SAN JOSE CLEAN ENERGY

A Program of the City of San José

PROGRAMS ROADMAP

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A MESSAGE FROM OUR DIRECTOR

San José Clean Energy was created in 2017 with the goal of bringing more renewable power options at competitive prices to San José. By taking control of our power supply, we're making progress towards meeting our Climate Smart San José greenhouse gas reduction goals while pursuing local priorities like equity and affordability. In addition to a cleaner power mix, our community benefits from local and transparent decision-making. Local advocates and leaders were imperative to our establishment, and the people who live, work, and play in San José continue to guide our organization's mission.

The Capital of Silicon Valley is home to over 1 million people and has been shaped by a rich history of immigration and innovation. From Downtown to Alum Rock, the Rose Garden to Evergreen, and Willow Glen to Santa Teresa, diversity permeates every aspect of life in San José. Ethnic and cultural diversity strengthen the fabric of our city.

Like the rest of the Bay Area, income inequality is rising steadily, and many of our communities are disproportionately burdened by environmental pollution. As San José does more to ensure that low-income residents and disadvantaged communities have greater access to the benefits of our tech-centered economy, SJCE's programs are designed to increase equity and access to the benefits of renewable energy and electrification.

We look forward to witnessing the impacts of SJCE programs, such as more equitable access to clean air, affordable electric vehicles, and resilient home energy systems. Increasing the benefits of local clean energy will create stronger ties with our community and foster positive change that can transcend generations.

- Lori Mitchell, *Director of San José Clean Energy*

INTRODUCTION

San José Clean Energy (SJCE) is the City of San José's new electricity supplier, providing residents and businesses with renewable power options at competitive rates since February 2019. Operated by the City of San José's Community Energy Department, SJCE is governed by the San José City Council. SJCE is a part of a proven model of locally controlled electricity providers, known as Community Choice Aggregators (CCA). SJCE, along with the 10 CCAs in Northern California, pride themselves on not only providing cleaner and more affordable electricity, but also in their ability to reinvest operational surpluses into the community through customer programs.

The focus of this document is to outline a roadmap and vision of the types of customer programs SJCE will evaluate and choose. The Programs Roadmap aims to be a publicly facing document that will eventually be presented to and approved by San José City Council.

Included in this Roadmap are:

- References to other CCA program strategies
- Intended alignment with City climate action plans
- Recommended program areas of focus
- Recommended process for selecting programs
- Programs under consideration and their prioritization

ROADMAP INPUT THUS FAR

The graphic below depicts the key Programs Roadmap input received thus far and input expected in the future. In the Clean Energy Community Advisory Commission and Transportation and Environment Committee reviews, two topics were agreed upon: 1) Program Guiding Principles (page 12) and 2) Program Areas (page 9). In addition to these reviews, SJCE has conducted numerous forms of community outreach including multi-language focus groups, online surveys, community presentations, and commercial and industrial customer interviews. The RMI/WRI-led workshop helped fine tune remaining key topics to prepare updates for the fall 2020 Transportation and Environment Committee and subsequent City Council presentations of the Programs Roadmap.

02
CCA PROGRAM LANDSCAPE

CCA PROGRAMS

All nine counties in the San Francisco Bay Area now have operating CCAs; therefore, there are numerous CCA programs for SJCE to learn from and benchmark against. In general, California CCAs have focused on programs that reduce greenhouse gas emissions (GHGs), increase electrical load through increased electrification, and/or reduce energy procurement costs. Most programs have focused on vehicle electrification due to the large percentage of GHG emissions from the transportation sector and electrical load growth opportunities. The second priority of CCA programs in our region has been focused on home and building electrification to accelerate the transition from natural gas to electrical appliances and equipment. Finally, Bay Area CCAs are increasingly focused on distributed energy resources (DERs) and resiliency.

Bay Area CCAs program choices and strategies have provided useful input toward SJCE's selection of program areas (section 4) and programs under consideration (section 6). The experience, impact, and lessons learned from Bay Area CCAs' programs will continuously feed into SJCE's Programs Roadmap and program designs. This is the case for the emerging set of CCA programs focused on DERs and resiliency.

CCA Program Strategies:

- Sonoma Clean Power
- Silicon Valley Clean Energy
- East Bay Community Energy
- Monterey Bay Community Power

03
SJCE PROGRAM STRATEGIC ALIGNMENT

As a department of the City of San José, maintaining alignment between SJCE programs and Climate Smart San José is important.

CLIMATE SMART SAN JOSE IS SJCE'S GUIDING PROGRAM STRATEGY

The following figure illustrates how SJCE fits within Climate Smart San José as well as the related strategies (in yellow dashed boxes) SJCE's programs will address within the Climate Smart Plan.

A Framework For Action: Nine Strategies in Three Pillars

PILLARS of what residents

Climate and water STRATEGIES

Pilar 1
A Sustainable & Climate Smart City

- **1.1** Transistion to a renewable energy future
- **1.2** Embrace our Californian climate

Pilar 2
A Vibrant City of Connected & Focused Growth

- **2.1** Densify our city to accomodate our future neighbors
- **2.2** Make homes more efficient and affordable to our families
- **2.3** Create clean, personalized mobility choices
- **2.4** Develop integrated, accessible public transport infrastructure

Pilar 3
An Economically Inclusive City of Opportunity

- **3.1** Create local jobs in our city to reduce vehicle miles traveled
- **3.2** Improve our commerical building stock
- **3.3** Make commercial goods movement clean and efficient

04 PROGRAM AREAS

PROGRAM AREAS

Building Electrification	**Vehicle Electrification**	**Distributed Energy Resources**
Energy Efficiency	**Program-Specific Rates**	**Resiliency**

SJCE will primarily focus on the above program areas, which have been chosen with the Clean Energy Community Advisory Commission. The program area recommendations are based on both other CCAs' experience as well as the program area's connections to Climate Smart San José and SJCE's program guiding principles approved by the City of San José Transportation and Environment Committee on June 3, 2019 (Section 5).

PROGRAM AREA DESCRIPTIONS

- **Vehicle Electrification**: Programs focused on accelerating the conversion of all vehicle types to an electrified version.
- **Building Electrification**: Programs supporting the conversion of homes and buildings from gas and electricity powered to solely electricity powered.
- **Distributed Energy Resources:** DER programs include any customer side of the utility meter resources such as solar, battery storage, and demand response.
- **Energy Efficiency:** Programs that help reduce customer energy usage and costs either through equipment upgrades or building envelope improvements.
- **Resiliency:** Programs to provide back-up power or to sustain power in the event of a power outage or other electric service disruption. Resiliency programs often rely on distributed, customer side of the utility meter resources to sustain power.
- **Program-Specific Rates:** Programs designed to offer special rates to select customer groups to either incentivize energy-use behavior or to support adoption of clean energy technologies.

05 PROGRAM SELECTION FRAMEWORK

PROGRAM SELECTION FRAMEWORK

SJCE staff has developed a program selection framework, based on the program guiding principles approved by the City of San José Transportation and Environment Committee on June 3, 2019, and used it to help guide selection of the future programs discussed later in this Roadmap.

Program Guiding Principles

- Promote equity and affordability and support disadvantaged communities.
- Maximize greenhouse gas reduction opportunities.
- Align with Climate Smart San José.
- Produce customer and community benefits.
- Maintain or improve the financial status of SJCE.

PROGRAM SELECTION PROCESS

PROGRAM GUIDING PRINCIPLES CHECK

Does the program address a majority of the guiding principles?

PROGRAM SCORING

Can the program be scored? What does the score tell us?

EQUITY REVIEW AND ANALYSIS

What is the program's impact on equity considerations?

PROVIDE RECOMMENDATIONS

Evaluate, compare and select.

PROGRAM SCORING

During the program scoring step of the proposed program selection process, SJCE will quantitatively evaluate a program based on the following list of metrics that align with SJCE program guiding principles.

Metric	Description
Equity	Options include: 1) # of participants in and % of low to middle-income communities able to access the program 2) % of program funding directed to disadvantaged and low-incomes communities 3) % change in energy burden
Emissions Impact	Lifetime metric tons (MT) of carbon dioxide equivalent (CO2e) reduced
GHG Cost Effectiveness	Lifetime $ spent per metric tons (MT) of carbon dioxide equivalent (CO2e) reduced
Program Cost Effectiveness	Program net present value (NPV)
Community Benefits	Benefits Include: 1) Reduces air pollutants 2) Saves customer money (at least 5% over lifetime) 3) Leads to Local Job Growth 4) Educates and Creates Awareness of Climate Solutions

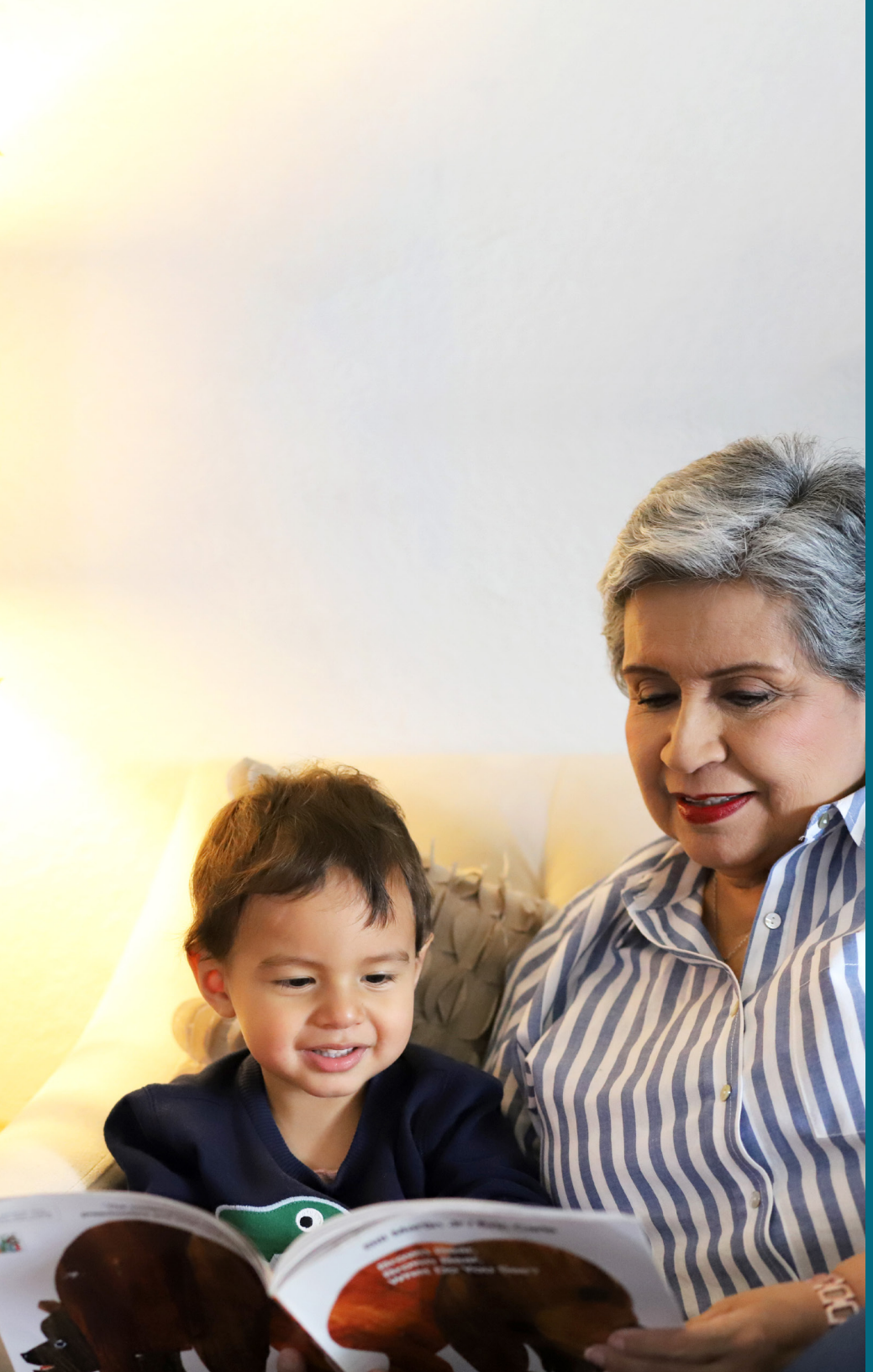
EQUITY REVIEW AND RECOMMENDATIONS

The equity review step will incorporate the City's work in developing an equity tool and process.

This step will serve as a checkpoint to ensure the program is considering equity impacts.

1. Desired Results
2. Data Analysis
3. Community Engagement
4. Strategies for Racial Equity
5. Implementation Plan
6. Communications and Accountability

The final step will be to evaluate and compare information collected from previous steps to arrive at a final staff recommendation.



06 PROGRAM APPROACH PRIORITIZATION

NEAR TERM PROGRAMS LEVERAGING EXTERNAL FUNDING

Prior to SJCE reaching financial operating targets, near term programs will be pursued. These are divided into programs that leverage external or matched funding as is shown below and programs that focus on education and outreach as shown in the next page. These near term programs did not go through the full program selection process, but went through the first step of the process, the program guiding principles check.

ENERGY EFFICIENCY

- Elect to Administer Energy Efficiency Programs

DISTRIBUTED ENERGY RESOURCES

- Disadvantage Community Green Tariff

VEHICLE ELECTRIFICATION

- CALeVIP

California Public Utilities Commission (CPUC) Funded

California Energy Commission (CEC) Co-Funded

NEAR TERM EDUCATION AND OUTREACH PROGRAMS

BUILDING ELECTRIFICATION

- Heat Pump Water Heater Workshops
- BayREN/CPUC Program Promotion
- Induction Cooktop Program

VEHICLE ELECTRIFICATION

- Low-Income EV Workshops
- Local EV Influencer
- EV Website Enhancement

DISTRIBUTED ENERGY RESOURCES

- Low-Income Program Promotion
- Education - Website, Events

RESILIENCY

- Medically Vulnerable Outreach
- SunShares Solar + Storage

FUTURE PROGRAMS TOPICS

Guided by the benchmarking of CCA programs and the input from the SJCE Programs Roadmap workshop, SJCE has developed a list of topics for future programs. The timing of future programs is based on the timing for SJCE to attain adequate operating reserve levels. This time frame is somewhat uncertain and could vary from 2-5 years depending on multiple regulatory and legislative outcomes.

- **BUILDING ELECTRIFICATION**
  - Heat Pumps
  - Electrical Panel Upgrades
  - Low-Income Home Retrofits
- **PROGRAM-SPECIFIC RATES**
  - Low-Income Discounts
  - Discounted Off-Peak
- **VEHICLE ELECTRIFICATION**
  - Used EV's
  - Fleet Electrification
  - Charging Infrastructure
  - E-Bikes
- **DISTRIBUTED ENERGY RESOURCES**
  - Demand Response
  - Energy Storage
  - Community Solar
- **RESILIENCY**
  - Medically Vulnerable Backup Power
  - Solar + Storage

SJCE will continuously invite stakeholder feedback and additional analysis to shape, add to, or change the list of future programs. The next section provides detailed descriptions of all programs under consideration that address the program topics introduced in the previous page.

07 PROGRAM DESCRIPTIONS

NEAR TERM PROGRAMS

Energy Efficiency Programs

As a CCA, SJCE may apply to become an administrator of energy efficiency programs funded by Public Purpose Programs charges, with oversight from the CPUC. This program follows the CPUC's 'elect to administer' pathway, and SJCE's programs will be tailored to the specific needs of San José residents and businesses to reduce energy usage and save money. This program is also aligned with actions related to Climate Smart strategy 2.2. This program will be brought to City Council for formal approval in late 2020-early 2021.

Electric Vehicle Charging Infrastructure Incentives

The California Electric Vehicle Infrastructure Project (CALeVIP) program was approved by City Council in 2019 and incentivizes the installation of electric vehicle charging stations. The program will launch in December 2020 and aims to drive emission reductions through vehicle electrification and aligns with Department of Transportation's Electric Mobility Roadmap and Climate Smart strategy 2.3.

Disadvantaged Community Green Tariff

Funded by State greenhouse gas allowances revenues with oversight by the CPUC, the program enables income qualified residential customers in Disadvantaged Communities (DACs) who may be unable to install solar on their roof to benefit from utility scale clean energy and receive a 20% bill discount. Participants would receive energy from a newly constructed solar project located in a DAC area. This program is aligned with actions related to Climate Smart strategy 1.1. This program will be brought to City Council for formal approval in late 2020.

NEAR TERM EDUCATION AND OUTREACH PROGRAMS

Distributed Energy Resources: Residential Rooftop Solar

To continue momentum towards Climate Smart San José's 1 GW Solar City objective, SJCE will engage in activities to expand access and awareness of residential rooftop solar, with special attention and focus on low-income communities that have not adopted solar systems at the pace of the rest of the city.

Below are a list of activities SJCE will explore in the near term:

- Promotion of existing low-income focused programs such as Disadvantaged Community Single-Family Affordable Solar Home (DAC-SASH) and Solar on Multifamily Affordable Housing (SOMAH) to San José residents and property owners.
- Education of customers on rooftop solar through SJCE's website and community events.

Vehicle Electrification: Passenger Vehicles

Staff recommends education and outreach activities focused on passenger vehicle electrification that focus on the price competitiveness of EVs when compared to conventional gas vehicles due to the rebates and incentives available and to highlight the significant benefits in the form of fuel savings along with lower vehicle maintenance costs.

Below are a list of activities SJCE recommends in the near term:

- Facilitate and/or host workshops on electric vehicles with a focus on low-income communities.
- Identify local "influencers" in communities with low adoption rates to promote and broadcast benefits of driving an electric vehicle.
- Make continuous updates and improvements to www.sanjosecleanenergy.org/ev, which is translated into Spanish and Vietnamese, to serve as a community informational resource on EVs.

NEAR TERM EDUCATION AND OUTREACH PROGRAMS

Building Electrification - Residential

SJCE recommends education and outreach to accelerate home electrification with a focus on driving adoption of Heat Pump Water Heaters (HPWH) in partnership with CCAs in the region as well as State agencies like the CEC. A key barrier toward greater HPWH adoption revolves around contractor and distributor awareness and training.

Below is a list of recommended near term programs:

- Explore partnerships with other CCAs to create workshops or informational kits for building contractors on HPWHs.
- Promote and broadcast available rebates and incentives through BayREN and CEC/CPUC's BUILD and TECH program.
- Extend or build on the Environmental Services Department electric induction cooktop program.

Resiliency

SJCE believes it will be important to evaluate opportunities to strengthen resiliency efforts in the community to prepare for future PG&E power shutoff events. Below are a list of activities SJCE recommends in the near term:

- Partner with the Silicon Valley Independent Living Center to help promote the Disability Disaster Access and Resources program that supports residents that rely on power to operate life-sustaining medical devices and are vulnerable to PG&E power shutoff events.
- Partner with Bay Area SunShares to promote discounted solar + storage and energy storage systems targeted towards San José residents living in forecasted PG&E power shutoff areas.

FUTURE PROGRAMS IDEAS: BUILDING ELECTRIFICATION & PROGRAM-SPECIFIC RATES

Heat Pump Water Heater Program

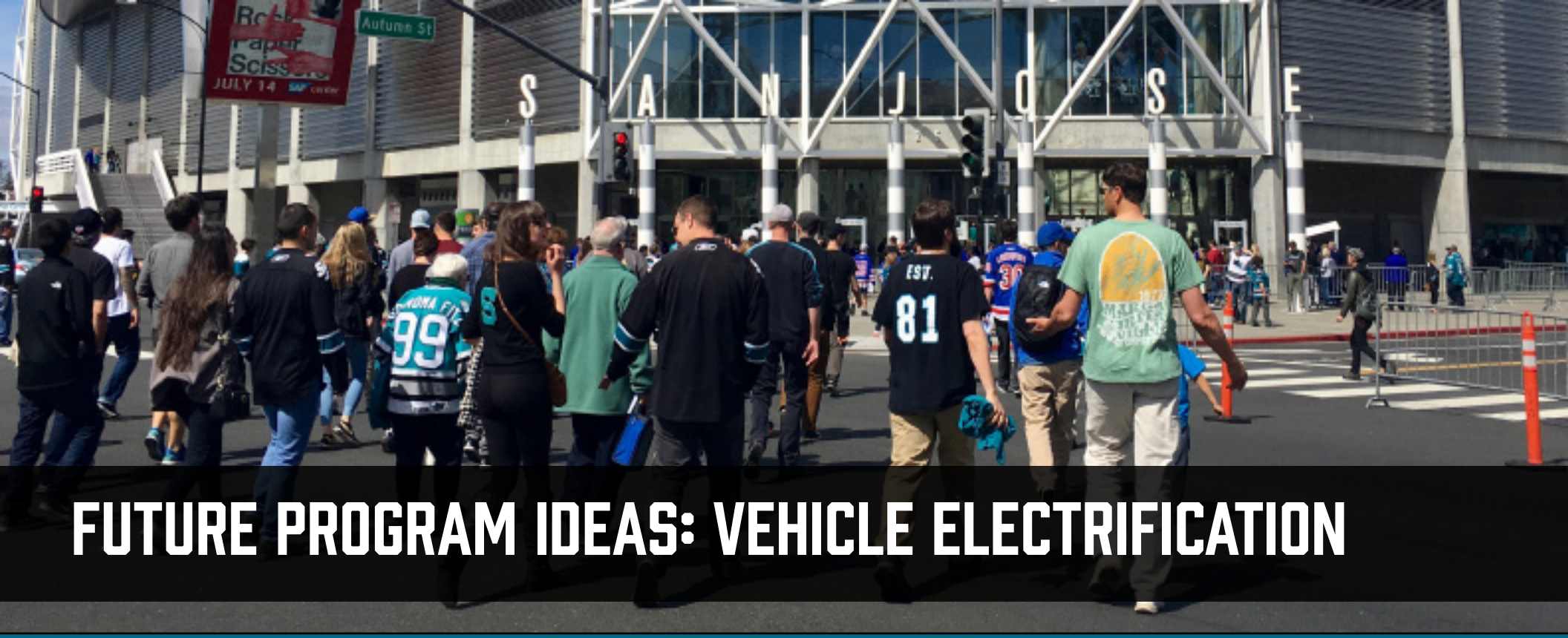
Contractor or distributor incentive towards purchase of single family heat pump water heater to replace a gas water heater.

CARE Customer Discount

Increased rate discount to current CARE customers and low-income customers that do not qualify for CARE.

Low-Income Home Upgrades

Annual supporting fund for City of San José Housing Department's Critical Home Repair program to go towards electrifying water heaters or upgrading electrical panels in low-income qualified homes.



FUTURE PROGRAM IDEAS: VEHICLE ELECTRIFICATION

Used EV Incentive

Based on Peninsula Clean Energy's program, work with a third party to offer down payment incentive and financial mentoring for low-income qualified residents to purchase a used EV.

Medium-Heavy Duty Fleet Electrification

Support small business fleets through either incentives to reduce the upfront costs of electrifying fleet vehicles, or technical assistance/incentives to support installation of charging infrastructure for electric fleets.

Multi-Family Dwelling (MUD) EV Charging Infrastructure Technical Assistance

Offer free technical assessment for MUD property owners on upgrades, investments, and incentive opportunities to install EV charging stations.

Electric School Bus Incentive

Offer incentive to San José school districts towards purchase of each electric bus.

FUTURE PROGRAM IDEAS: VEHICLE ELECTRIFICATION

E-Bike Incentive

Point-of-purchase incentive toward e-bike in partnership with local bicycle shops.

EV Ride and Drives

Host EV Ride and Drives in downtown San José, low income communities, and on corporate campuses to educate, promote, and spur EV adoption.

Commercial Lawn Mower Electrification Incentives

Incentive program to campuses and small landscaping businesses to electrify commercial sized lawn mowers. Offer rebate per electric lawn mower.

FUTURE PROGRAM IDEAS: DISTRIBUTED ENERGY RESOURCES & RESILIENCY

Residential Demand Response Program

Leverage technologies such as smart thermostats or home EV charging to reduce energy consumption during peak events and reduce SJCE procurement and RA costs.

Medically Vulnerable Customer Backup Power

Support medically and financially at-risk customers with backup power options to prepare for PG&E power shutoff events. Program could either be a rebate on a portable battery, a negotiated discount on a portable battery, or facilitation support to receive SGIP incentives.

Energy Storage for Resiliency, Resource Adequacy

Based on the joint program of East Bay Community Energy, Silicon Valley Clean Energy, and Peninsula Clean Energy, work with customer-sited battery storage aggregators to seek existing and new battery systems to provide both capacity to satisfy resource adequacy requirements and support increased resilience in San José.

08
SAN JOSE BACKGROUND

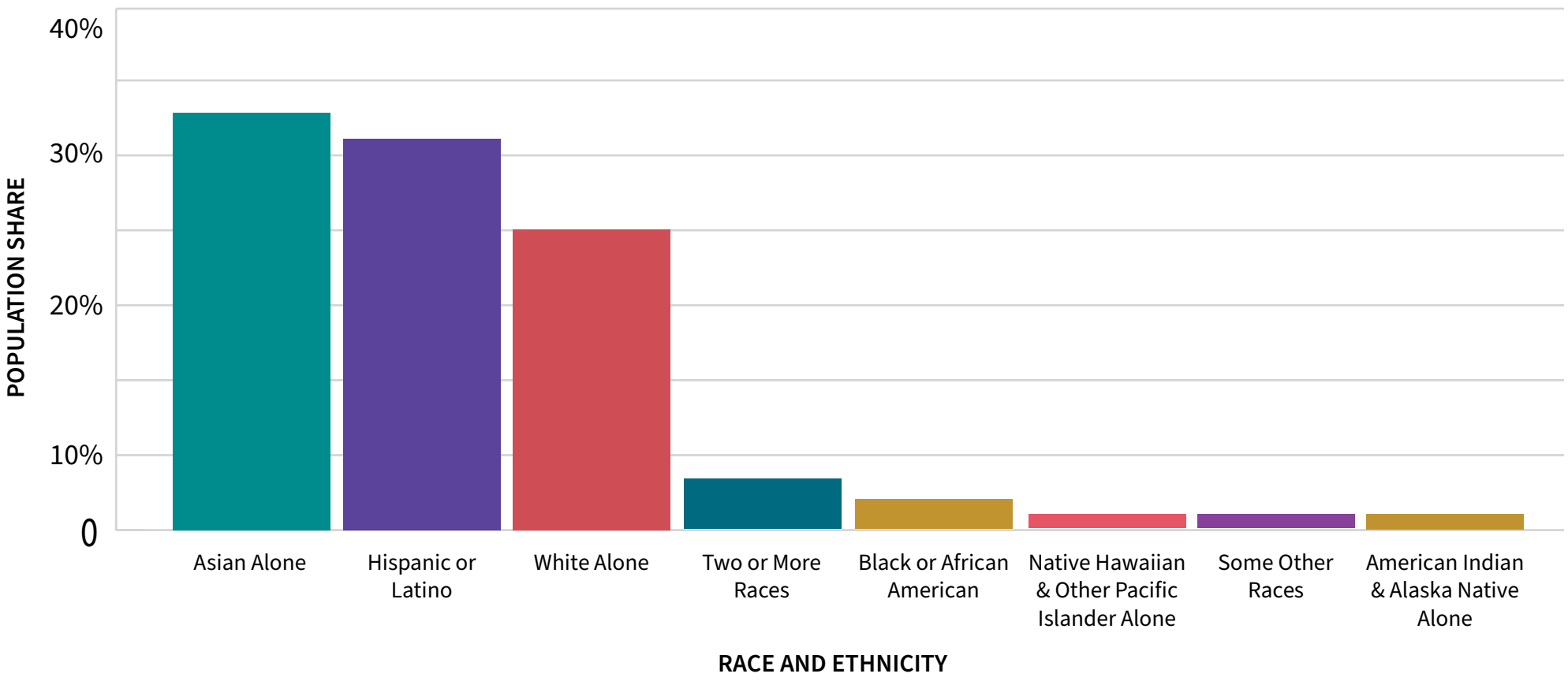
GENERAL INFORMATION

San José is Northern California's largest city.

Source: https://datausa.io/profile/geo/san-jose-ca/#demographics

RACE AND ETHNICITY

Asian and Hispanic or Latino communities make up around 67% of San José's population.



Source: https://datausa.io/profile/geo/san-jose-ca/#demographics

NON-ENGLISH SPEAKERS AND FOREIGN-BORN POPULATION

San José has a much higher rate of foreign-born and non-English speaking population than the rest of the US.

Non-English Speakers

MOST COMMON LANGUAGES

1. Spanish
   224,144 speakers (23.2%)
2. Vietnamese
   98,189 speakers (10.1%)
3. Chinese
   68,810 speakers (7.11%)

57.6% of San José citizens are speakers of a non-English language, which is more than double the national average of 21.9%.

Foreign-Born Population

39%

2017 FOREIGN-BORN POPULATION SAN JOSE

13.7%

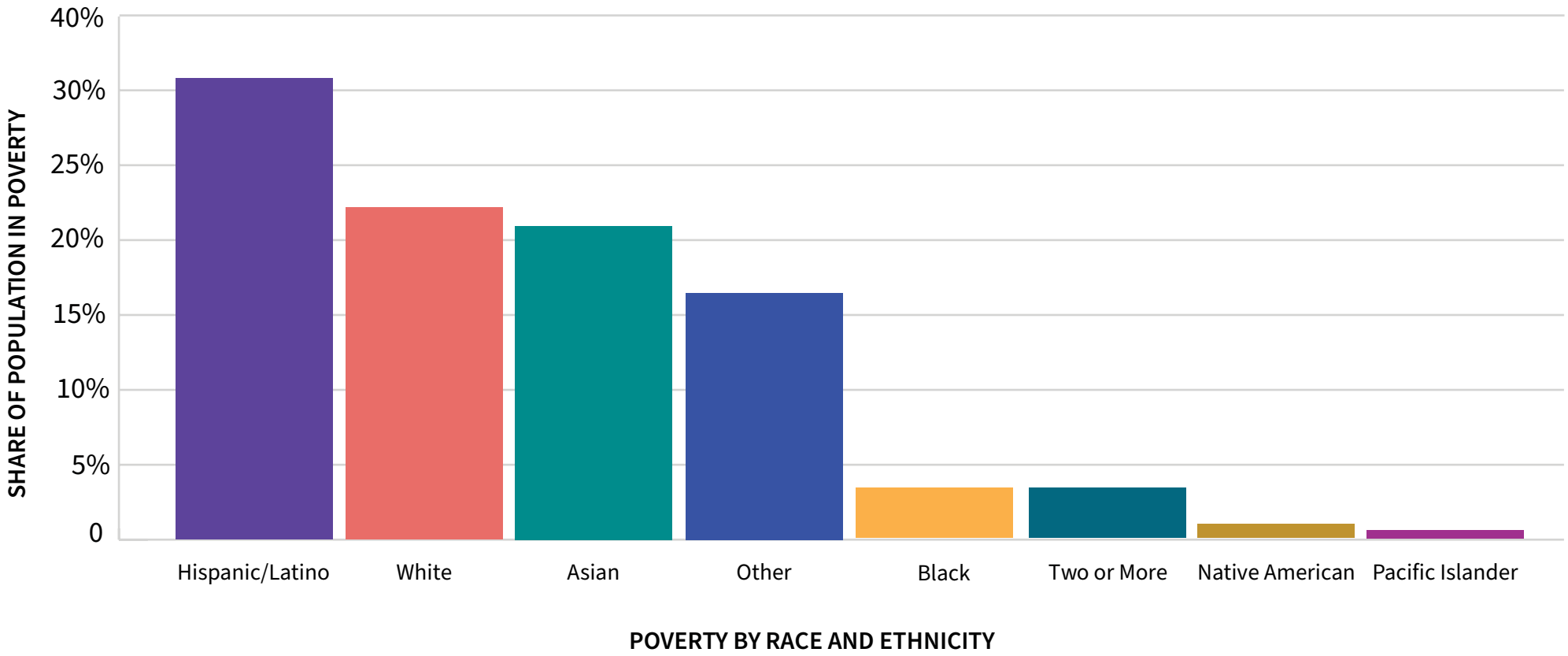
2017 FOREIGN-BORN POPULATION NATIONAL AVERAGE

As of 2017, 39% of San José residents (404,000 people) were born outside of the United States, which is higher than the national average of 13.7%.

Source: https://datausa.io/profile/geo/san-jose-ca/#demographics

POVERTY BY RACE AND ETHNICITY

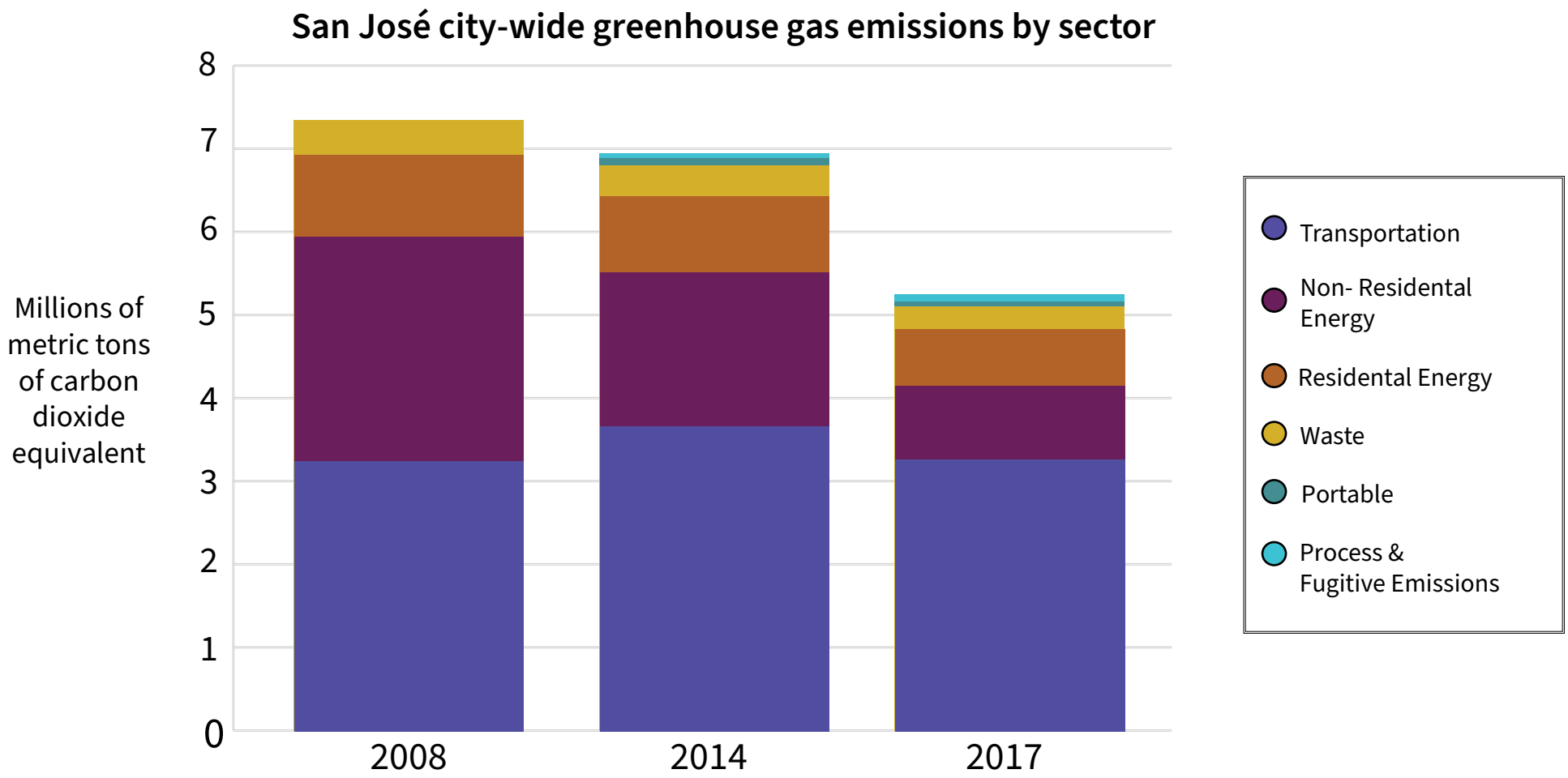
Hispanic or Latino communities have the highest percentage of low-income residents.



Source: https://datausa.io/profile/geo/san-jose-ca/#economy

GREENHOUSE GAS EMISSIONS

While a cleaner electric power mix has caused emissions from buildings to decrease since 2008, emissions from transportation have remained constant as San José's highest source of emissions.



Source: https://data.prospectsv.org/ghg-emissions/