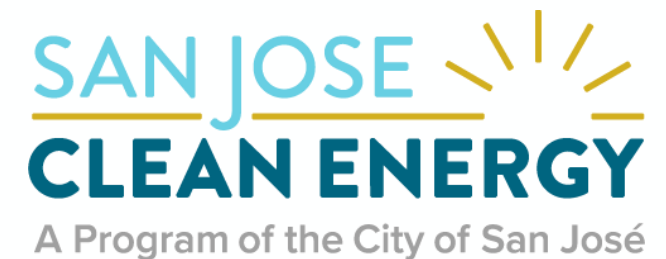


PROGRAMS ROADMAP UPDATE

(D) 2. Transportation & Environment
Committee

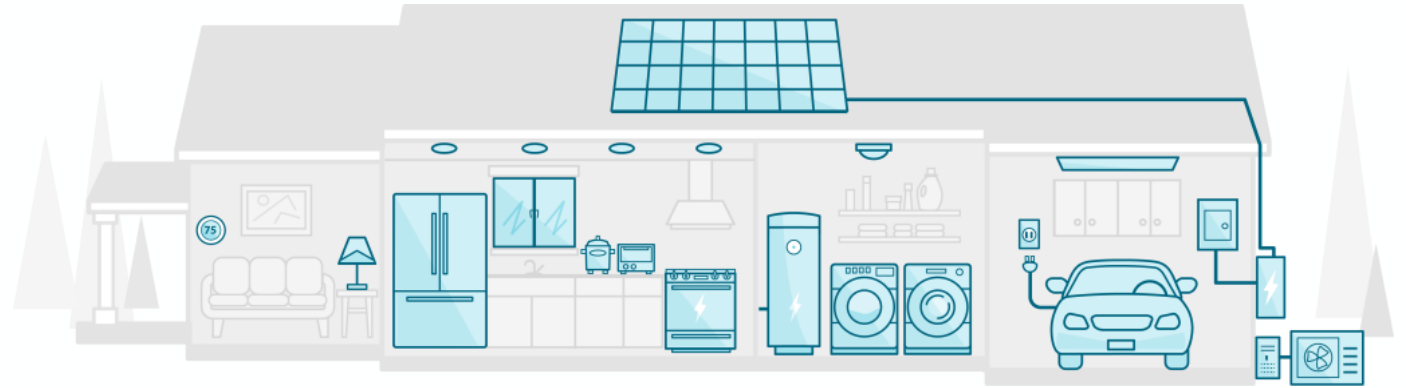
March 4, 2024

Zach Struyk, Assistant Director
Kate Ziemba, Senior Environmental Program Manager
Leslie Park, Senior Power Resources Specialist
Marcos Santiago, Power Resources Specialist II



AGENDA

- Background
- Overview of current programs
- Program scoring and community input
- Near-term program recommendations





BACKGROUND

PROGRAMS HISTORY & AREAS

- 2019-2021: stakeholder engagement to develop programs roadmap
- 2021: adoption by City Council

Vehicle
Electrification

Building
Electrification

Distributed
Energy
Resources

Energy
Efficiency

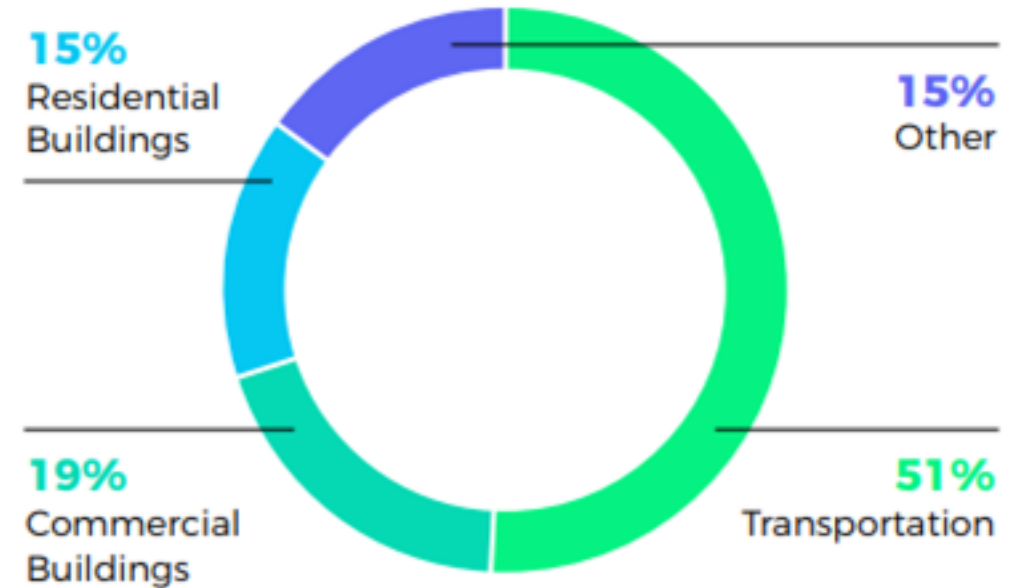
Program-
Specific
Rates

Resiliency

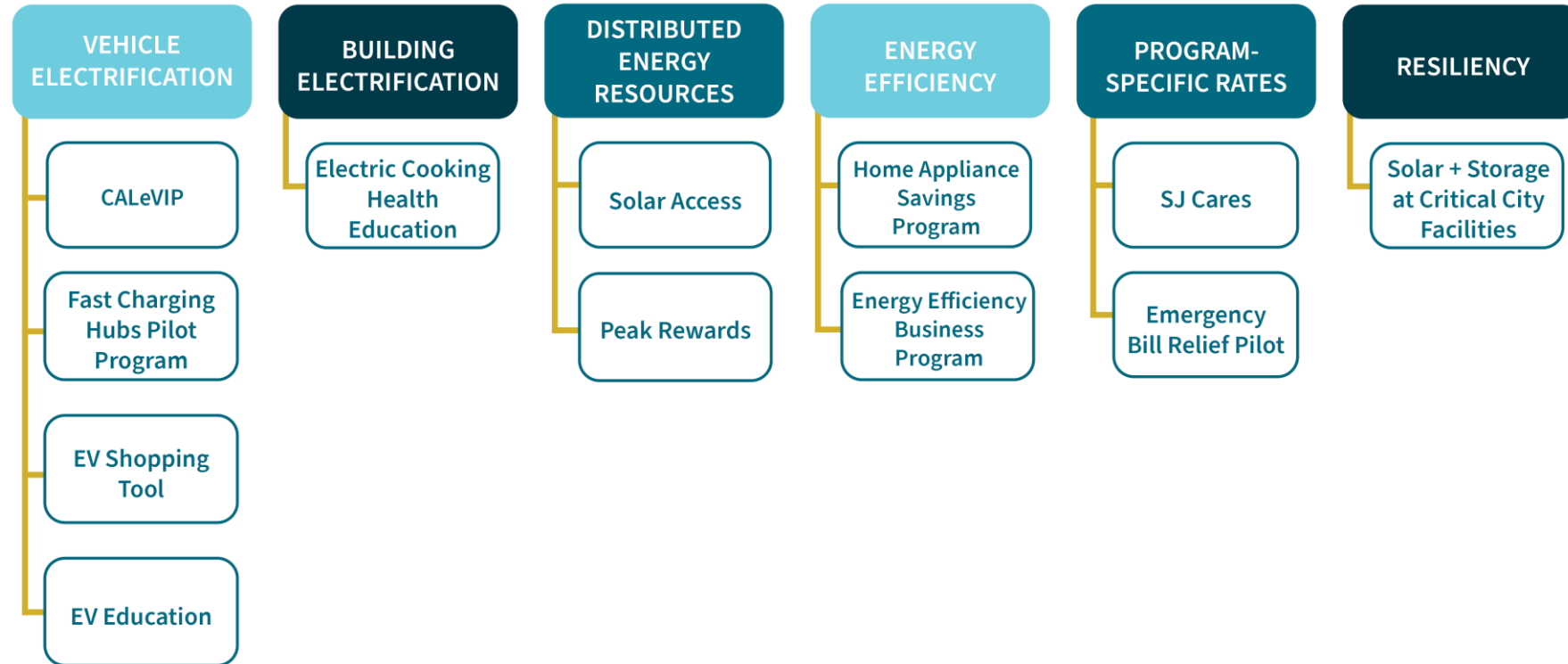
SAN JOSE'S CARBON NEUTRALITY GOAL

- City adopted carbon neutral by 2030 goal in 2021 and pathway to carbon neutrality in 2022
- Beyond providing a carbon-free power supply, need to electrify transportation and buildings to achieve the goal
- SJCE programs can incentivize electrification and efficiency

2019 Communitywide Emissions by Sector
(Climate Smart San Jose)



CURRENT PROGRAMS

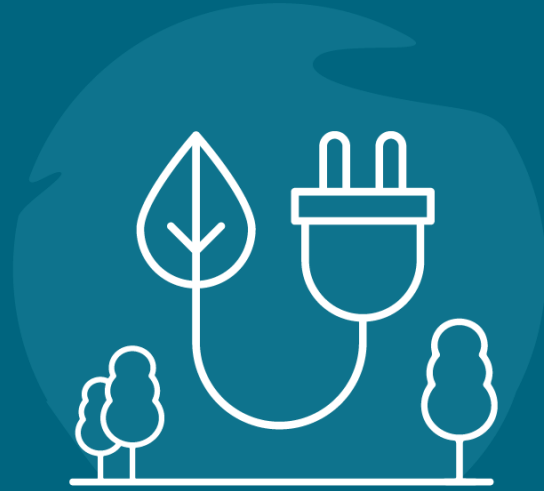


Total budgets: \$38.5 million over program lifetimes (next 3-10+ years)
80% externally funded
(excludes SJ Cares)

IMPACT OF CURRENT PROGRAMS

Historical impact through 2023

| | Electricity savings | Greenhouse gas reductions | Customer savings | Installations/ customers served |
|--|----------------------------------|---|---------------------|--|
| California Electric Vehicle Infrastructure Project (CALeVIP) | - | 875 metric tons CO ₂ | \$2,191,000 | 26 direct current fast chargers, 140 Level 2 chargers |
| Solar Access | - | 360 metric tons CO ₂ | \$395,500 | Approximately 840 participants |
| Home Appliance Savings Program | 238,000 kilowatt-hours | 87 metric tons CO ₂ | \$199,500 | 65 appliances installed, 140 smart power strips, and 167 smart thermostats |
| Energy Efficient Business Program | 17,634,000 kilowatt-hours | 990 metric tons CO ₂ | \$6,339,000 | 574 businesses served |
| Peak Rewards | 8,000 kilowatt-hours | 3 metric tons CO ₂ | \$10,000 | 9 participants, 13 enrolled |
| SJ Cares | - | - | \$19,900,000 | Approximately 70,000 participants |
| Total | 17,880,000 kilowatt-hours | 2,315 metric tons CO₂ | \$29,036,500 | - |



NEAR-TERM PROGRAM RECOMMENDATIONS

PROGRAM SCORING

- Staff developed a scoring framework to help prioritize programs
- Weighted metrics (highest to lowest):
 - Greenhouse gas emissions reductions
 - Investment in priority communities
 - Customer savings
 - Peak demand reductions
 - Fiscal impact for SJCE
- Qualitative considerations:
 - Contribution to personal and community resiliency
 - Ensuring all customer groups are served
 - Availability of external funding



COMMUNITY INPUT

Key takeaways from multilingual community survey:

Most important energy issues:

1. Cost of energy bills
2. Power outages
3. Climate change

Number one reason folks are not interested in making energy upgrades is cost.

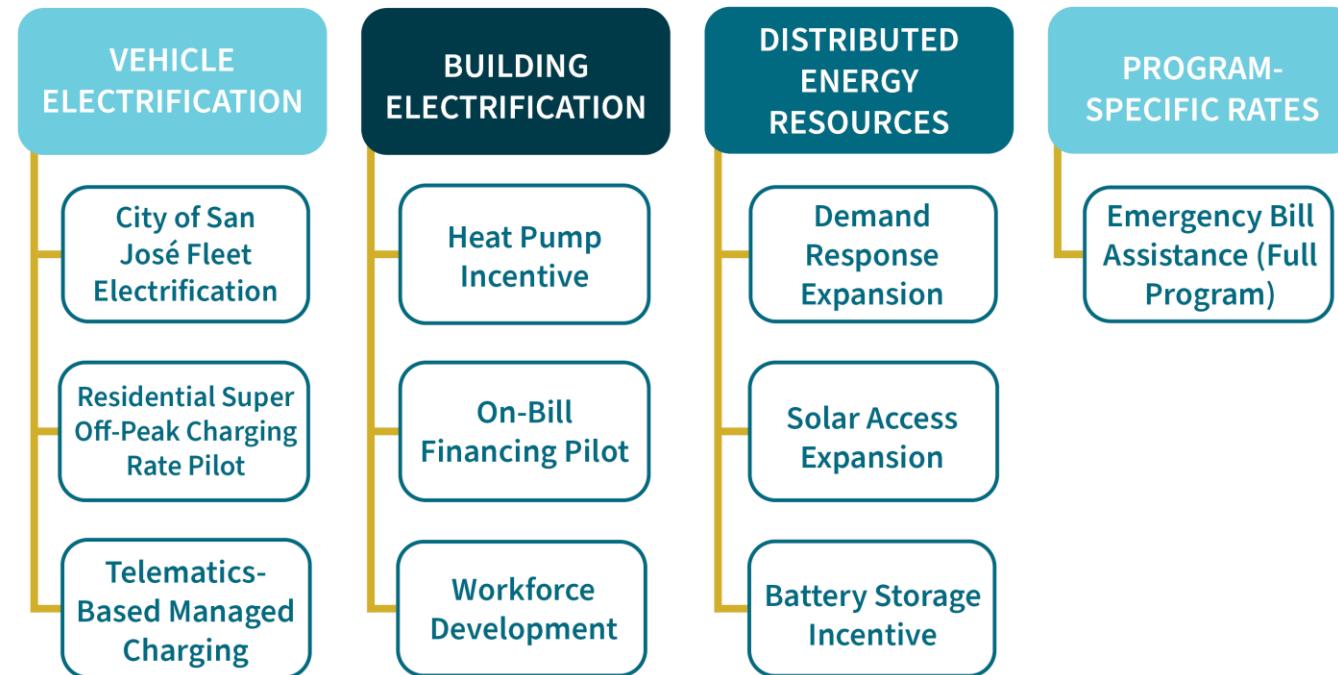
Many renters have not talked to their landlords about energy upgrades they are interested in.

Over half of homeowner respondents were interested in a program that rewards charging an EV at different times of day.

Most renters would not consider purchasing an EV if they could not charge at home.

Next step: multilingual listening sessions

NEAR-TERM PROGRAM RECOMMENDATIONS



Total cost through Fiscal Year 2024-2025: \$12M

includes \$5.5M of existing external funding

excludes SJ Cares

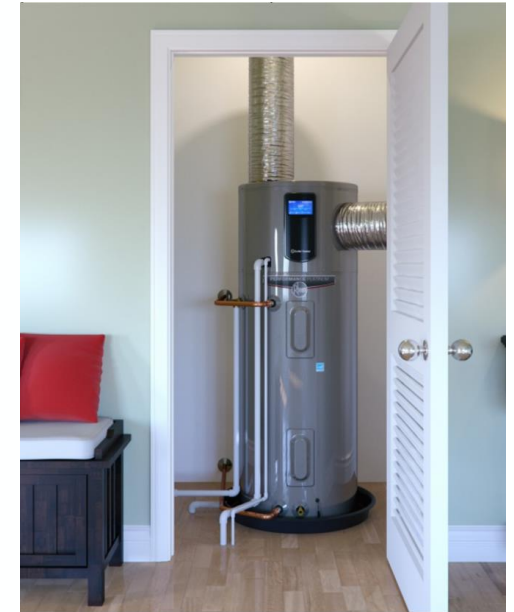
VEHICLE ELECTRIFICATION

| Program | Description |
|---|--|
| City of San José Fleet Electrification | Work with a consultant to produce a master plan guiding zero-emission vehicle procurement and the installation of accompanying chargers at City properties for fleet and public use, in partnership with the Departments of Public Works and Transportation. |
| Residential super off peak rate pilot | Create a new electrification rate plan with lower residential electricity rates from 9 a.m. to 2 p.m. to incentivize EV charging during the middle of the day. |
| Telematics-based managed charging | Shift EV charging for 500 residential EVs from evening peak and overnight to daytime, when electricity is cleaner and cheaper. |



BUILDING ELECTRIFICATION

| Program | Description |
|--------------------------------|--|
| Heat pump incentive | Offer residential customers incentives to install heat pump water heaters and heat pump HVAC systems, with additional incentive adders for low-income customers. |
| On-bill financing pilot | Offer zero-interest loans to residential customers who install heat pump water heaters and/or heat pump HVAC systems. Loans will be repaid through a charge on the customers' monthly electricity bill. |
| Workforce development | Collaborate with IBEW and industry consultants to develop programs to improve workforce development. May include scholarships for pre-apprenticeship or apprenticeship programs or sponsoring training events. |



DISTRIBUTED ENERGY RESOURCES PROGRAMS

| Program | Description |
|----------------------------------|--|
| Demand response expansion | Expand SJCE's demand response efforts to include options for both residential and commercial customers, as well as to provide additional options for participation with smart thermostats, electric vehicle smart chargers, and batteries. |
| Solar Access expansion | Leverage additional energy from the West Tambo Solar Project to serve an additional 150 residents under the Solar Access program, providing a 20% bill discount and 100% renewable energy. |
| Battery storage incentive | Develop an incentive program for residential or commercial customers to install battery storage and allow SJCE to tap into their battery for daily load shifting and grid emergencies. |



PROGRAM-SPECIFIC RATES

| Program | Description |
|---|--|
| Emergency Bill Relief (full program) | In February 2024, Council approved a pilot to provide funds to 100 customers for overdue bill payment to households at immediate or potential future risk of disconnection. In FY 2024-2025 recommend expanding this to 1,000 customers. |

PROJECTED ANNUAL IMPACT OF RECOMMENDED PROGRAMS



100,000

kWh of energy savings



3,240

metric tons of CO2 avoided



\$2,280,000

in customer bill savings



7,350

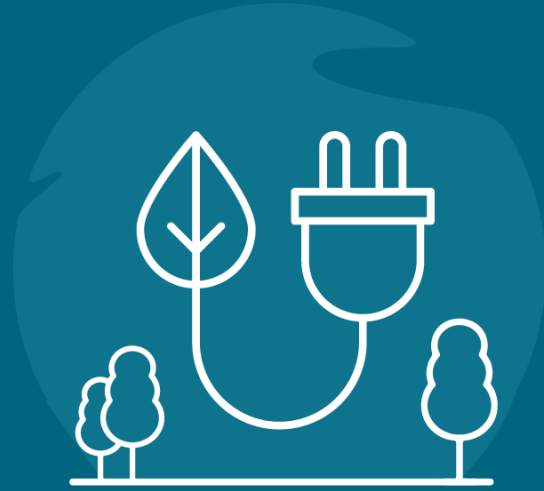
participating customers

FUTURE PROGRAMS

- Low-income EV Purchase Incentive and/or Interest Rate Buydown Pilot
- Low-income EV Charging Card Pilot
- Workplace Charger Program
- Low-income E-bike Rebate
- Energy Advisor Concierge Service
- Water Heater Loaner Pilot
- Automated Device Shop
- If awarded, implementation of grant funding for public EV charging stations; commercial battery storage incentives; residential building electrification, solar and storage

QUESTIONS?

- Recommendation: Accept this update on SJCE's Programs Roadmap and recommend this item for full Council consideration at the April 9, 2024, City Council meeting.
- Staff
 - Zach Struyk, Assistant Director
 - Kate Ziemba, Senior Environmental Program Manager
 - Leslie Park, Senior Power Resources Specialist
 - Marcos Santiago, Power Resources Specialist II



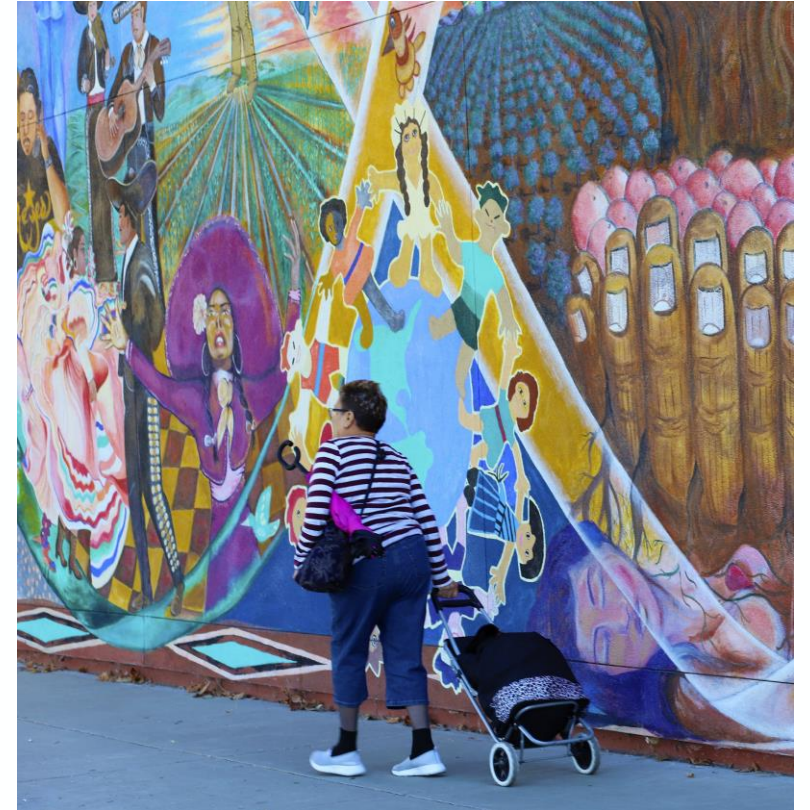
EXTRA SLIDES

PROGRAMS ROADMAP HISTORY



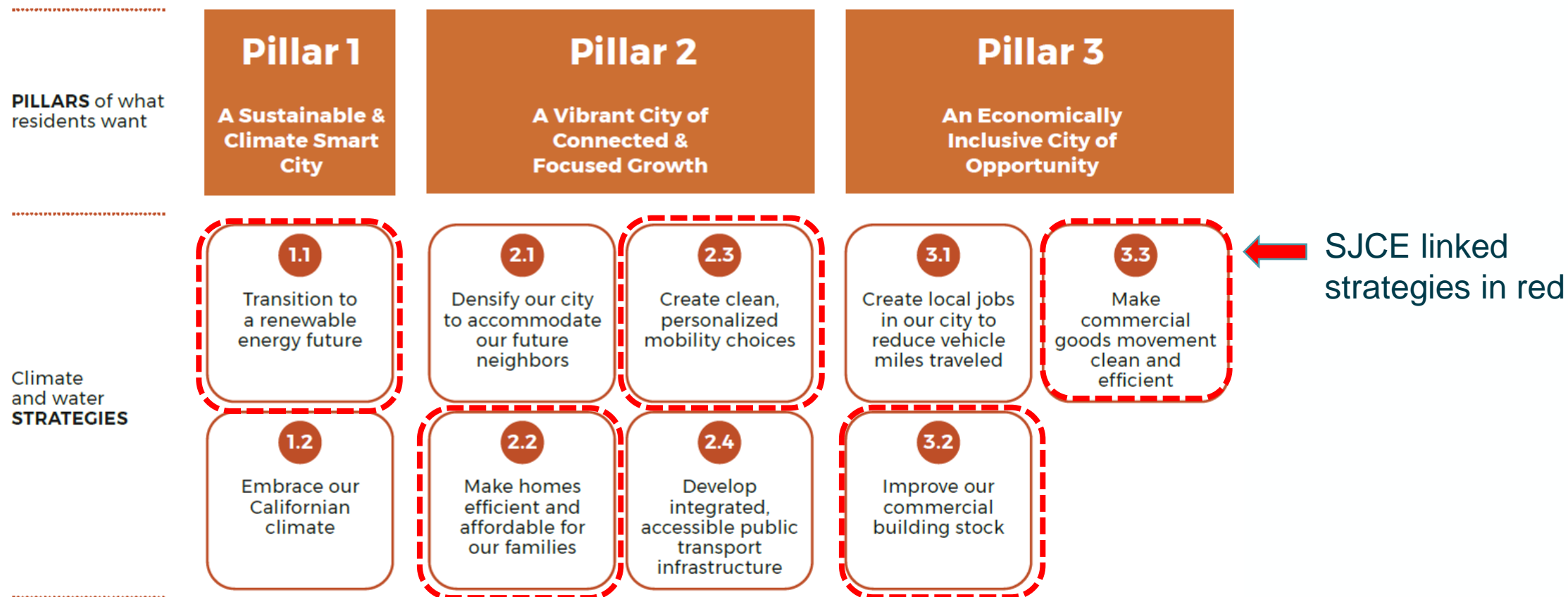
PROGRAM GUIDING PRINCIPLES

1. Maximize greenhouse gas reduction opportunities
2. Align with Climate Smart San José
3. Promote equity, affordability and support disadvantaged communities
4. Produce community benefits
5. Maintain or improve the financial stability of SJCE



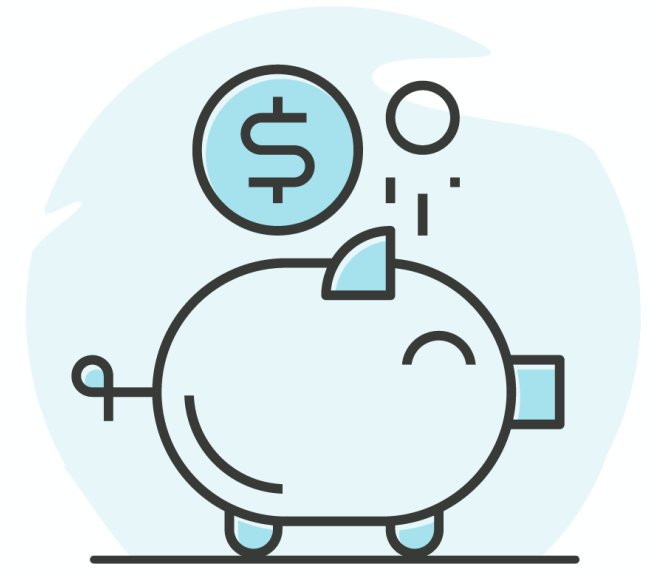
SJCE PROGRAMS ALIGNED WITH CLIMATE SMART

A Framework for Action: Nine Strategies in Three Pillars



PROGRAMS FUNDING SOURCES

- Important to leverage external funding for programs until SJCE builds operating reserves
 - SJCE Reserves Policy: 180 days of operating expenses
 - Resiliency to cushion against volatility in power markets, PCIA uncertainty, and regulatory changes
- Still building towards 180 days of operating reserves



ENERGY EFFICIENCY PROGRAMS

- Launched September 2022 through end of 2024
- \$5.6 million budget, CPUC-funded
- Estimated 2,800 megawatt-hours annual savings

San José Home Appliance Savings Program

- 50-70% discounts on refrigerators, washers, and dryers through Airport Home Appliance
- Free smart thermostats and plugs
- Eligibility: single-family households in disadvantaged communities or with moderate incomes
- Progress:
 - 140 smart plugs
 - 115 smart thermostats
 - 9 appliances
- 2023 expansion: GE and induction cooktops
- Goal: serve 1,058 households

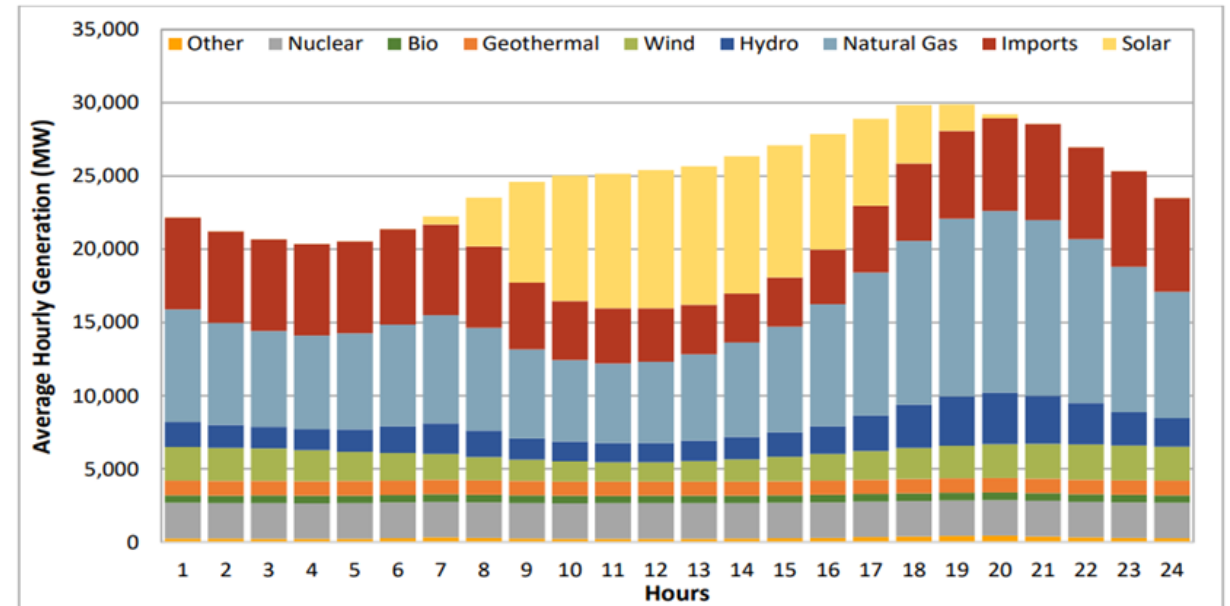
San José Energy Efficient Business Program

- 80-90% rebate on HVAC, refrigeration, and water heating components
- Eligibility: all businesses, targeted to small and medium and schools
- Progress:
 - 20 businesses served
 - 44 businesses & school district in progress
- Goal: serve 300 businesses and 9 schools

VEHICLE ELECTRIFICATION

SJCE is focused on:

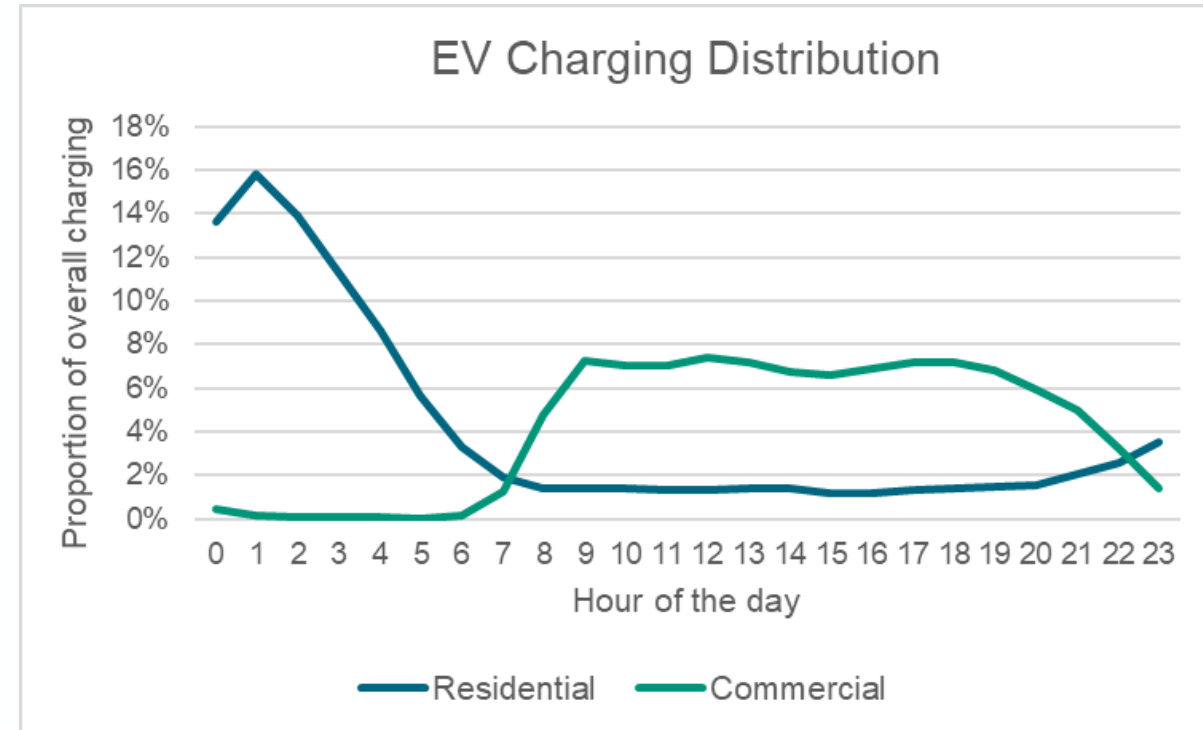
1. Managing the additional electric demand from charging to reduce greenhouse gas emissions and improve resiliency
2. Helping ensure equitable EV adoption and access to charging infrastructure



California Independent System Operator Average Hourly Power Production by Resource Type – 2020

EV CHARGING IN SAN JOSE

- ~30% of new vehicles registered in San Jose since spring 2022 have been electric
- Most residential charging occurs overnight
- SJCE aims to shift more EV charging to the middle of the day to reduce emissions, SJCE's energy procurement costs, and customer rates
- Opportunity:
 - Nearly 80% of survey respondents work from home all or part-time
 - Approximately 80% of charging occurs at home
 - Nearly half of respondents reported that their workplace has chargers



DISTRIBUTED ENERGY RESOURCES: DEMAND RESPONSE

- Compensating customers who reduce their usage during events
 - CAISO emergencies (demand outstrip supply)
 - High power market prices
 - High demand
- Types
 - Behavioral: people take action to reduce usage
 - Automated: wirelessly adjust equipment (thermostats, EV chargers, smart plugs)
 - Load shaping: smoothing demand peaks (storage, HVAC, EV charging)

