cities>

Table 2: Types of GPC Emissions

Emissions Type	Definition
Scope 1	Emissions produced directly by an activity such as CO ₂ emitted by a vehicle or N ₂ O produced at a wastewater plant.
Scope 2	Indirect emissions associated with electricity or heat generation.
Scope 3	Indirect emissions produced by local government operations.

Quantifying Greenhouse Gas Emissions

Sources and Activities

Communities contribute to GHG emissions in many ways. Two central categorizations of emissions are used in the community inventory: 1) GHG emissions that are produced by “sources” located within the community boundary, and 2) GHG emissions produced as a consequence of community “activities.”

Table 3: Source vs. Activity for Greenhouse Gas Emissions

Source	Activity
Any physical process inside the jurisdictional boundary that releases GHG emissions into the atmosphere.	The use of energy, materials, and/or services by members of the community that result in the creation of GHG emissions.

By reporting on both GHG emissions sources and activities, local governments can develop and promote a deeper understanding of GHG emissions associated with their communities. A purely source-based emissions inventory could be summed to estimate total emissions released within the community’s jurisdictional boundary. In contrast, a purely activity-based emissions inventory could provide perspective on the efficiency of the community, even when the associated emissions occur outside the jurisdictional boundary. The division of emissions into sources and activities per the USCP is used in combination with the scopes framework of the GPC protocol to provide a comprehensive overview of communitywide emissions.

Base Year

The inventory process requires the selection of a base year with which to compare current emissions. San José's community GHG emissions inventory utilizes 2008 as its baseline year because it is the baseline used for the development of Climate Smart. 2021 is the most recent year for which the necessary data are available, and therefore will also be used to compare current emissions and measure more recent progress.

Quantification Methods

GHG emissions can be quantified in two ways:

- Measurement-based methodologies refer to the direct measurement of GHG emissions (from a monitoring system) emitted from a flue of a power plant, wastewater treatment plant, landfill, or industrial facility.
- Calculation-based methodologies calculate emissions using activity data and emission factors. To calculate emissions accordingly, the basic equation below is used:

$$\text{Activity Data} \times \text{Emission Factor} = \text{Emissions}$$

Most emissions sources in this inventory are quantified using calculation-based methodologies. Activity data refers to the relevant measurement of energy use or other GHG-generating processes such as fuel consumption by fuel type, metered annual electricity consumption, and annual vehicle miles traveled. Please see the appendices for a detailed listing of the activity data used in composing this inventory.

Known emission factors are used to convert energy usage or other activity data into associated quantities of emissions. Emissions factors are usually expressed in terms of emissions per unit of activity data (e.g. lbs CO₂/kWh of electricity). For this inventory, calculations were mostly made using ICLEI's [ClearPath Climate Planner](#) tool, and in some cases were externally calculated. See Appendix: Methodology Details for details on calculation methods.



San José's Rosicrucian Museum has achieved Net Zero Carbon status through being fully powered by solar energy and adopting energy efficient technologies.

Community Emissions Inventory Results

Table 4: 2023 Communitywide Emissions

Sector	Fuel or Source	Activity	2023 Emissions (Mt CO ₂ e)	% of Sector Emissions
Buildings	Electricity	Residential	35,534	2.46%
		Commercial	37,144	2.57%
		Industrial	8,992	0.62%
		Direct Access	288,930	19.98%
		Transmission & Distribution Losses	15,204	1.05%
		Electricity Total	385,804	26.67%
	Natural Gas	Residential	614,944	42.52%
		Commercial + Industrial + Governmental	342,282	23.66%
		On-site Electric Generation	87,234	6.03%
		Natural Gas Total	1,044,460	72.21%
	Non-Utility Fuels	Liquid Propane Gas (Residential)	15,511	1.07%
		Kerosene (Residential)	251	0.02%
		Distillate Fuel Oil No. 2 (Residential)	121	0.01%
		Wood (Residential)	80	0.01%
		Distillate Fuel Oil No. 2 (Industrial)	8	0.001%
		Liquid Propane Gas (Industrial)	142	0.01%
		Non-Utility Fuels Total	16,113	1.11%
Buildings Total			1,446,377	100%
Transportation & Mobile Sources	On-Road	Private + Commercial	2,207,761	85.43%
	Off-Road	All Equipment	226,284	8.76%
	Aviation	Local Flights	5,084	0.20%
		Non-local Flights	102,599	3.97%

Table 4: 2023 Communitywide Emissions Inventory (Continued)

Sector	Fuel or Source	Activity	Emissions (Mt CO ₂ e)	% of Sector Emissions
Transportation & Mobile Sources	Public Transit	VTA Light Rail	581	0.02%
		Buses	27,598	1.07%
		Paratransit	3,081	0.12%
	Freight Rail	Biodiesel + Distillate Diesel + Renewable Diesel	7,944	0.31%
	Commuter Rail	Amtrak (Capitol Corridor)	260	0.01%
		Caltrain	2,601	0.10%
		Altamont Corridor Express (ACE)	470	0.02%
Transportation & Mobile Sources Total			2,584,263	100%
Solid Waste	Residential	Landfill	101,214	25.99%
		Recycling	Not Estimated*	N/A
		Composting	37,178	9.55%
	Commercial	Landfill	69,678	17.89%
		Recycling	Not Estimated*	N/A
		Composting	0	0.00%
		Anerobic Digestion	4,990	1.28%
	C&D	Landfill	176,325	45.28%
		Recycling	Not Estimated*	N/A
		Composting	0	0.00%
Solid Waste Total			389,385	100%
Wastewater	Energy**	Electricity	225	1.30%
		Natural Gas	12,768	73.68%
	Process Emissions	Nitrification/Denitrifica tion	2,319	13.38%
		Treated Effluent Discharge	2,018	11.64%
Wastewater Total			17,330	100%

*Recycling is a landfill diversion measure therefore emissions from recycling are not estimated.

**Wastewater - Energy emissions are included in the stationary energy sectors in ClearPath, but listed separate here to match previous inventory reports. Energy data comes from Cal e-GGRT.

Table 4: 2023 Communitywide Emissions Inventory

Sector	Fuel or Source	Activity	Emissions (Mt CO2e)	% of Sector Emissions
Process & Fugitive Emissions	Fugitive HFCS and PFCs	Residential	138,531	22.77%
		Commercial	260,596	42.84%
		Industrial	71,285	11.72%
		Transportation	99,245	16.32%
	Fugitive Natural Gas	All Sectors	33,482	5.50%
	Fugitive SF₆	All Sectors	5,165	0.85%
	Industrial Process Emissions	Electronics Manufacturing	0	0.00%
Process & Fugitive Emissions Total			608,304	100%
Total Gross Emissions			5,045,659	100%
Agriculture, Forestry, and Other Land Use	Trees Outside of Forests	Sequestration by Urban Trees	-64,061	N/A
	Forests	Sequestration by Undisturbed Forests	-15,652	N/A
		Sequestration by Newly Forested Lands	-3	N/A
		Emissions from Forest Disturbances (Insects, Fires, Harvests)	119	N/A
		Emissions from Forest Loss	0	N/A
		Agriculture, Forestry, and Other Land Use Total		
Total Emissions with Forests and Trees			4,966,062	100%

Key Findings: Transportation

As in previous years, Transportation & Mobile Sources was the largest contributor to emissions in San José, accounting for 2,584,263 MT CO₂e, which was a 7% increase from 2021. Figure 2 shows the breakdown of emissions by activity. The largest contributor is On-road Transportation (commercial and private vehicles) accounting for 86% of emissions. Emissions from on-road transportation increased by 6% compared to 2021 and for the first time since the City began conducting inventories.

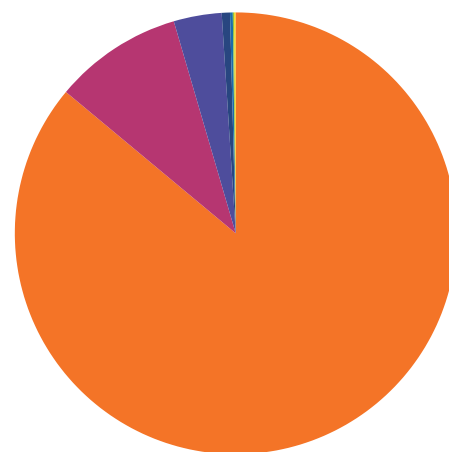
The next largest contributors are Off-road Transportation (9%) and Non-local Flights (4%). Off-road vehicles and equipment are numerous and varied, and emissions from them were mainly estimated using a county-level model created and maintained by CARB. Buses, Freight Trains, Local Flights, Commuter Trains, and Light Rail account for the remaining (1.3%) emissions. Overall, Transportation & Mobile Sources represent 51% of San José's communitywide emissions.

EMISSIONS AT A GLANCE

1 On-road
Transportation
86%

2 Off-road
Transportation
9%

3 Non-local
Flights
4%



On-road Transportation	(86%)
Off-road Transportation	(9%)
Aviation - Non-local Flights	(4%)
Buses	(0.6%)
Freight Trains	(0.2%)
Aviation - Local Flights	(0.1%)
Commuter Trains	(0.1%)
Light Rail	(0.01%)

Figure 5: Transportation Emissions by Activity

Key Findings: Buildings

Also consistent with previous years, Buildings (consisting of Residential, Commercial, and Industrial Energy, not including energy used at the wastewater facility) were the second largest contributor to emissions in San José, accounting for 1,446,377 MT CO₂e. This is a 12% decrease from 2021, mainly due to a significant (40%) decrease in emissions from electricity use. While the amount of electricity used in San José did slightly increase (by less than 1%) compared to 2021, emissions from electricity use have reduced significantly due to SJCE and PG&E providing much cleaner power.

Figure 3 shows the breakdown of emissions by activity. Total Natural Gas use accounted for 72% of overall Building emissions. The largest contributor is Residential Natural Gas with 43% of overall emissions. The next largest contributors are Commercial + Industrial Natural Gas (24%) and Industrial + Direct Access Electricity (21%). The remaining emissions (~13%) are made up of natural gas used for On-site Electricity Generation, Commercial Electricity, Residential Electricity, Residential Non-Utility Fuels, and Industrial Non-Utility Fuels.

EMISSIONS AT A GLANCE

- 1 Residential Natural Gas**
43%
- 2 Commercial Natural Gas**
24%
- 3 Industrial Electricity**
21%

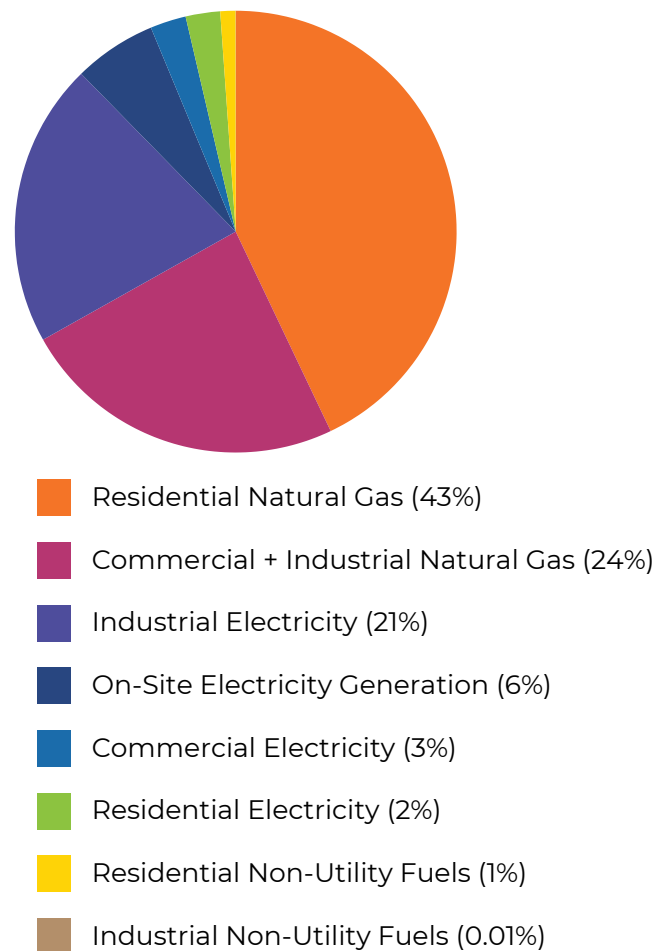


Figure 6: Building Emissions by Activity

Key Findings: Process & Fugitive Emissions

Process & Fugitive Emissions were the third largest contributor to San José's total emissions in 2023, accounting for 608,304 MT CO₂e. This was a 2% increase from 2021, where emissions were 595,559 MT CO₂e.

Per the U.S. Community Protocol, process emissions refer to "Emissions from physical or chemical processing rather than from fuel combustion. Examples include emissions from manufacturing cement, aluminum, adipic acid, ammonia, etc." Fugitive (leaked) emissions refer to the unintentional release of gases or vapors into the atmosphere from various processes, equipment, or infrastructure.

Of these, Fugitive HFCs and PFCs make up the majority of the emissions from this sector, representing 92%. These high-GWP gases were adopted internationally as replacements for ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons. HFCs and PFCs are frequently used in refrigeration and air-conditioning equipment and can leak during equipment use or during equipment disposal.

Fugitive Emissions from Natural Gas (7%) and SF₆ (1%) made up the remaining portion of emissions. Fugitive natural gas is released from natural gas pipes and distribution lines. Fugitive SF₆ is released from electricity transmission and distribution equipment such as circuit breakers and switchgears, where it is used as an insulator. There were no industrial process emissions from electronics manufacturing in 2023 and there have been no reported sources of industrial process emissions in San José since 2014.

EMISSIONS AT A GLANCE

1 Fugitive HFCs
and PFCs

92%

2 Fugitive
Natural Gas

7%

3 Fugitive SF₆

1%

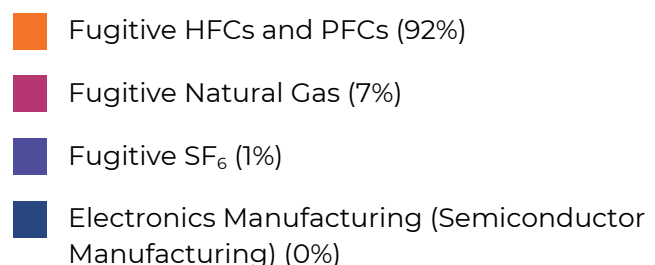
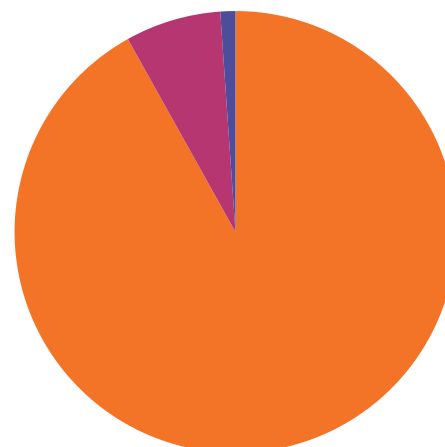


Figure 7: Process & Fugitive Emissions by Activity

Avoided Emissions

The below table shows estimates for San José's transportation-related avoided emissions in 2023. The following activities account for 275,081 MT CO₂e fewer emissions than would be expected if residents instead used on-road fossil fuel transportation.

Table 5: Avoided Emissions

Sector	Fuel or Source	Activity	Avoided Emissions (Mt CO ₂ e)
Transportation & Mobile Sources	Avoided Emissions	Electric Vehicles	130,276
		Carpool Commutes	61,604
		Public Transit Commutes	50,995
		Walking	22,806
		Biking (Not Including Bikeshare)	7,920
		Bikeshare	507
		Vanpool Commutes	541
		Scooters	432
Transportation & Mobile Sources Avoided Emissions Total			275,081

Comparison Discussion

The 2023 GHG emissions inventory measures San José's progress in reducing communitywide emissions, using the 2008, 2014, 2017, 2019, and 2021 inventories as reference points. After seeing steady progress since 2008, San José saw a slight increase in emissions between 2021 and 2023. Table 6 provides a full breakdown and comparison of emissions in each of San José's six communitywide inventories. Sectors that are included in the Climate Smart plan are highlighted in pink.

Table 6: San José Communitywide Emissions by Sector and Activity for All Years

Sector	Emissions (MT CO ₂ e)						% Change from 2008	% Change From 2021
	2008	2014	2017	2019	2021	2023		
Transportation	3,856,884	3,523,541	3,125,874	2,857,093	2,415,812	2,584,263	-33%	7%
On-road vehicles	3,451,004	3,172,509	2,747,265	2,463,769	2,076,057	2,207,761	-36%	6%
Off-road vehicles	224,439	211,574	220,378	222,817	223,468	226,284	1%	1%
Buses and paratransit	26,884	22,263	23,113	21,871	14,903	30,679	14%	106%

Table 6: San José Communitywide Emissions by Sector and Activity for All Years (Continued)

Sector	Emissions (MT CO ₂ e)						% Change from 2008	% Change From 2021
	2008	2014	2017	2019	2021*	2023		
Aviation - non-local flights	121,725	96,437	120,905	134,856	85,168	102,599	-16%	20%
Aviation - local flights	12,767	4,871	4,570	3,818	6,269	5,084	-60%	-19%
Freight rail	12,450	9,206	4,819	5,730	6,503	7,944	-36%	22%
Commuter rail	4,048	4,049	4,085	3,790	2,885	3,331	-18%	15%
Light rail	3,566	2,633	737	440	559	581	-84%	4%
Buildings	3,099,053	2,274,873	1,788,153	1,712,149	1,646,499	1,446,377	-53%	-12%
Natural gas	1,060,660	897,230	990,544	1,046,701	991,658	1,044,460	-2%	5%
Electricity	2,022,068	1,367,353	783,991	649,299	638,410	385,804	-81%	-40%
Other residential fuels	16,325	10,290	13,618	16,149	16,279	16,113	-1%	-1%
Process and Fugitive	392,161	558,164	605,548	594,282	595,559	608,304	55%	2%
Fugitive HFCs and PFCs	281,122	477,254	556,030	544,426	547,142	569,657	103%	4%
Fugitive natural gas	47,831	40,053	44,138	44,853	42,041	33,482	-30%	-20%
Fugitive SF6	8,231	5,005	5,380	5,003	6,375	5,165	-37%	-19%
Solid Waste	311,659	261,148	339,755	317,170	358,881	389,385	25%	8%
Residential	141,884	130,568	117,283	109,440	119,008	138,392	-2%	16%
C&D/other	99,718	83,021	163,285	146,345	169,318	176,325	77%	4%
Commercial	70,057	47,560	59,186	61,385	70,555	74,668	7%	6%
Wastewater Treatment	21,271	25,865	23,039	22,304	20,166	17,330	-19%	-14%
Total emissions	7,681,028	6,643,591	5,882,368	5,502,998	5,036,766	5,045,659	-34%	0.2%
Forests and Trees	-79,818	-73,846	-70,647	-80,038	-78,540	-79,597	0.3%	-1%
Net emissions	7,601,209	6,569,746	5,811,721	5,422,959	4,958,377	4,958,937	-35%	0.2%

*2021 inventory data was revised for the 2023 project, updating proxy data with year-specific activity data and emissions. These updates resulted in a roughly 1.6% increase in 2021 emissions.

Below, notable changes in each sector between 2021 and 2023 are discussed.

Transportation

Overall, transportation emissions rose by 7% from 2021 to 2023, primarily contributed to by additional on-road travel and more non-local flights. Emissions increased in all transportation activities except for local flights. It can be theorized that 2021's transportation emissions were impacted by COVID-19, contributing to fewer San José residents leaving their homes, avoidance of higher density travel like transit, rail, and aviation, and lower commercial activity to drive freight rail. The increase in emissions likely reflects a return to typical activity levels, driven by a rise in vehicle miles traveled (VMT) as residents resumed pre-pandemic travel, often commuting longer distances from more affordable, distant areas. This trend is further compounded by persistently low public transit use.

Buildings

Building emissions decreased by 12% from 2021 to 2023, driven mostly by reductions in electricity emissions, which were reduced by 40%. This was due to the electricity supply being much cleaner in 2023, as overall electricity consumption was almost the same between the two years. Natural gas emissions rose a small amount (5%), however, it's worth noting that emissions from natural gas used specifically for on-site electricity generation (e.g. fuel cells) rose by nearly 12%. Due to data privacy laws, commercial and industrial natural gas usage are combined, so it currently isn't possible to analyze trends separately for those two sectors.

Process & Fugitive Emissions

Process & fugitive emissions grew only 2% from 2021-2023, mainly from HFCs and PFCs. Natural gas and SF6 fugitive emissions fell, in contrast, by nearly 20% each - potentially due to less leakage in distribution. Emissions estimates for this subsector are scaled down from statewide estimates, and so more research would be needed to confirm if emissions from this subsector truly increased in San José in recent years, and if so, why. For background on the sources of these emissions, refer to [Key Findings: Process & Fugitive Emissions](#).

Solid Waste

Overall, solid waste emissions increased by 8%. Based on tonnage alone, San José generated roughly 3% more waste in 2023 than 2021; however, the amount of recycled waste decreased while the amount of landfilled and composted waste increased. This contributed to the disproportionately higher increase in emissions as more paper, food, yard, and lumber material ended up decomposing in landfills or through compost. Emissions in the residential sector increased by 16% from 2021 levels - the largest increase among the 3 sectors. The increase in this sector likely reflects the gradual economic recovery from the pandemic and increased consumer spending which may have resulted in heightened waste disposal. The amount of commercial organic waste sent to anaerobic digestion more than doubled, which could be attributed to more businesses generating waste compared to 2021.

Wastewater Treatment

Wastewater emissions were roughly 14% lower in 2023. Both electricity and natural gas use were lower in 2023 (by 9% and 12% respectively), possibly due to recently implemented energy efficiency projects. Because SJCE now provides much cleaner energy, emissions from energy use took an even greater dip and were roughly 17% lower. Emissions from effluent and nitrification/denitrification were nearly the same among the two years.

Projections and Current Progress

When considering only sectors that are addressed under Climate Smart (shaded in pink in Table 6), **overall emissions are in line with Climate Smart Plan Pathway goals despite a slight increase in emissions since 2021.** The Climate Smart Plan Pathway goal for 2023 is 5 million MT CO₂e. San José's 2023 net emissions are just slightly under this goal. This indicates that the progress San José has made related to each Climate Smart strategy is effectively mitigating communitywide emissions and keeping us on track. Most strategies target stationary energy and transportation, which is represented in Table 6 with these sectors and activities serve as the largest contributors to the City outpacing the Pathway projection.

In 2021, the City adopted a carbon neutrality by 2030 goal to accelerate the goals of the Climate Smart plan. The carbon neutrality definition under Resolution 80284 does not encompass process and fugitive emissions, therefore carbon neutrality in this report refers to net zero emissions in all other sectors. To stay on track for meeting this goal, San José must have achieve a more aggressive target of 4.4 million MT CO₂e in 2023. However, San José's net emissions were 0.6 million MT CO₂e higher. San José will need to upscale its current efforts and/or develop new strategies and actions to meet the reductions required by this pathway.

Figure 8* compares the Climate Smart plan pathway, the Carbon Neutral by 2030 pathway, and San José's progress so far.

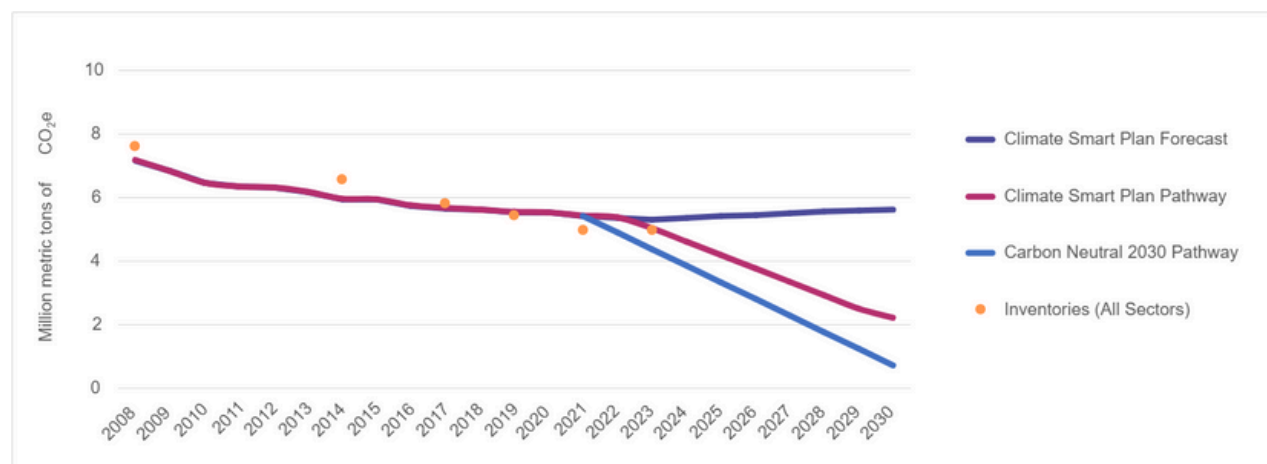


Figure 8: Climate Smart San José Emissions Projections and Current Progress

*Figure 8 represents emissions covering all sectors included under San José's greenhouse gas inventories and uses data from a new climate model (2025) that was developed for the upcoming Climate Smart Plan update. The Carbon Neutral 2030 Pathway line ends above 0 because the definition of carbon neutrality under Resolution 80284 does not include process & fugitive emissions. The model used to develop the Climate Smart Plan Forecast standardized transportation data across all years, resulting in slight discrepancies between the forecast line and the inventory dots. Emissions from forest and trees are not included in the data that was used to create the graph, but forecasted avoided emissions from Natural and Working Lands strategies are included.

Conclusion

This 2023 GHG emissions inventory measures San José's progress in reducing communitywide emissions, using inventories for 2008 through 2021 as reference points. From 2008 – 2021, communitywide emissions steadily decreased. The 2023 inventory results show us that for the first time in years our total emissions have plateaued, and many individual sectors have increased (see Figure 9.) While electricity emissions continue to decrease due to a cleaner electricity supply, natural gas emissions have slightly increased. Transportation emissions increased for the first time since the 2008 inventory, driven by rising on-road vehicle emissions and low public transit use. This underscores the ongoing challenge of reducing transportation-related GHGs, especially as high housing costs contribute to urban sprawl and longer car-dependent commutes.

The City of San José has already taken several important steps to reduce major sources of communitywide emissions, including establishing SJCE, adopting a Reach Code and Natural Gas Prohibition Ordinance, and developing programs to support EV adoption, transportation mode shift, and building electrification. This inventory shows the impacts of some of these actions, but also shows that more work remains. In particular, it supports a continued focus on EV adoption, transportation mode shift, and building electrification. In addition, further emissions reductions are likely to get more difficult over time, as easy changes are usually made first.

Recognizing the need for immediate and accelerated action, the City is updating Climate Smart, which will incorporate the more ambitious goals set in the Pathway to Carbon Neutrality by 2030. The City will continue to track progress towards its Climate Smart and carbon neutrality goals by regularly conducting communitywide inventories and tracking additional sustainability indicators via the Climate Smart Data Dashboard.

There is much to be gained by continuing the City of San José's efforts to reduce GHG emissions. In addition to the emissions reductions themselves, emissions reductions programs bring additional benefits including improved resident safety, health, economic stability, and quality of life. By continuing to implement the Climate Smart plan, the City can keep working towards a thriving future San José with walkable and transit-rich climate smart communities providing residents with comfortable homes, local jobs, access to nature, and protection from environmental hazards such as flooding and heat.

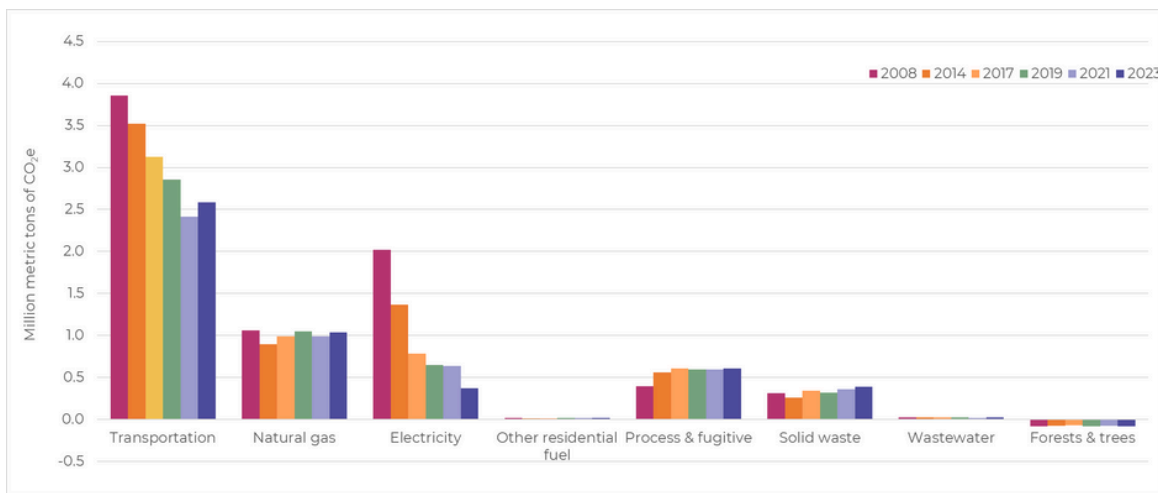


Figure 9: Comparison of Communitywide GHG Emissions from Each Sector over All Inventory Years

Appendix: Methodology Details

Buildings - Electricity

Table 7: Building Electricity Methodology

		2023	Scale	Units	Source
Activity Data	PG&E				
	Residential	64,124,944	Citywide	kWh	PG&E
	Commercial	119,574,984	Citywide	kWh	PG&E
	Industrial	492,791,705	Citywide	kWh	PG&E
	Direct Access	1,453,799,480	Citywide	kWh	PG&E
	Total	2,130,291,113	Citywide	kWh	Calculated
	SJCE				
	Residential - Total Green	5,866,343	Citywide	kWh	SJCE
	Residential - Green Source	1,551,410,832	Citywide	kWh	SJCE
	Residential - Solar Access	5,245,394	Citywide	kWh	SJCE
	Commercial - Total Green	85,651,358	Citywide	kWh	SJCE
	Commercial - Green Source	1,626,216,741	Citywide	kWh	SJCE
	Industrial - Total Green	53,167,227	Citywide	kWh	SJCE
	Industrial - Green Source	271,012,393	Citywide	kWh	SJCE
	Total	3,598,570,288	Citywide	kWh	Calculated
	Total (PG&E + SJCE)	5,728,861,401	Citywide	kWh	Calculated
	Transmission & Distribution Losses				
		4.10%	Regional	Percent	eGRID
Emission Factors	PG&E Base Plan	12	Regional	lbs CO ₂ e / MWh	Power Content Label
	SJCE Total Green	0	Regional	lbs CO ₂ e / MWh	Power Content Label
	SJCE Green Source	50	Regional	lbs CO ₂ e / MWh	Power Content Label

Table 7: Building Electricity Methodology (Continued)

		2023	Scale	Units	Source
Emission Factors	SJCE Solar Access	0	Regional	lbs CO2e / MWh	Power Content Label

Activity data for San José were received from PG&E in a Community Inventory report, which provides aggregated data on electricity use by sector. Activity data were also received from SJCE, which also provides aggregated electricity use by sector and electricity rate program. PG&E reports electricity supplied by SJCE as part of the direct access sector, and so the total amount of electricity supplied by SJCE was subtracted from the direct access usage reported by PG&E to calculate electricity use by direct access customers.

Due to California's 15/15 Aggregated Data Access Rule, commercial non-government data failed to meet aggregation rules in the report provided by PG&E. In order to ensure commercial non-government consumption was represented, 2021 data was used as a proxy. Likewise, industrial non-government data failed to meet aggregation rules and was dropped from the report. In 2021, the same non-government category was also dropped, but county and total consumption were provided. County use was subtracted from total industrial use, which was then used as a proxy for 2021 non-government data. Calculations were computed according to U.S. Community Protocol Method BE.2.1.

Santa Clara Valley Transportation Authority, which provides transit services to the San José area, maintains various forms of electric transportation, including light rail and transit buses. Fuel use (kWh) for these emissions activities was reported independent of stationary energy data, as this is considered to be electricity consumed in operation. Any electricity consumed as a result of charging is accounted for by Commercial Energy.

Transmission and distribution losses represent electricity lost when transporting energy from generation plants to consumers, and are accounted for for all electricity providers in the San José boundary. Utility-specific rates of loss were not reported by both PG&E and SJCE, so a default eGrid rate of 4.10% for the Western region was utilized.

Buildings - Natural Gas

Table 8: Building Natural Gas Methodology

		2023	Scale	Units	Source
Activity Data	Residential	115,627,328	Citywide	therms	PG&E
	Commercial	63,955,689	Citywide	therms	PG&E
	Industrial	2,809,889	Citywide	therms	PG&E
Emissions Data	SJSU Cogeneration - CO ₂ e	27,313	Facility	MT	CARB MRR
	Equinix Great Oaks Bloom Energy Servers - CO ₂ e	46,811	Facility	MT	CARB MRR

Table 8: Building Natural Gas Methodology (Continued)

		2023	Scale	Units	Source
Emissions Data	Equinix Lundy Bloom Energy Servers - CO ₂ e	13,110	Facility	MT	CARB MRR
Emission Factors	Natural Gas - CO ₂	53.02	National	kg / MMBtu	USCP
	Natural Gas - CH ₄ (Residential + Commercial)	0.005	National	kg / MMBtu	USCP
	Natural Gas - CH ₄ (Industrial)	0.001	National	kg / MMBtu	USCP
	Natural Gas - N ₂ O	0.0001	National	kg / MMBtu	USCP

Activity data for San José were received from PG&E in a Community Inventory report, which provides aggregated data on natural gas use by sector. All data provided by PG&E met aggregation rules. Natural gas was computed according to U.S. Community Protocol Method BE.1.1. Fuel use was estimated from CO₂ emissions and the CO₂ emission factor for natural gas use at facilities reporting emissions to CARB MRR.

As of 2020, PG&E does not include natural gas used to generate electricity in the Community Inventory reports it supplies to municipalities. Emissions data for on-site electricity generation facilities in San José were taken from the CARB Mandatory GHG Reporting website (CARB MRR; <https://ww2.arb.ca.gov/mrr-data>).

Buildings - Non-utility Fuels

Table 9: Building Non-utility Fuel Methodology

		2023	Scale	Units	Source
Emissions Data	Distillate Fuel Oil No. 2 (Residential) - CO ₂	121	Statewide	MT	CARB GHG Inventory
	Distillate Fuel Oil No. 2 (Residential) - CH ₄	0.0006	Statewide	MT	CARB GHG Inventory
	Distillate Fuel Oil No. 2 (Residential) - N ₂ O	0.0003	Statewide	MT	CARB GHG Inventory
	Biodiesel (Residential) - Biogenic CO ₂	4	Statewide	MT	CARB GHG Inventory
	Biodiesel (Residential) - CH ₄	0.00007	Statewide	MT	CARB GHG Inventory
	Biodiesel (Residential) - N ₂ O	0.000007	Statewide	MT	CARB GHG Inventory
	Renewable Diesel (Residential) - Biogenic CO ₂	24	Statewide	MT	CARB GHG Inventory

Table 9: Building Non-utility Fuel Methodology (Continued)

		2023	Scale	Units	Source
Emissions Data	Renewable Diesel (Residential) - CH ₄	0.0003	Statewide	MT	CARB GHG Inventory
	Renewable Diesel (Residential) - N ₂ O	0.00003	Statewide	MT	CARB GHG Inventory
	Kerosene (Residential) - CO ₂	0.2	Statewide	MT	CARB GHG Inventory
	Kerosene (Residential) - CH ₄	9	Statewide	MT	CARB GHG Inventory
	Kerosene (Residential) - N ₂ O	0.002	Statewide	MT	CARB GHG Inventory
	LPG (Residential) - CO ₂	15,451	Statewide	MT	CARB GHG Inventory
	LPG (Residential) - CH ₄	0.7	Statewide	MT	CARB GHG Inventory
	LPG (Residential) - N ₂ O	0.1	Statewide	MT	CARB GHG Inventory
	Wood (Residential) - CH ₄	1	Statewide	MT	CARB GHG Inventory
	Wood (Residential) - N ₂ O	0.2	Statewide	MT	CARB GHG Inventory
	Distillate Fuel Oil No. 2 (Industrial) - CO ₂	8	Facility	MT	EPA FLIGHT
	Propane Gas (Industrial) - CO ₂	142	Facility	MT	EPA FLIGHT
Scaling Factors	CA Households				
	Bottled, tank, or LP gas	468,722	Statewide	Households	American Community Survey
	Fuel oil, kerosene, etc.	29,683	Statewide	Households	American Community Survey
	Wood	176,013	Statewide	Households	American Community Survey
	San José Households				
	Bottled, tank, or LP gas	5,248	Citywide	Households	American Community Survey
	Fuel oil, kerosene, etc.	219	Citywide	Households	American Community Survey
	Wood	337	Citywide	Households	American Community Survey

All emissions generated from household fuel use of non-utility fuels were gathered from CARB's current California GHG Emission Inventory Data. This inventory reflects California's emissions as of 2022, which are used as a proxy for 2023. Emissions were

originally calculated using AR4 GWPs, and were updated to reflect AR6 GWPs. Emissions were then downscaled to San José by house heating fuel household counts per the American Community Survey. Fuel use was estimated using CO₂ emissions and CO₂ emission factors.

Industrial non-utility fuels were collected from EPA FLIGHT reports. This energy represents fuels in use in machinery and other equipment at major industrial facilities in the community. Motor gasoline, though reported, was not accounted for as there is a risk of double counting with gasoline off-road equipment.

Transportation - On-road

Table 10: On-road Transportation Methodology

		2023	Scale	Units	Source
Activity Data	On-road Transportation	4,983,222,817	Citywide	VMT	Google EIE
Emissions Data	On-road Transportation - CO ₂ e	2,207,761	Citywide	MT	Google EIE

Google EIE has been used to account for the City's VMT from 2019 onwards. Prior to the switch, San José used its own VMT model, though an alternate data source was necessitated by the lack of data validation after 2015. This data uses the origin-destination model and is GPC compliant. This VMT represents 100% of all in-boundary transportation and 50% cross-boundary transportation (Inbound & Outbound). This data is assumed to include all types of on-road fuels, as well as motorcycles, passenger vehicles, light trucks, and heavy trucks.

Google EIE VMT data represents on-road transportation after sources of avoided emissions have interacted with the data. Walking and biking (no bikeshare) are already represented in the EIE methodology, and are reported as is. In addition to those alternate modes of travel, San José also sees residents utilize several other modes unaccounted for in EIE, including electric vehicles, carpool, vanpool, public transit commutes, scooters, and bikeshare. The reduced emissions from these activities were calculated using the Shared-Use Mobility Center's Shared Mobility Benefits Calculator, as with past emissions accounting. Updated scooter and bikeshare counts were provided by the City, and EVs collected from the City's dashboard, while other modes maintained values used in previous inventories.

Transportation - Off-road

Table 11: Off-road Transportation Methodology

		2023	Scale	Units	Source
Activity Data	CARB Off-Road Emissions Inventory v1.1.0 (CARB OFFROAD)				
	Agriculture - Gasoline	4,723	Countywide	Gallons	CARB OFFROAD

Table 11: Off-road Transportation Methodology (Continued)

		2023	Scale	Units	Source
Activity Data	Agriculture - Diesel	156,472	Countywide	Gallons	CARB OFFROAD
	Commercial Harbor - Diesel	113,117	Countywide	Gallons	CARB OFFROAD
	Construction - Gasoline	232,049	Countywide	Gallons	CARB OFFROAD
	Construction - Diesel	3,160,772	Countywide	Gallons	CARB OFFROAD
	Forestry - Diesel	1,948	Countywide	Gallons	CARB OFFROAD
	Industrial - Gasoline	3,114,238	Countywide	Gallons	CARB OFFROAD
	Industrial - Diesel	1,030,584	Countywide	Gallons	CARB OFFROAD
	Industrial - CNG	5,564,439	Countywide	GGE	CARB OFFROAD
	Lawn and Garden - Gasoline	2,625,392	Countywide	Gallons	CARB OFFROAD
	Lawn and Garden - Diesel	49,180	Countywide	Gallons	CARB OFFROAD
	Light Commercial - Gasoline	3,342,749	Countywide	Gallons	CARB OFFROAD
	Light Commercial - Diesel	382,063	Countywide	Gallons	CARB OFFROAD
	Light Commercial - CNG	393,480	Countywide	GGE	CARB OFFROAD
	Pleasure Craft - Gasoline	251,199	Countywide	Gallons	CARB OFFROAD
	Portable Equipment - Diesel	3,706,420	Countywide	Gallons	CARB OFFROAD
	Recreational - Gasoline	64,749	Countywide	Gallons	CARB OFFROAD
	Transport Refrigeration - Diesel	1,273,942	Countywide	Gallons	CARB OFFROAD
	San José Mineta International Airport				
	Aviation - Gasoline	34,354	Facility	Gallons	SJC / Public Works
	Aviation - Diesel	13,351	Facility	Gallons	SJC / Public Works
Scaling Factors	Santa Clara County				
	Agriculture, Forestry, Fishing & Hunting	2,463	Countywide	Jobs	OnTheMap
	Construction	52,167	Countywide	Jobs	OnTheMap
	Manufacturing	170,116	Countywide	Jobs	OnTheMap
	Wholesale Trade	32,409	Countywide	Jobs	OnTheMap

Table 11: Off-road Transportation Methodology (Continued)

		2023	Scale	Units	Source
Scaling Factors	Retail Trade	73,309	Countywide	Jobs	OnTheMap
	Transportation & Warehousing	18,590	Countywide	Jobs	OnTheMap
	Arts, Entertainment, & Recreation	17,185	Countywide	Jobs	OnTheMap
	Total Jobs	1,123,624	Countywide	Jobs	OnTheMap
	Population	1,902,799	Countywide	People	CA Dept. of Finance
	San José				
	Agriculture, Forestry, Fishing & Hunting	317	Citywide	Jobs	OnTheMap
	Construction	28,257	Citywide	Jobs	OnTheMap
	Manufacturing	53,013	Citywide	Jobs	OnTheMap
	Wholesale Trade	13,503	Citywide	Jobs	OnTheMap
	Retail Trade	39,645	Citywide	Jobs	OnTheMap
	Transportation & Warehousing	10,914	Citywide	Jobs	OnTheMap
	Arts, Entertainment, & Recreation	8,589	Citywide	Jobs	OnTheMap
	Total Jobs	449,805	Citywide	Jobs	OnTheMap
	Population	970,772	Citywide	People	CA Dept. of Finance
Emission Factors	Transportation Fuel				
	Gasoline - CO ₂	8.78	National	kg / gal	USCP
	Diesel - CO ₂	10.21	National	kg / gal	USCP
	CNG - CO ₂	0.054	National	kg / scf	USCP
	Airport Ground Support Vehicles				
	Gasoline - CH ₄	0.5	National	g / gal	USCP
	Diesel - CH ₄	0.58	National	g / gal	USCP
	Gasoline - N ₂ O	0.22	National	g / gal	USCP
	Diesel - N ₂ O	0.26	National	g / gal	USCP

Fuel consumption for Santa Clara County off-road vehicles and equipment was collected using CARB's OFFROAD model. Using the U.S. Census Bureau OnTheMap tool, job counts were obtained for each NAICS sector for Santa Clara County and San José, and used to downscale the fuels per CARB vehicle category that most closely aligned with

the NAICS sector provided by OnTheMap. Exceptions include the grouping together of wholesale trade, retail trade, and transportation & warehousing to downscale light commercial and transportation refrigeration and using total jobs to downscale portable equipment. For off-road vehicles and equipment associated with ownership by the general populace (pleasure craft, lawn and garden), total population from the California Department of Finance was used for the scaling factor.

Transportation - Aviation

Table 12: Aviation Transportation Methodology

		2023	Scale	Units	Source
Activity Data	Local Aviation Gasoline - RHV	169,653	Facility	Gallons	RHV
	Non-local Aviation Gasoline - RHV	97,111	Facility	Gallons	RHV
	Local Jet Kerosene - RHV	16,559	Facility	Gallons	RHV
	Non-local Jet Kerosene - RHV	9,479	Facility	Gallons	RHV
	Local Flights CO ₂ - SJC	3,507	Facility	MT	SJC
	Non-local Flights CO ₂ - SJC	101,696	Facility	MT	SJC
Scaling Factors	2021 Local Flights - RHV	85,913	Facility	Flights	FAA OPSNET
	2021 Non-local Flights RHV	57,765	Facility	Flights	FAA OPSNET
	2023 Local Flights - RHV	102,801	Facility	Flights	FAA OPSNET
	2023 Non-local Flights RHV	58,844	Facility	Flights	FAA OPSNET
	Local Flights - SJC	4,658	Facility	Flights	FAA OPSNET
	Non-local Flights - SJC	159,888	Facility	Flights	FAA OPSNET

Reid-Hillview Airport provided fuel data in 2021, but did not respond to data requests for the 2023 inventory. 2021 fuel data was scaled to 2023 and allocated to local and non-local flights using flight operations collected from the FAA OPSNET. Landing and takeoff emissions for San José Mineta Airport were attributed to local and non-local flight operations data obtained from FAA OPSNET.

Transportation - Public Transit

Table 13: Public Transportation Methodology

		2023	Scale	Units	Source
Activity Data	Gasoline Revenue Fleet (Shuttles)	20,054	Regional	VMT	Caltrain
	Gasoline Revenue Fleet (Shuttles)	2,747	Regional	Gallons	Caltrain
Emissions Data	Electric Transit Bus - CO ₂ e	7	Regional	MT	VTA
	Gas Paratransit Bus - CO ₂	3,060	Regional	MT	VTA
	Gas Paratransit Bus - CH ₄	0.07	Regional	MT	VTA
	Gas Paratransit Bus - N ₂ O	0.07	Regional	MT	VTA
	Diesel Transit Bus - CO ₂	26,428	Regional	MT	VTA
	Diesel Transit Bus - CH ₄	0.08	Regional	MT	VTA
	Diesel Transit Bus - N ₂ O	4	Regional	MT	VTA
Emission Factors	Gasoline Transit Bus - CO ₂	7.3	National	MPG	2022 US National Defaults (FHWA & EPA SIT)
	Gasoline Transit Bus - CH ₄	0.03	National	g / mile	2022 US National Defaults (FHWA & EPA SIT)
	Gasoline Transit Bus - N ₂ O	0.004	National	g / mile	2022 US National Defaults (FHWA & EPA SIT)

Google EIE on-road transportation data does not include buses, ensuring all transit operations are not double counted. VTA provided activity data, however emissions were calculated externally by the transportation authority and were directly entered into ClearPath. Any non-revenue fleets were excluded to avoid double counting with on-road emissions provided by Google EIE. Emissions from Caltrain shuttles were calculated using 2022 US National Defaults, a factor set created from FHWA fuel economy statistics and EPA SIT tool on-road emission factors.

As mentioned in Buildings - Electricity, VTA electricity data represents electricity consumed in operation of light rail and transit bus operations. This data is considered distinct from electricity used in the charging of these transportation options, which falls under Commercial Energy.

Transportation - Rail

Table 14: Rail Transportation Methodology

		2023	Scale	Units	Source
Activity Data	Caltrain				
	Diesel Revenue Fleet (Locomotives)	252,432	Regional	Gallons	Caltrain
	Capitol Corridor (Amtrak)				
	Diesel	28,702	Regional	Gallons	Capitol Corridor (Amtrak)
	Renewable Diesel	27,522	Regional	Gallons	Capitol Corridor (Amtrak)
	ACE				
	Diesel	45,591	Regional	Gallons	ACE
Emissions Data	Statewide Freight Rail				
	Diesel - CO ₂	7,934	Statewide	MT	CARB GHG Inventory
	Diesel - CH ₄	1	Statewide	MT	CARB GHG Inventory
	Diesel - N ₂ O	5	Statewide	MT	CARB GHG Inventory
	Biodiesel - CH ₄	0.1	Statewide	MT	CARB GHG Inventory
	Biodiesel - N ₂ O	0.6	Statewide	MT	CARB GHG Inventory
	Renewable Diesel - CO ₂	0.6	Statewide	MT	CARB GHG Inventory
	Renewable Diesel - CH ₄	3	Statewide	MT	CARB GHG Inventory
Scaling Factors	Caltrain				
	Total System Miles	77	Systemwide	Miles	Caltrain
	San José Miles	5	Citywide	Miles	GIS Analysis
	Capitol Corridor (Amtrak)				
	Total System Miles	169	Systemwide	Miles	2018 CA State Rail Plan
	San José Miles	7	Citywide	Miles	GIS Analysis
	ACE				
	Total System Miles	86	Systemwide	Miles	ACE
	San José Miles	7	Citywide	Miles	GIS Analysis

Table 14: Rail Transportation Methodology (Continued)

		2023	Scale	Units	Source
Scaling Factors	Statewide Freight Rail				
	Total System Miles	5,295	Systemwide	Miles	2018 CA State Rail Plan
	San José Miles	37	Citywide	Miles	GIS Analysis
Emission Factors	Diesel - CO ₂	10.15	National	kg / gal	USCP
	Diesel - CH ₄	0.8	National	g / gal	USCP
	Diesel - N ₂ O	0.3	National	g / gal	USCP
	Biodiesel - CO ₂	73.84	National	kg / MMBtu	EPA Emission Factor Hub
	Biodiesel - CH ₄	1.1	National	g / MMBtu	EPA Emission Factor Hub
	Biodiesel - N ₂ O	0.11	National	g / MMBtu	EPA Emission Factor Hub

All commuter data was provided at a systemwide scale, while freight rail emissions were collected at a statewide level. The scale of the data necessitates a scaling of activity data and emissions to San José via citywide miles of rail track for each rail operator. For freight rail, ClearPath only provides emission factors for standard diesel, resulting in the need to calculate emissions externally using EPA Emission Factors Hub biodiesel emissions for 2023.

Solid Waste

Table 15: Solid Waste Methodology

		2023	Scale	Units	Source
Activity Data	Landfilled Residential MSW (Methane Collection)	140,859	Citywide	Tons	IWM
	Landfilled Residential MSW (No Methane Collection)	15,651	Citywide	Tons	IWM
	Landfilled Commercial MSW (Methane Collection)	94,983	Citywide	Tons	IWM
	Landfilled Commercial MSW (No Methane Collection)	10,554	Citywide	Tons	IWM
	Landfilled C&D MSW (Methane Collection)	560,402	Citywide	Tons	IWM
	Landfilled C&D MSW (No Methane Collection)	62,267	Citywide	Tons	IWM

Table 15: Solid Waste Methodology (Continued)

		2023	Scale	Units	Source
Activity Data	Composted Residential Food Waste	87,914	Citywide	Tons	IWM
	Composted Residential Biologic Waste	159,730	Citywide	Tons	IWM
	Composted Commercial Anaerobic Digestion	51,664	Citywide	Tons	IWM
Emission Factors	Landfilled Waste				
	Mixed MSW - CH ₄	0.0648	National	MT / wet short ton	EPA WARM
	Newspaper - CH ₄	0.042	National	MT / wet short ton	EPA WARM
	Office Paper - CH ₄	0.1556	National	MT / wet short ton	EPA WARM
	Corrugated Cardboard - CH ₄	0.1048	National	MT / wet short ton	EPA WARM
	Magazines/Third Class Mail - CH ₄	0.0476	National	MT / wet short ton	EPA WARM
	Food Scraps - CH ₄	0.0648	National	MT / wet short ton	EPA WARM
	Grass - CH ₄	0.0228	National	MT / wet short ton	EPA WARM
	Leaves - CH ₄	0.026	National	MT / wet short ton	EPA WARM
	Branches - CH ₄	0.058	National	MT / wet short ton	EPA WARM
	Landfill Gas Capture Rate - National Average Moisture Content & California Regulatory Methane Collection Scenario				
	Dimensional Lumber - CH ₄	0.0068000	National	%	EPA WARM
	Mixed MSW LFG Capture Rate	66	National	%	EPA WARM
	Newspaper LFG Capture Rate	65	National	%	EPA WARM
	Office Paper LFG Capture Rate	64	National	%	EPA WARM
	Corrugated Containers LFG Capture Rate	61	National	%	EPA WARM
	Magazines/Third Class Mail LFG Capture Rate	62	National	%	EPA WARM
	Food Scraps LFG Capture Rate	60	National	%	EPA WARM
	Grass LFG Capture Rate	50	National	%	EPA WARM
	Leaves LFG Capture Rate	58	National	%	EPA WARM

Table 15: Solid Waste Methodology (Continued)

		2023	Scale	Units	Source
Emission Factors	Branches LFG Capture Rate	59	National	%	EPA WARM
	Dimensional Lumber LFG Capture Rate	65	National	%	EPA WARM
	Oxidation Rate	0.1	National	%	EPA WARM
	Composting				
	Green Waste - CH ₄	0.004	National	MT / Ton	EPA WARM
	Green Waste - N ₂ O	0.00007	National	MT / Ton	EPA WARM
	Biowaste - CH ₄	0.006	National	MT / Ton	EPA WARM
	Biowaste - N ₂ O	0.00003	National	MT / Ton	EPA WARM

Waste tonnages were estimated by Climate Smart using 2019 waste characterizations and tonnage estimates and 2023 activity data on waste by sector and disposal method. Taking this data, ICLEI developed a custom waste characterization based on the tons landfilled for each waste category type listed in ClearPath (see emission factors for landfilled waste). This contrasts previous inventories in which a waste characterization was developed for each stream. Methane emissions were calculated in alignment with the EPA WARM model version 15, but differs in the use of a consistent 10% oxidation rate as opposed to WARM's 10-30%. This results in slightly higher emissions, but ensures simplicity. Landfilled waste of all sectors was transported to a number of locations with a variety of methane collection scenarios and moisture contents. A national average was used for moisture content to ensure consistency, and waste sent to landfills with methane collection used "California Regulatory" for the landfill gas collection scenario. For waste sent to landfills with no methane collection, no scenario was selected. These factors determined the landfill gas capture rate in the table above. The amount of waste sent to landfills with methane collection was calculated based on data from CalRecycle and the EPA Landfill Methane Outreach Program (LMOP) database.

For composting, commercial organic waste was anaerobically digested at the Zero Waste Energy Development (ZWED) facility in San José, and then sent for further composting to the GreenWaste ZBEST Composting facility in Gilroy. To ensure accurate reporting of emissions associated with this process, emissions were calculated externally by City staff and entered directly into ClearPath. It should also be noted that the amount sent to ZWED differs from the amount composted at ZBEST - the former tonnage was used for activity data. Emission factors for anaerobic digestion account for emissions from composting residuals.

Wastewater

Table 16: Wastewater Methodology

		2023	Scale	Units	Source
Activity Data	Population Served	970,772	Citywide	People	CA Dept of Finance
Activity Data	Population Served - Total	1,500,000	Regional	People	Wastewater Facility

Table 16: Wastewater Methodology (Continued)

		2023	Scale	Units	Source
Activity Data	Discharge Multiplier	1.25	Citywide	N/A	USCP
	Daily N Load	2578.37	Citywide	kg / day	Wastewater Facility
Emission Factors	Process Emissions from Wastewater Treatment - N ₂ O	7	National	g / person	USCP
	Process Emissions from Effluent Discharge - N ₂ O	0.005	National	kg / kg N	USCP

The wastewater sector only includes process and effluent discharge emissions associated with wastewater treatment. Emissions from energy use are already captured by the commercial subsector (under the Buildings sector) and are represented as so in the appendix, however energy use from wastewater processes was reported under the Wastewater sector and separately from Buildings in tables throughout the report to remain consistent with previous inventories. Emissions in this sector were scaled down to only include those associated with treatment of wastewater from San José sources. Because the Wastewater Facility also treats wastewater from other cities and districts, only a fraction of total emissions from the Wastewater Facility are reported here.

Process emissions from N₂O use the default ClearPath industrial-commercial discharge multiplier of 1.25, which multiplies the emissions based on the level of commercial and industrial activity within the community. 1.25 is the default for cities with significant commercial and industrial activity. Process emissions from N₂O are also impacted by the use of nitrification/denitrification, which leads to higher emissions output. The Wastewater Facility confirmed nitrification/denitrification as a step in the process, resulting in a higher N₂O emission factor. Emissions were calculated in accordance to WW.8 of the USCP.

Process N₂O emissions from effluent discharge were calculated using daily N load rather than population and industrial-commercial discharge multiplier based on available data. Effluent is discharged into the South San Francisco Bay, and to remain consistent with previous inventories, the effluent discharge emissions factor for rivers was used. Emissions were calculated using WW.12 of the USCP.

Agriculture, Forestry, and Other Land Use

Table 17: Agriculture, Forestry, and Other Land Use Methodology

		2023	Scale	Units	Source
Activity Data	Trees Outside of Forests	4,521	Citywide	Hectares	DOT
	Undisturbed Forest	2,619	Citywide	Hectares	ICLEI LEARN
	Forest Disturbances	12	Citywide	Hectares	ICLEI LEARN
	Non-forest to Forest	0.5	Citywide	Hectares	ICLEI LEARN
	Forest to Settlement	0	Citywide	Hectares	ICLEI LEARN
	Forest to Grassland	0.1	Citywide	Hectares	ICLEI LEARN

Table 17: Agriculture, Forestry, and Other Land Use Methodology (Continued)

		2023	Scale	Units	Source
Activity Data	Forest to Other Non-forest	0	Citywide	Hectares	ICLEI LEARN
Emission Factors	Trees Outside of Forests	-4.26	Citywide	t C / ha / yr	DOT
	Undisturbed Forest	-1.63	Citywide	Hectares	ICLEI LEARN
	Forest Disturbances	71.98	Citywide	Hectares	ICLEI LEARN
	Non-forest to Forest	-1.66	Citywide	Hectares	ICLEI LEARN
	Forest to Settlement	0	Citywide	Hectares	ICLEI LEARN
	Forest to Grassland	0	Citywide	Hectares	ICLEI LEARN
	Forest to Other Non-forest	0	Citywide	Hectares	ICLEI LEARN

ICLEI's LEARN tool calculates emissions and sequestration associated with land cover change at a resolution of 30 meters - about the size of a baseball field. For this reason, the City's Department of Transportation chose to utilize its urban tree canopy data on its own dashboard to provide a more accurate assessment of sequestration from urban trees. The remainder of the analysis was performed in LEARN, which analyzes emissions and sequestration associated with land coverage between 2019 and 2021. Land selects emission factors from cities throughout the U.S. based on proximity and shared climate, so San Francisco was used to inform emissions calculations. Emissions and sequestration from the LEARN analysis are excluded from the gross emissions count for San José per the USCP Appendix J: Forest Land and Trees. Refer to Tree Canopy Analysis for further information about Appendix J and the exclusion of LEARN data.

Process & Fugitive Emissions

Table 18: Process & Fugitive Emissions Methodology

		2023	Scale	Units	Source
Activity Data	Quantity of Natural Gas	182,392,906	Citywide	therms	PG&E
	Leakage Rate	0.3	National	%	EDF
	Natural Gas Energy Density	1,034	National	btu / scf	EIA
	Natural Gas Density	0.8	National	kg / m ³	USCP
	Natural Gas - CH ₄	93.4	National	%	USCP
	Natural Gas - CO ₂	1	National	%	USCP
Emission Data	HFC-134a - CO ₂ e	191,157	Statewide	MT	CARB GHG Inventory
	HFC-152a - CO ₂ e	8,514	Statewide	MT	CARB GHG Inventory
	HFC-43-10mee - CO ₂ e	260	Statewide	MT	CARB GHG Inventory

Table 18: Process & Fugitive Emissions Methodology (Continued)

		2023	Scale	Units	Source
Emissions Data	CF4 - CO ₂ e	54	Statewide	MT	CARB GHG Inventory
	HFC-125 - CO ₂ e	235,407	Statewide	MT	CARB GHG Inventory
	HFC-227ea - CO ₂ e	1,656	Statewide	MT	CARB GHG Inventory
	HFC-236fa - CO ₂ e	1,364	Statewide	MT	CARB GHG Inventory
	HFC-245fa - CO ₂ e	19,080	Statewide	MT	CARB GHG Inventory
	HFC-143a - CO ₂ e	74,975	Statewide	MT	CARB GHG Inventory
	HFC-32 - CO ₂ e	37,117	Statewide	MT	CARB GHG Inventory
	HFC-365mfc - CO ₂ e	10	Statewide	MT	CARB GHG Inventory
	Other PFC and PFE - CO ₂ e	63	Statewide	MT	CARB GHG Inventory
	SF ₆ - CO ₂ e	5,165	Statewide	MT	CARB GHG Inventory
Scaling Factors	HFC-134a	1,530	Global	GWP	IPCC 6 th Assessment
	HFC-152a	164	Global	GWP	IPCC 6 th Assessment
	HFC-43-10mee	1,600	Global	GWP	IPCC 6 th Assessment
	CF4	7,380	Global	GWP	IPCC 6 th Assessment
	HFC-125	3,740	Global	GWP	IPCC 6 th Assessment
	HFC-227ea	3,600	Global	GWP	IPCC 6 th Assessment
	HFC-236fa	8,690	Global	GWP	IPCC 6 th Assessment
	HFC-245fa	962	Global	GWP	IPCC 6 th Assessment
	HFC-143a	5,810	Global	GWP	IPCC 6 th Assessment
	HFC-32	771	Global	GWP	IPCC 6 th Assessment
	HFC-365mfc	914	Global	GWP	IPCC 6 th Assessment
	Other PFC and PFE	8,620	Global	GWP	IPCC 6 th Assessment
	SF ₆	24,300	Global	GWP	IPCC 6 th Assessment

FPG&E did not provide a leakage rate or information on natural gas characteristics when delivering activity data. As a result, default values in ClearPath were used, obtained from the EDF User Guide for Natural Gas Leakage Rate Modeling Tool. Heat content was updated to the California-specific value per EIA data.

Emissions from hydrofluorocarbons and refrigerants was obtained from CARB's Current California GHG Emission Inventory Data. CARB's data already converted each HFC and PFC to CO₂e, but did so using AR4 GWPs. CO₂e emissions were back calculated to the original quantities of each process emission, then re-calculated using AR6 GWPs. For "Other PFC and PFE", PFC 51-14 c was assumed to represent this gas category as the AR4 value matched what was reported by the IPCC.

Contrasting with earlier inventories, no emissions were generated from semiconductor manufacturing in 2023. This industrial process is referred to as "electronics manufacturing" in ClearPath.

Avoided Emissions

Table 19: Avoided Emissions Methodology

		2023	Scale	Units	Source
Activity Data	Electric Vehicles	310,454,782	Citywide	VMT	San José Climate Smart Data Dashboard
	Carpool Commutes	149,888,490	Citywide	VMT	SUMC
	Public Transit Commutes	124,075,852	Citywide	VMT	SUMC
	Walking	51,475,855	Citywide	Miles	Google EIE
	Biking (No Bikeshare)	19,270,194	Citywide	Miles	Google EIE
	Bikeshare	1,254	Citywide	Bikes	DOT
	Vanpool Commutes	1,316,930	Citywide	VMT	SUMC
	Scooters	2,200	Citywide	Scooters	DOT

Emissions avoided in 2023 by electric scooters, bikeshare, and commuters traveling by transit, carpool, or vanpool were estimated using the [Shared Use Mobility Center \(SUMC\) benefits calculator](#). These estimates were based on City data on scooters and bikeshare; SUMC estimates of numbers of transit commuters, carpool commuters, and vanpool commuters; and California Energy Commission data on light-duty EV registration in San José ZIP codes. Emissions avoided by walking and biking were estimated using VMT data for these modes from Google EIE, and Google EIE data on total emissions and VMT for on-road transportation.

Inventory Calculations

The 2023 inventory was calculated following the USCP, GPC, CRF, and ICLEI's ClearPath Climate Planner Climate Planner software. As discussed in Inventory Methodology, the IPCC 6th Assessment was used for GWP values to convert methane and nitrous oxide to CO₂ equivalent units. ClearPath Climate Planner's inventory calculators allow for input of the sector activity (i.e. kWh or VMT) and emission factor to calculate the final CO₂e emissions.



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**Attachment C – Climate Smart Initiatives
March – August 2025 Status Report**

Ref. No.	Climate Smart Key Strategy	Project Title	Project Description	March – August 2025 Activities Update	Est. City Council Date	Lead Department
1	Move to Zero-Emission Vehicles	California Electric Vehicle Infrastructure Project	The California Electric Vehicle Infrastructure Project (CALeVIP), administered by the Center for Sustainable Energy and launched in Dec. 2020, is a \$14 million rebate program for Level 2 and Direct Current Fast Charging infrastructure co-funded by San José Clean Energy (SJCE) and the California Energy Commission.	As of Aug. 2025, 265 Level 2 and 70 Direct Current Fast Chargers funded by the program are operational, totaling \$4.4 million in incentives. Six more projects are in the pipeline and expected to be completed through Dec. 2025.	N/A	Energy Department
2	Move to Zero-Emission Vehicles	Direct Current Fast Charging (DCFC) Hubs Pilot	In Nov. 2022, Council approved San José Clean Energy (SJCE) to implement a DCFC Hubs pilot program to increase access to affordable and reliable electric	SJCE is currently in contracting to establish 4-7 hubs (40-70 ports) at City-owned sites. The contract is expected to be signed by Oct. 2025 and the first chargers should be installed by Q1 in	N/A	Energy Department

			vehicle (EV) charging in charging deserts.	2027. SJCE will control variable retail pricing to encourage midday charging and improve charging affordability.		
3	Move to Zero-Emission Vehicles	Delivering Zero Emissions Communities (DZEC) Initiatives	The City was awarded the DZEC grant in June 2021 to support work towards reducing GHG emissions from urban freight. Phase 1, working with an Equity Task Force and interviews with commercial freight companies, consisted of an analysis of commercial freight GHG emissions data and strategies the City could use to address urban freight emissions. In Phase 2, City staff collaborated with a working group of women from the Santee Neighborhood, to identify community priorities.	Through Phase 3 (summer 2025) staff have conducted site visits and interviews to shape the direction of the final phase of this pilot. Staff expects to have a draft scope of work ready by Dec. 2025.	N/A	Department of Transportation

4	Move to Zero-Emission Vehicles	Electric micro-transit and e-bikeshare	In 2024, DOT received \$5.2 million from the California Air Resources Board's (CARB) for the East San José Equity Mobility project, a three-year initiative that includes bike education, apprenticeships, and mobility wallet programs. Another CARB grant for \$1.5 million will expand bikeshare from downtown to the Mayfair and Alum Rock neighborhoods.	In March, City staff applied for \$3,453,094 through the Valley Transportation Authority Measure B Innovative Transit Service Models Competitive Grant. A response is expected by Sept. 2025.	N/A	Department of Transportation
5	Move to Zero-Emission Vehicles	Electric Vehicle Service Equipment (EVSE) Installations at Municipal Sites	The City is interested in expanding access to public chargers in underserved neighborhoods and support charging needs for the City's fleet. The Metropolitan Transportation Commission (MTC)	City staff submitted a funding obligation request to MTC to ensure the project is included in the Transportation Improvement Program. The project remains on track for delivery in 2027.	N/A	Department of Transportation

			awarded the City \$2.4 million for the Community EV Charging Access Project, to install EV and e-bike chargers at six City-owned sites in underserved East San José neighborhoods that currently lack public charging access.			
6	Move to Zero-Emission Vehicles	EVSE Rates and Fees Policy	The City is pursuing adjustments to charging rates and the introduction of overstay fees to reduce operating costs, encourage turnover, and improve access to public chargers.	In July, the City Manager approved a rate change for all of the City's EV chargers, which will cover the City's O&M costs, encourage greater use of renewable energy, and align with rates in the region. The new time-of-use rate will take effect on Oct. 1. The City Council approved an EV charger overstay fee in May 2025 to encourage faster turnover and improve access for fleet and	N/A	Department of Transportation

				public users. DOT is coordinating with other City departments on a pilot of the new policy in a downtown garage.		
7	Move to Zero-Emission Vehicles	EVSE Operations and Vendor Strategy	The City is pursuing updates of procedures, contracts, and agreements to ensure reliable, cost-effective operations of City-owned EVSE.	The City is reviewing procurement procedures to identify preferred vendors capable of offering competitive pricing, agreements, and services to better support future EVSE projects.	N/A	Department of Transportation/ Public Works
8	Move to Zero-Emission Vehicles	Electric Vehicle Infrastructure Planning and Policy	The City is working to support electrification of the City's fleet and installation of supporting EVSE through 2035. Work includes an EV Fleet and Charging Master Plan and an EV charging siting tool that prioritizes charging deserts and disadvantaged communities.	City staff is working with the consultant to develop a scope of work for a custom web map application, to support EV charging planning and siting.	N/A	Department of Transportation/ Energy Department
9	Move to Zero-	EV Instant Rebates Program	In April 2025, the City Council approved SJCE to offer	Staff are preparing to launch the program on September 1, 2025.	N/A	Energy Department

	Emission Vehicles		incentives for new and used EVs to income-qualified customers. The incentive will be offered at point-of-sale at participating dealerships.			
10	Move to Zero-Emission Vehicles	EV Advisor	In April 2025, the City Council approved SJCE to offer an EV Advisor service to provide customers with multilingual (English, Spanish, and Vietnamese) customer telephone hotline, email and live chat advisory service to assist customers on EVs, EV charging, e-Mobility, home electrification, energy efficiency, resilience, home battery storage systems, solar, and demand response or virtual power plant participation.	City staff completed a Request for Proposals process and is working with the implementer (SMUD) to launch the EV Advisor service by the end of October 2025.	N/A	Energy Department

11	Move to Zero-Emission Vehicles	Residential Super Off-Peak Charging Rate Pilot	In August 2024, SJCE created a new residential rate plan for EV drivers that adds a new super off-peak period from 9 a.m. to 2 p.m. with the lowest rates to incentivize charging when solar is abundant on the grid.	The pilot ended in mid-August 2025. Staff are analyzing results.	N/A	Energy Department
12	Move to Zero-Emission Vehicles	EV Education	City staff undertake various initiatives to support and promote EV uptake in San José.	Staff completed a competitive bid process to identify organizations with community roots and environmental knowledge to implement electrification education campaigns. Staff developed an EV education plan for FY25-26. In August 2025, SJCE sponsored the Silicon Valley Clean Cities Coalition's annual EV ride-and-drive, which saw an attendance of 70	N/A	Energy Department

				residents and over 100 test drives.		
13	Move to Zero-Emission Vehicles	Multifamily EV Charger Incentive Program	In October 2024, ED launched an EV charger incentive pilot program for multifamily properties. The program offers up to \$5,000 in incentives for Level 2 charging ports or up to \$2,000 in incentives for low-power Level 1/Level 2 charging outlets.	City staff expanded the original pilot program to a full program in July 2025. As of August 2025, 10 properties have reserved incentives for 50 EV charging ports. The program will continue through FY25-26 with an expanded \$1 million incentive budget. The Program is working with other grant programs to ensure that incentives make the most impact in driving projects over the finish line.	N/A	Energy Department
14	Move to Zero-Emission Vehicles	EVSE Low Carbon Fuel Standard (LCFS) Reporting	City staff are reporting EVSE usage to the California Low Carbon Fuel Standard program to generate credits, providing an additional revenue to offset some EVSE costs.	City staff submitted the quarterly report to California Air Resources Board to generate LCFS credits. Working with a broker, Transportation and Airport Department staff secured net transactions exceeding \$100,000, with	N/A	Department of Transportation

				revenues supporting minor EV charging repairs and community engagement to advance electric mobility programs.		
15	Reduce the Mile We Travel in our Vehicles by at least 20%	Better Bike Plan 2025	In 2020, City Council adopted the City's Better Bike Plan 2025. As of the end of 2024, the City has a 550-mile bikeway and trail system. Each Spring, the Department of Transportation provides an annual update to the Transportation and Environment Committee (T&E).	Bikeway upgrades in 2025 will be delivered through the pavement program, with additional improvements coming through the Downtown Better Bikeways project. Most implementation occurs in the Fall and is reported in the following Spring. Additional mileage delivered between March and September 2025 will be included in the next annual update in 2026.	Spring 2026 (T&E)	Department of Transportation
16	Reduce the Mile We Travel in our Vehicles by at least 20%	San José Mobility Hubs Project	In 2024, the City received a \$1.5 million MTC grant to build two mobility hubs on San Fernando Street with amenities like bike and scooter parking,	The City submitted a request to MTC to advance the project to Preliminary Engineering, anticipated to begin in 2026. Community engagement planning	N/A	Department of Transportation

			e-bike charging, seating, and real-time transit info to support multimodal travel	is underway for a fall 2025 start, and the project remains on schedule.		
17	Reduce the Mile We Travel in our Vehicles by at least 20%	Multimodal Transportation Improvement Plan	In 2024, the City initiated work on a Connect North San José – Multimodal Transportation Improvement Plan.	During the reporting period, City staff hosted the final community engagement event and convened a follow-up business focus group to review proposed project ideas and draft recommendations. City staff developed an administrative draft of the Connect North San José – Multimodal Transportation Improvement Plan, currently under internal review with publication anticipated in fall 2025. City staff also developed a draft concept for North First Street, focusing on improving safety and enhancing transit operations along the corridor. The team is currently conducting an	N/A	Department of Transportation

				operational analysis to evaluate the feasibility and performance of the proposed changes to North First Street.		
18	Reduce the Mile We Travel in our Vehicles by at least 20%	Bike Share Service Expansion	DOT staff are working with MTC, Lyft and community partners to expand bikeshare access in East San José. A State grant (Clean Mobility Options) and MTC investments will fund 500 new e-bikes and 22 new stations and community programs.	City staff deployed 500 e-bikes and initiated site planning for new dock stations, with 12 new stations expected by the end of 2025. The expansion effort is on track for completion by May 2026.	N/A	Department of Transportation
19	Reduce the Mile We Travel in our Vehicles by at least 20%	SMART Curbs: Curb Digitization and Curb Management Pilots	The City's SMART Curb Management Pilot used camera-based LiDAR to track downtown curb activity. In March 2025, MTC awarded the City \$2 million to pilot curb space reallocation, deploy sensors to detect bikes and pedestrians, and launch a public data	The SMART Curb Management Pilot ended on June 30, 2025. It included a LiDAR inventory of 140 miles of Downtown streets, installation of 160+ solar-powered cameras, and integration of real-time, historical, and citation data into a centralized platform. Extensive community engagement informed	N/A	Department of Transportation

			platform to share findings.	curb use strategies. City staff will provide a final report to USDOT by August 29, 2025. With new MTC funding, the project will expand to monitor multimodal activity, update curb regulations, and launch a public-facing tool for real-time curb visibility.		
20	Reduce the Mile We Travel in our Vehicles by at least 20%	Department of Transportation Data Dashboard	DOT acquired a comprehensive data source with real-time and historical travel data to support analysis of travel patterns, traffic conditions, VMT and mode-shift. This data will help prioritize projects aligned with Climate Smart goals	Following onboarding with a data analytics consultant, DOT began integrating the data into its Decision Support System, which combines travel, land use, and safety data to support planning, evaluation, and equitable project prioritization, along with other tools for project and program analysis	N/A	Department of Transportation
21	Switch our appliances from fossil fuel to electric	EcoHome Rebate	SJCE's EcoHome Rebate program launched in December 2024. It provides rebates to	As of late August 2025, customers have installed 445 heat pump HVAC systems and 159 heat pump	N/A	Energy Department

			residential customers for heat pump water heaters, heat pump HVAC systems, insulation, panel upgrades, circuit splitters/pausers, and pre-wiring for future home electrification. The incentive budget for FY25-26 is approximately \$2.7 million.	water heaters. Nearly \$1.6 million in incentives have been delivered to SJCE customers.		
22	Switch our appliances from fossil fuel to electric	EcoHome Payment Plan	SJCE's EcoHome Payment Plan pilot program launched in December 2024. SJCE provides \$1.25 million in zero-interest payment plans to customers who install a heat pump. Loans are up to \$5,000 for 2, 3, or 5-year terms.	As of August 19, 2025, 55 loans have been issued and over \$250,000 in loans has been dispersed. Over 70% of funds are still available for future loans.	N/A	Energy Department
23	Switch our appliances from fossil fuel to electric	Home electrification advisor service	The Go Electric Advisor provides a multilingual (English, Spanish, and	Advisor service set to launch early November 2025.	N/A	Energy Department

			Vietnamese) customer telephone hotline and email advisory service providing comprehensive customer assistance on electric vehicles, EV charging, e-Mobility, home electrification, energy efficiency, resilience, home battery storage systems, solar, and demand response or virtual power plant participation.			
24	Switch our appliances from fossil fuel to electric	Heat Pump Education	City staff undertake various initiatives to support and promote heat pump uptake in San José.	City staff completed a competitive bid process to identify organizations with community roots and environmental knowledge to implement electrification education campaigns. Contracting is in progress, and staff	N/A	Energy Department

				developed a home electrification education plan for FY25-26.		
25	Switch our appliances from fossil fuel to electric	Electrification Workforce Development	The Energy Department finished a consultant study and interviewed 30 labor stakeholders to understand how the City can support the building electrification workforce and the creation of high road jobs.	In September 2025, staff will seek Council approval to launch two electrification workforce development programs, one funding training equipment and local training institutions and the other funding scholarships. Staff will also propose a “high road” badge to highlight contractors in the online EcoHome Network directory who meet qualifications around health care, prevailing wage, and training. Energy Department staff continue to attend the High Road Training Partnership member meetings and communicate with labor stakeholders to inform current future program design.	Sept. 9, 2025 (Council)	Energy Department

26	Switch our appliances from fossil fuel to electric	Building Reach Code	Present building reach codes for City Council consideration to help to support Climate Smart goals such as increased EV infrastructure, renewable energy, and building electrification.	City staff drafted a single-family existing building reach code, hosted five outreach webinars, and drafted a Frequently Asked Questions document posted on the City's Reach Code webpage.	Sept. 9, 2025 (Council)	Energy Department
27	Power our community with 100 percent carbon-neutral electricity	Solar Access Program	The Solar Access program offers customers with low incomes living in disadvantaged communities a 20 percent bill discount and 100 percent solar energy from a solar facility in Northern California. The program is entirely funded by the CPUC. Staff began enrolling customers in November 2021, intending to serve 900 customers. The program is expected to run for 20 years.	Between March and August 2025, SJCE enrolled 189 new customers onto the Solar Access Program, bringing the total number of participants to 926. SJCE is leveraging a new permanent solar resource for Solar Access with increased annual production, allowing SJCE to gradually increase the number of customers it can serve through the program	N/A	Energy Department
28	Power our community with 100	Virtual Power Plant/ Peak Rewards	Peak Rewards, originally launched for large commercial	SJCE launched Peak Rewards for Smart Homes in May 2025.	N/A	Energy Department

	percent carbon-neutral electricity		customers in 2023, is SJCE's Virtual Power Plant. Participation in Peak Rewards is enabled by three distinct programs: Peak Rewards for All (launched in 2024 for residential customers), Peak Rewards for Smart Homes (launched May 2025), and Peak Rewards for Business (newly named in May 2025).	Peak Rewards for Smart Homes allows customers to be paid for enrolling their smart thermostats, EV chargers, and EVs through telematics for SJCE to adjust. SJCE has enrolled 2,513 total customers in Peak Rewards and added support for smart thermostats. SJCE is currently redesigning incentives for commercial customers to better align with other programs on the market and encourage additional participation from large commercial customers.		
29	Power our community with 100 percent carbon-neutral electricity	Low-income solar + storage offer	In August 2025, SJCE partnered with Haven Energy to offer no to low cost solar and storage systems to low-income homeowners by utilizing state incentives.	SJCE promoted the offer to eligible customers in August 2025.	N/A	Energy Department

30	Power our community with 100 percent carbon-neutral electricity	Pilot Zonal Electrification	Senate Bill 1221 (Min, 2024) requires gas corporations by January 1, 2026, to designate priority neighborhood decarbonization zones based on the cost-effectiveness of electrification versus gas distribution line replacement costs and the CPUC to develop a program with 30 pilot project sites statewide that facilitates the cost-effective decarbonization of priority neighborhood decarbonization zones.	City staff engaged with PG&E to review San José's priority neighborhood decarbonization zones as designated by PG&E and collaborate with PG&E to ensure a zone in San José can be one of the 30 pilot project sites, if desired by affected residents.	TBD	Energy Department
31	Power our community with 100 percent carbon-neutral power	Home Appliance Savings Program and Energy Efficient Business Program	Funded by external funding, SJCE offered two energy efficiency programs: The Home Appliance Savings Program offered discounts on energy-saving appliances and free devices to	At the end of 2024, SJCE sunset its energy efficiency programs. The programs resulted in lifetime customer savings of nearly \$11 million, more than 18,000 metric tons of CO2 avoided, and 3,500 megawatt-hours	N/A	Energy Department

			geographic- and income-qualified customers. The Energy Efficient Business Program offered rebates for qualified energy-saving upgrades.	of annual electricity savings over the lifetimes of the energy-saving equipment – equal to the annual energy usage of about 720 homes.		
32	Power our community with 100 percent carbon-neutral electricity	Battery Storage Incentive Program	In May 2025, the Energy Department added an incentive for battery storage systems through SJCE's EcoHome Rebate program. The program offers up to \$3,250 in rebates for any battery system installed in San José by an eligible SJCE customer and up to \$10,400 for eligible equity, low-income customers. There are additional rebates available for panel upgrades, EV circuit pre-wiring, and other electrification measures.	From March to May 2025, City staff finalized the program design and the launched the program. The program has approved more than 300 applications, totaling about \$900,000 in funds reserved (82% of total budget). Of those approved, 5 have already been completed, meaning we've paid out \$25,000 in incentives so far.	N/A	Energy Department

33	Cross-cutting	Zero Emissions Neighborhood (ZEN) Pilot	The ZEN is intended to bring a suite of Climate Smart building, mobility, and water improvements to households in the Santee pilot neighborhood with community input. Previous work included grant funding for urban greening and building electrification projects. In 2025, the City began work on a \$341,000 Extreme Heat and Community Resilience Program (EHCRP) grant, centered around the ZEN pilot area, that will continue through 2027.	In June 2025, the City began working with community partners to finalize the project work plan. In late Sept. 2025, City staff will host a community EHCRP kick-off meeting and launch a community survey to identify community needs and inform grant deliverables.	N/A	Energy Department
34	Cross-cutting	GoGreen Teams	Launched in 2022, GoGreen Teams is a community engagement program in San José, supported by Bright Action Communities.	A third cohort launched in October 2024, implementing targeted outreach to a diverse set of local community groups, including neighborhood	N/A	Energy Department

			Thus far, two cohorts completed, it encourages residents and students to form teams and participate in meetings on climate solutions and track their progress on the Climate Smart Challenge platform.	associations, faith-based groups, youth groups, and business associations. This cohort also includes a pilot led by Bright Action to engage with Spanish-speaking communities in East San José through climate education presentations, promoting the platform as a resource. This cohort has resulted in over 150 new platform signups thus far, engaging and educating the community on climate solutions.		
35	Cross-cutting	Climate Smart Challenge	Staff continue to promote the City's Climate Smart Challenge platform.	As of August 31, 2025, the San José's Climate Smart Challenge platform has 1,582 users who have committed to or completed over 5,644 climate actions, that have resulted in approximately \$144,754 saved, 392 tons of CO2 reduced,	N/A	Energy Department

				and 535,463 gallons of water saved. Energy and Public Works Department staff worked together to develop a new section of the Climate Smart Challenge platform for In-Office Energy Efficiency, featuring 10 new energy saving actions, which rolled out with the new City Hall Energy Efficiency Campaign in June 2025.		
36	Cross-cutting	Climate Smart San José Plan Update	Updates to the Climate Smart plan are intended to align with the General Plan's four-year review cycle. This first update reflects progress made, lessons learned, and evolving City priorities since the adoption of Climate Smart.	Public comments closed on June 30, 2025. City staff are working with a designer to finalize the update.	Oct. 6, 2025 (T&E), Oct. 21, 2025 (Council)	Energy Department

37	Cross-cutting	Climate Advisory Commission	In May 2023, Council directed staff to establish a Climate Advisory Commission. The commission has an annual workplan and meetings every other month.	City staff facilitated four Climate Advisory Commission meetings. The Commission provided review and input on various City programs and policies, including the Climate Adaptation and Resilience Plan, and SJCE's reserves, rates, and power mix strategy. T&E approved the Commission's FY 2025–26 Work Plan and FY 2024–25 Annual Report in Aug. 2025. During the reporting period, staff also reviewed applications to fill two commissioner vacancies.	N/A	Energy Department
38	Cross-cutting	Energy and Water Building Performance Ordinance (BPO)	The City's BPO requires property owners of large commercial and multi-family properties 20,000 square feet and above to track the	In April 2025, City Council approved a minor amendment to align the energy audit requirements with industry standards.	Sept. 16, 2025 (Council) Spring 2026 (T&E)	Energy Department

			property's energy and water use and report this to the City annually using the U.S. EPA ENERGYSTAR Portfolio Manager® platform. On a rolling five-year cycle, starting in 2023, properties also have to complete one of two "Beyond Benchmarking" Pathways (i.e. demonstrate high performance or complete steps to improve performance). Staff share energy and water data with buildings via annual customized scorecards and will be creating a public-facing map and dashboard of BPO data.	City staff drafted an additional memo to amend the ordinance to update the lead department given the Climate Smart Division's move to the Energy Department in FY25-26. City staff also mailed out compliance cycle invoices (April 2025) and completed the annual data reporting requirements to the California Energy Commission (July 2025). City staff will be evaluating the effectiveness of the BPO and returning with recommendations to the Transportation and Environment Committee in Spring 2026.		
39	Cross-cutting	Climate Art Program	The Climate Art Program aims to build energy and community support	The Climate Art program continues to host bi-weekly events in person and online	N/A	Office of Economic Development

			around the City's 2030 goal of carbon neutrality by enlisting the support of and reducing the carbon impact of the San José arts and culture sector.	including cross sector visits to museums to learn about their sustainability and adaptation plans, and online community sharing including presentations from Climate Smart, Valley Water and the Climate Museum. In June 2025, the Climate Art program hosted an evening around food justice at Grateful Gardens that explored artists working in urban agriculture.		and Cultural Affairs
40	Cross-cutting	Communitywide Greenhouse Gas Inventory	City staff prepare annual communitywide greenhouse gas inventories to monitor progress toward Climate Smart greenhouse gas emission reduction goals	City staff completed the 2023 Communitywide Greenhouse Gas Inventory in April 2025 and will complete the 2024 Inventory by December 2025.	Oct. 6, 2025 (T&E), Oct. 21, 2025 (Council)	Energy Department
41	Municipal	Municipal Building Electrification	City staff pursue building electrification at municipal buildings to lead by example.	In April 2025, the City received notice of award for the BayREN Decarbonization Showcase to electrify	N/A	Public Works

				appliances at Roosevelt Community Center.		
42	Municipal	Green Fleet Policy Update	The City adopted a Green Fleet Policy in 2007 and is seeking to update it to align with current City goals.	The City Auditor's Office is reviewing the current policy and an update is expected by October 2025.	TBD	Public Works
43	Municipal	EV Fleet Master Plan	The City is developing a master plan for converting its fleet to EVs that outlines vehicle conversion and EV charger installations, needed in three phases through 2040, to fully electrify the City fleet.	In May 2025, Energy, Public Works, and Transportation Department staff finalized the City of San José Fleet Electrification Master Plan.	TBD	Energy Department/ Public Works Department
44	Municipal	Airport Power Resiliency and Delivery Upgrades Study	The City is developing a comprehensive feasibility study to assess potential power delivery upgrades and resiliency measures to support the Airport's existing electrical infrastructure and	In August 2025, the Airport began working with the consultant on this study. It includes the evaluation of distributive energy resources for campus-wide use; exploring power resiliency through a potential Airport microgrid; assessing Smart Grid	N/A	Airport

			anticipated future loads from implementation of the Airport Capital Improvement Program and Master Plan projects.	integration, microgrid controls, and high-level designs for incorporating Battery Energy Storage Systems and power resiliency solutions. The study will also further assess the potential for implementation of decarbonization of the Airport's Central Utility Plant. Staff anticipate that the final report for this study will be completed by March 2026.		
45	Municipal	Climate Smart Training for City Staff	Provide resources and training to City staff to inform and inspire the integration of actions supporting the City's Climate Smart in City initiatives and operations.	City staff hosted an inaugural Climate Smart training session for over 100 City executive and senior leadership staff. City staff also initiated work, including development of a workplan and timeline, in coordination with Human Resources	N/A	Energy Department

				Department staff for a Climate Smart e-learning module for new employee onboarding.		
46	Other	Climate Adaptation and Resilience Plan	In 2023, the Governor's Office of Planning and Research (now the Governor's Office of Land Use and Climate Innovation) awarded the City with a \$650,000 grant to develop a Climate Adaptation and Resilience Plan.	In April 2025, City staff, the project consultant, and SPUR hosted Workshop 1 to gather community input. City staff created a new City Climate Adaptation and Resilience webpage and advertised the webpage and efforts to date at five tabling events. In May 2025, staff provided an update to the City's Climate Advisory Commission. City staff expects to release a public review draft in late Sept. 2025.	Feb. 9, 2026 (T&E), Feb. 24, 2026 (Council)	Energy Department
47	Other	New Climate Smart Zero Waste Element (ZWE)	The ZWE will address GHG emissions from the solid waste sector to assess and	From March through June 2025, City staff and the project consultant worked to finalize the proposed	Oct. 6, 2025 (T&E), Nov 2025 (Council, tentative)	Environmental Services Department

			reevaluate the prioritization of the City's zero waste strategies and address related critical issues regarding recycling markets, changing waste regulations, domestic reuse potential, local infrastructure related to waste, and landfill capacity.	Element and developed a Frequently Asked Questions document to aid with preparation to take this item to Council for approval in Fall 2025. The project consultant developed an accessible and translated version (Spanish and Vietnamese) of the ZWE.		
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