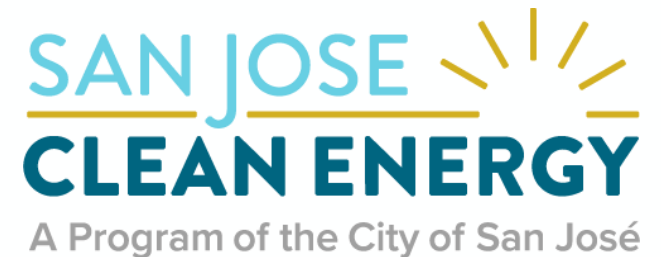


PROGRAMS ROADMAP UPDATE

Transportation & Environment
Committee

March 6, 2023

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



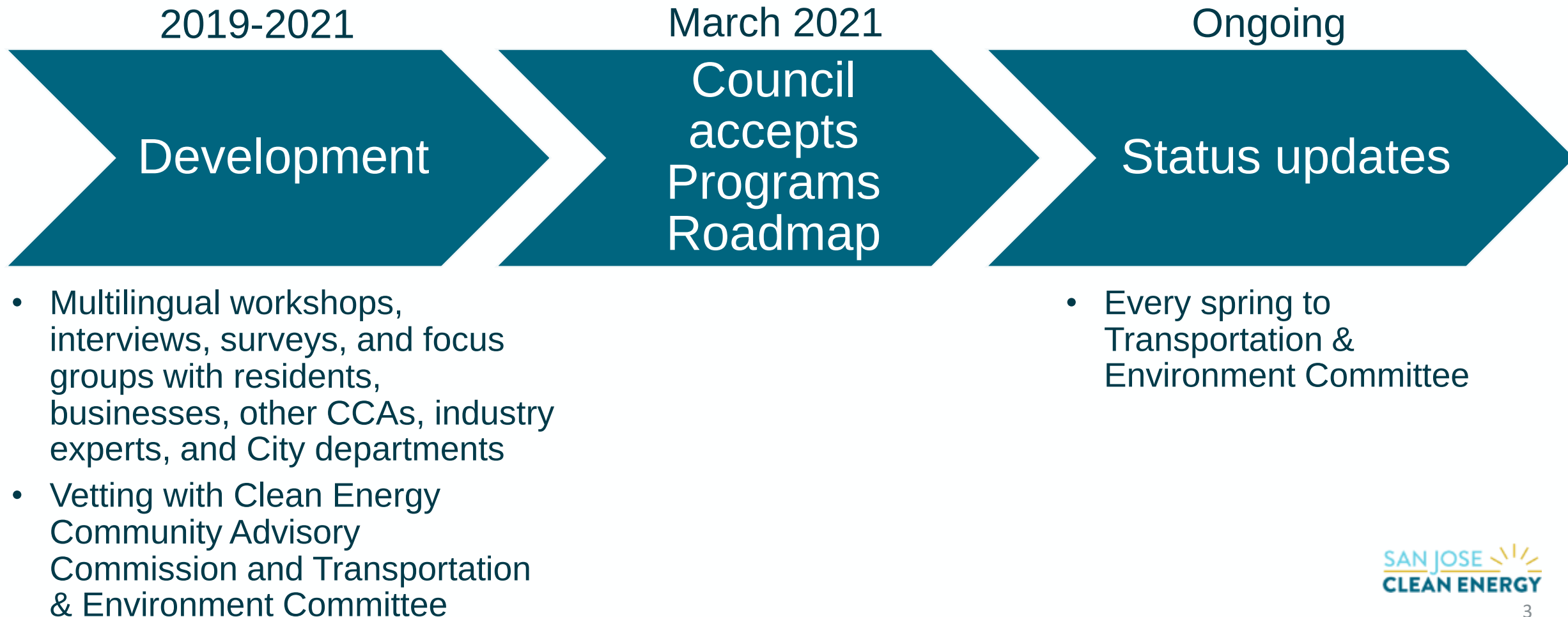
AGENDA

- Background on Programs Roadmap development
- Status of current programs
- Near-term program recommendations
- Long-term program recommendations



BACKGROUND

PROGRAMS ROADMAP DEVELOPMENT



PROGRAM AREAS

Vehicle
Electrification

Building
Electrification

Distributed
Energy
Resources

Energy
Efficiency

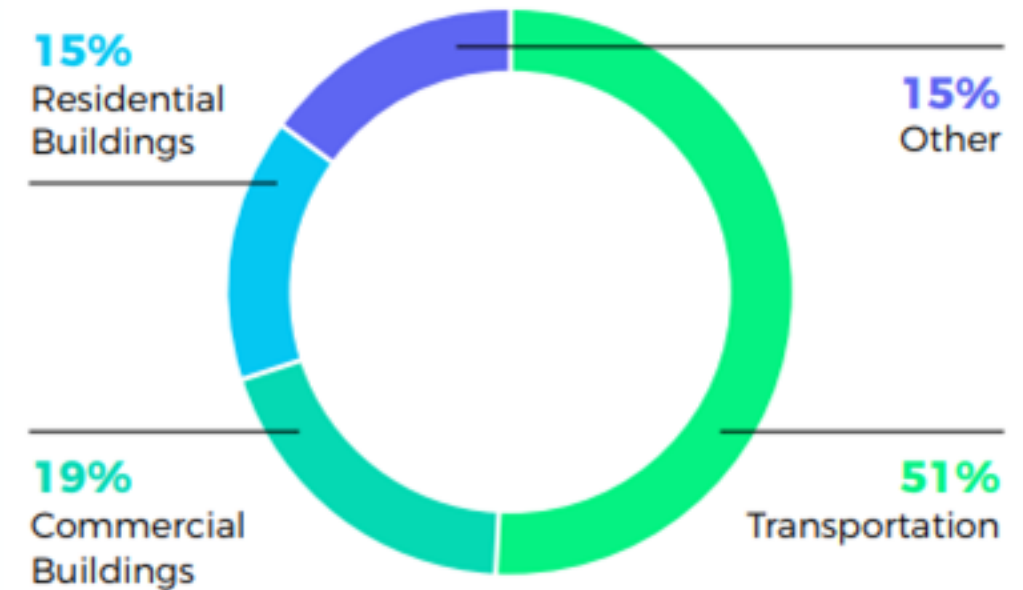
Program-
Specific
Rates

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

2019 Communitywide Emissions by Sector
(Climate Smart San Jose)



PROGRAMS FUNDING SOURCES

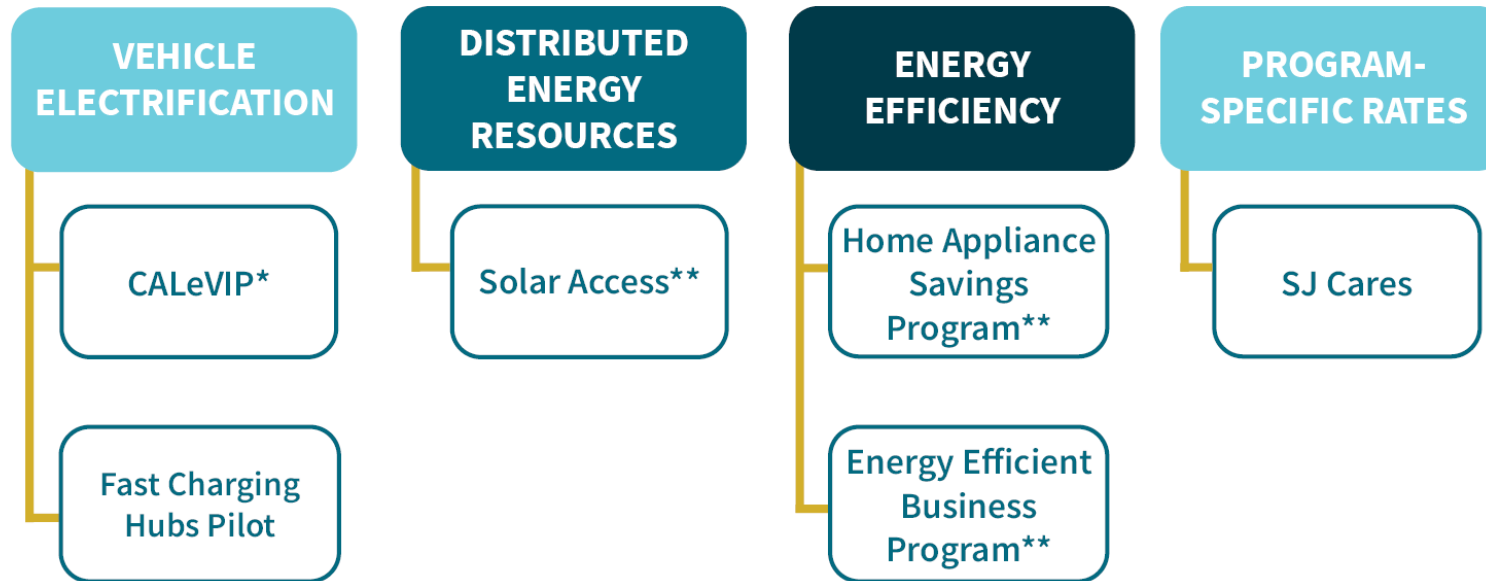
- Important to leverage external funding for programs until SJCE builds operating reserves
 - SJCE Reserves Policy: 180 days of operating expenses
 - Resiliency to cushion against volatility in power markets, PCIA uncertainty, and regulatory changes
- On track for 180 days of operating reserves by end of CY 2023





STATUS OF CURRENT PROGRAMS

CURRENT PROGRAMS



*California Energy Commission co-funded

**California Public Utilities Commission funded

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

ANNUAL IMPACTS OF CURRENT PROGRAMS

	Electricity savings	Greenhouse gas reductions	Customer bill savings
Solar Access	-	350 metric tons CO ₂	\$200,000
Home Appliance Savings Program	110,000 kilowatt-hours	8-29 metric tons CO ₂ *	\$38,000
Energy Efficient Business Program	4,959,000 kilowatt-hours	360 metric tons CO ₂	\$1,215,000
SJ Cares	-	-	\$5,500,000
Total	5,069,000 kilowatt-hours	718 – 740 metric tons CO₂	\$6,953,000

*Depends on the number of electric appliances that will replace natural gas appliances

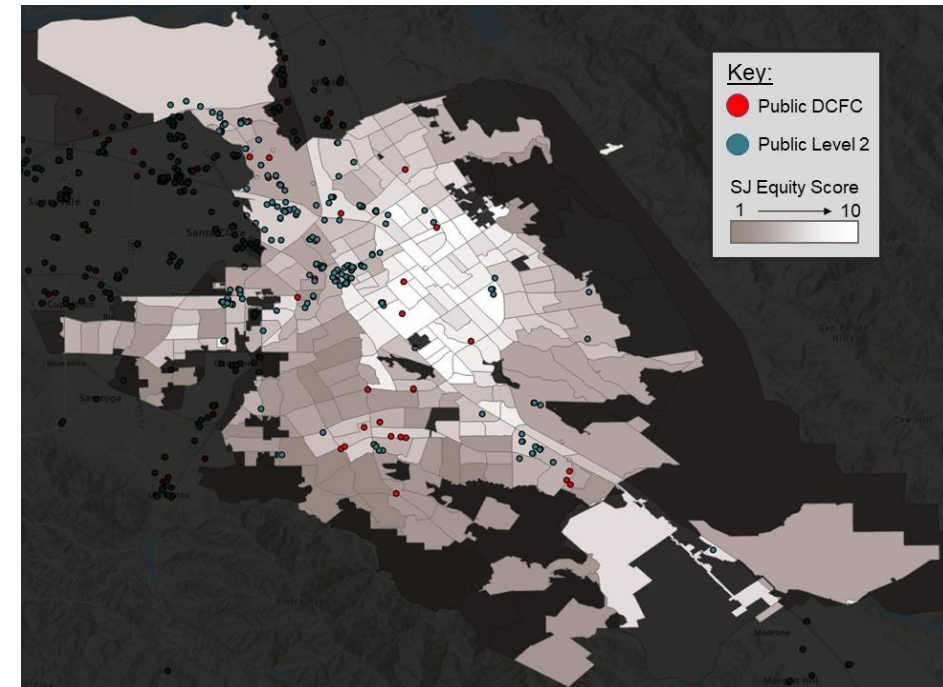
VEHICLE ELECTRIFICATION

CALeVIP

- Launched Dec 2020
- \$14 million for Level 2 and direct current fast charging infrastructure at multifamily, workplace, and public locations
- 35% of funding in state-defined disadvantaged and low-income communities
- 100 Level 2 and 11 DCFC installed so far

Fast charging hubs pilot

- Approved Nov 2022
- 1-3 DCFC hubs at City-owned sites in neighborhoods lacking EV charging infrastructure
- Pay-for-performance tolling agreements with developer(s)
- Test retail pricing structure to incentivize daytime charging
- Estimated online date: early to mid 2024



DISTRIBUTED ENERGY RESOURCES: SOLAR ACCESS

- Launched Nov 2021
- CPUC-funded
- ~840-940 CARE and FERA customers in neighborhoods with high levels of pollution receive 20% bill discount and 100% solar from an array in Merced County
 - CARE/FERA: annual income below 250% of federal poverty guidelines
- Fully subscribed

GET 20% OFF YOUR ELECTRICITY BILL

- ▶ You are eligible to save with Solar Access from San José Clean Energy and the City of San José
- ▶ No solar panel installation or equipment needed

Obtenga un 20% de descuento en su factura de electricidad

- ▶ Usted es elegible para ahorrar con el Programa de Acceso Solar de San José Clean Energy y de la Ciudad de San José
- ▶ No se necesitan instalación ni equipo de paneles solares

Chiết khấu 20% hóa đơn tiền điện của quý vị

- ▶ Quý vị đủ điều kiện để tiết kiệm nhờ có Mặt Trời Giá Rẻ Cho Bạn từ Năng Lượng Sạch San José và Thành Phố San José
- ▶ Không cần lắp đặt tấm quang điện hay thiết bị

SAN JOSE
CLEAN ENERGY
A Program of the City of San José

CITY OF
SAN JOSE
CAPITAL OF SILICON VALLEY



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

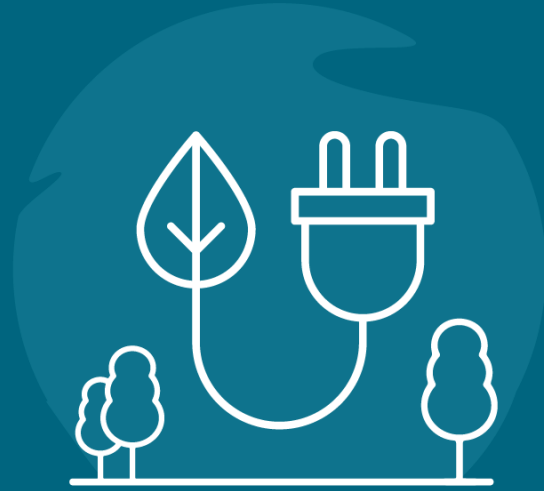
San José Energy Efficient Business Program

- 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

PROGRAM SPECIFIC RATES: SJ CARES

- Generation rate discount for CARE and FERA customers
 - ~75,000 customers
 - 21% of customers
- January 1, 2023: discount increased from 5% to 10%
 - ~\$6 per month

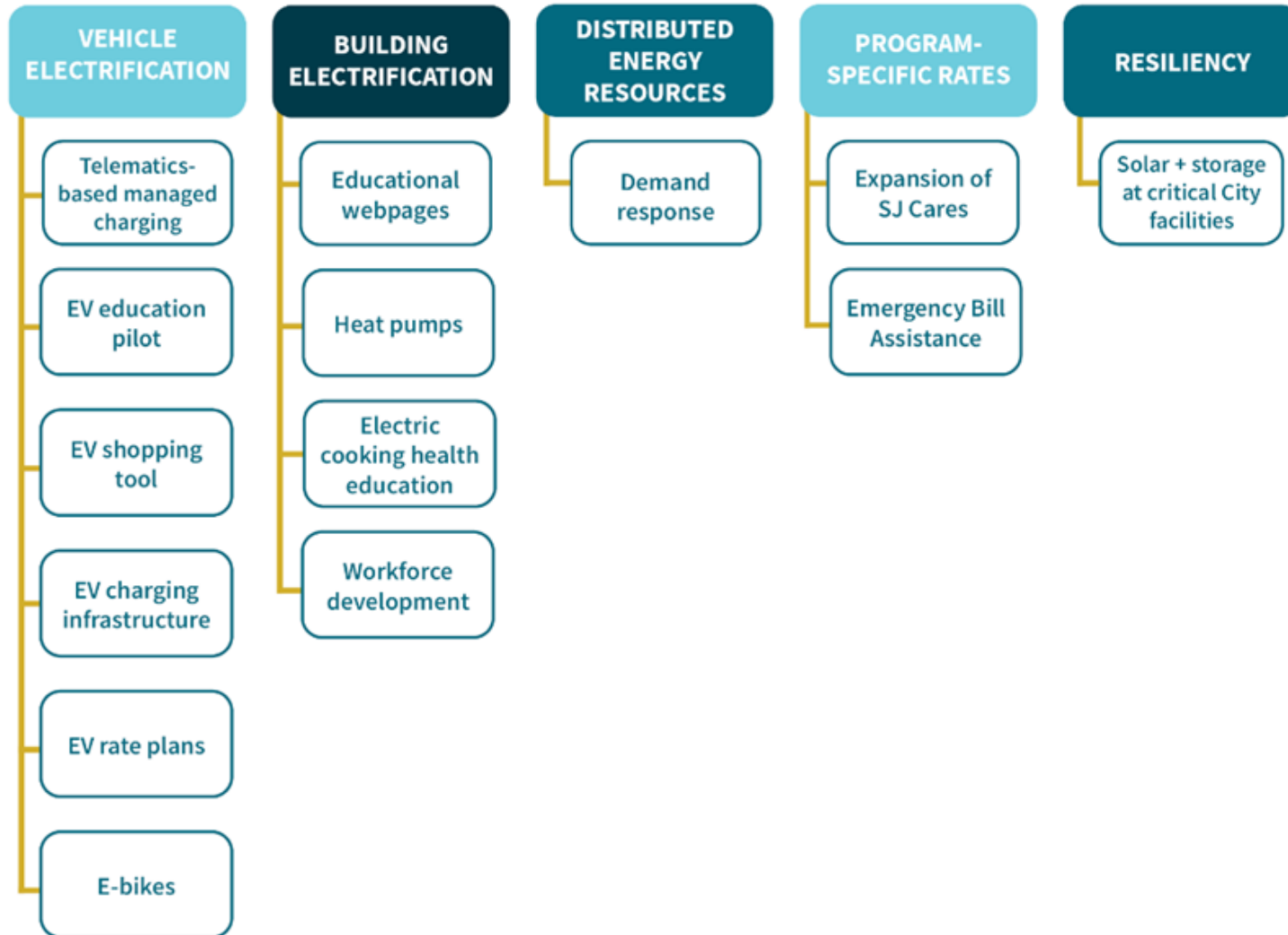




NEAR-TERM PROGRAM RECOMMENDATIONS

NEAR-TERM PROGRAM RECOMMENDATIONS

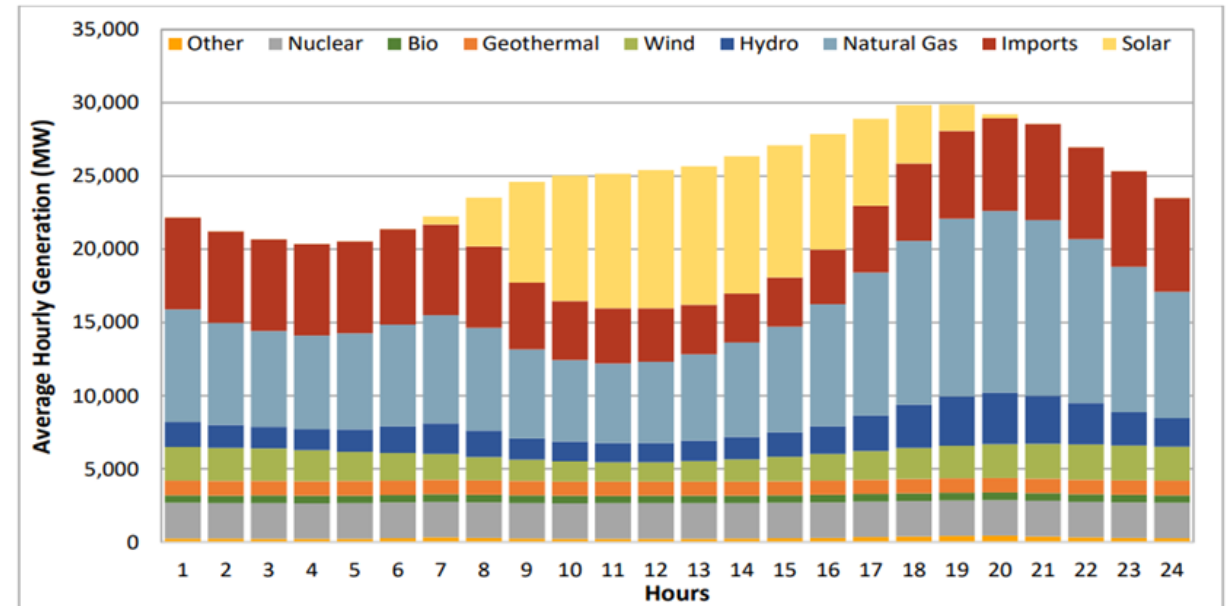
Calendar
years 2023
and 2024



VEHICLE ELECTRIFICATION

SJCE is focused on:

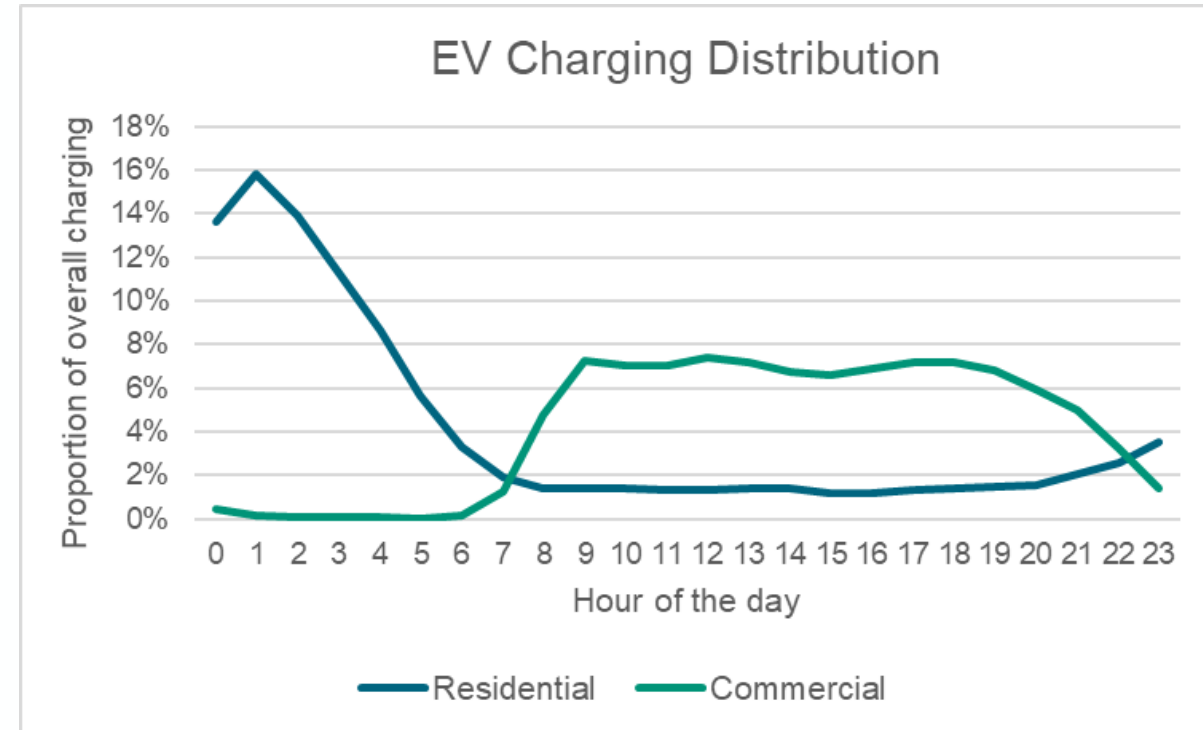
1. Managing the additional electric demand from charging to reduce greenhouse gas emissions and improve resiliency
2. Helping ensure equitable EV adoption and access to charging infrastructure



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



STACKABLE INCENTIVES

2023 Bolt EV

Starting at \$26,595*

As shown \$29,795*



CARVANA CERTIFIED

2015 Nissan LEAF

S • 59,014 miles

\$14,990

New EV

Low-income Stackable Incentives	Amount
Federal: New EV tax credit	Up to \$7,500
State: Clean Vehicle Rebate Program	Up to \$7,500
Local: Clean Cars 4 All	Up to \$9,500
Total new, base model Chevy Bolt*	\$2,095 \$12,000

Used EV

Low-income Stackable Incentives	Amount
Federal: Used EV tax credit	Up to \$4,000
Local: Clean Cars 4 All	Up to \$9,500
Local: PG&E	\$4,000 \$12,000
Total used Nissan Leaf*	As low as \$0

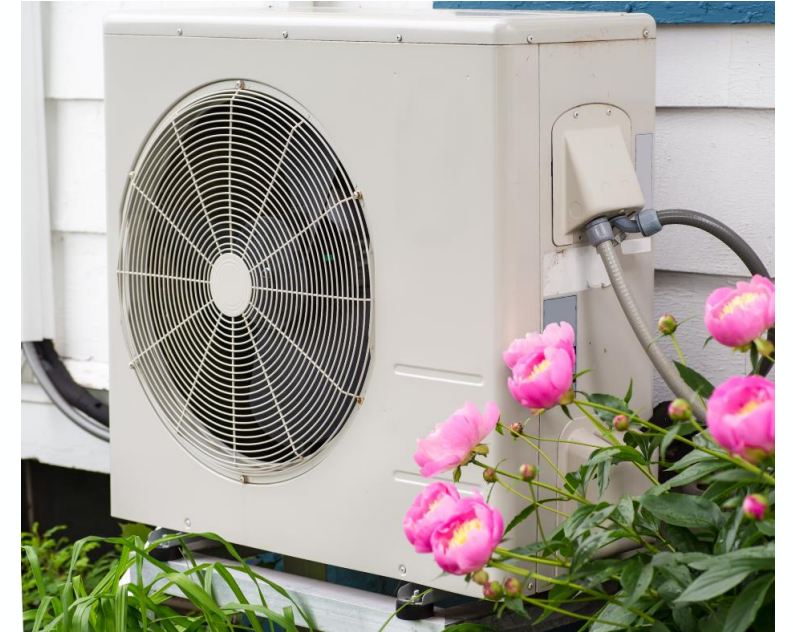
*Before taxes, fees, and registration

RECOMMENDED NEAR-TERM VEHICLE ELECTRIFICATION PROGRAMS AND PILOTS

Program	Description
Telematics-based managed charging	Shift charging for 500 residential EVs from evening peak and overnight to daytime, when electricity is cleaner and cheaper. Shift 10-12 times per month and during grid emergencies.
EV education pilot	Test drive events, financial education workshops, and one-on-one assistance applying for incentives targeted to low-adoption neighborhoods, with 3-5 community-based organizations.
EV shopping tool	Online multilingual website for comparing lifetime costs and emissions for EVs versus gas-powered cars and finding incentives and nearby chargers.
EV charging infrastructure	Submit \$5 million innovation pilot concept to CPUC to install EV chargers in neighborhoods with low EV adoption and infrastructure.
EV rate plans	Explore adjusting commercial EV rate to encourage more daytime charging.
E-bikes	Rebate program for CARE and FERA customers.

BUILDING ELECTRIFICATION

- Replacing natural gas uses in buildings with electric: heat pump water heaters, heat pump-HVAC, electric cooktops & electric dryers
 - More efficient, safer, healthier, less expensive to operate
 - Consistent with City's Building Electrification Framework (May 2022)
- New federal and state programs to incentivize electric appliances:
 1. Inflation Reduction Act tax credits
 2. Federal High-Efficiency Electric Home Rebate (HEEHR) program: rebates for households <150% area median income
 3. CPUC Self-Generation Incentive Program for heat pump water heaters
 4. TECH California contractor incentives for heat pump HVAC



RECOMMENDED NEAR-TERM SJCE BUILDING ELECTRIFICATION PROGRAMS

Program	Description
Educational webpages	Build new webpages on heat pump water heaters, heat pump HVACs, and electric dryers and cooktops, including costs, incentives, permits, testimonials, and bill impacts.
Heat pump program	Leverage \$5 million in CPUC program funding for 500 heat pump water heater installations and panel upgrades. Estimated CO2 reductions: 8,200 metric tons over a 15-year heat pump lifetime
Electric cooking health education	Educational campaign featuring videos with scientists, chefs, and microinfluencers about electric cooking and the health impacts of natural gas.
Workforce development	Leverage Silicon Valley Clean Energy's online contractor training; pay up to \$5,000 to San José participants to install a heat pump at their home or business.

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)



RECOMMENDED NEAR-TERM SJCE DISTRIBUTED ENERGY RESOURCES PROGRAMS

Program	Description
Demand Response	Implement demand response programs in four phases, starting with behavioral demand response for targeted commercial customers in summer 2023. Compensate customers for energy savings during energy saving events and grid emergencies while lowering SJCE energy procurement costs.

RECOMMENDED NEAR-TERM SJCE PROGRAM-SPECIFIC RATES

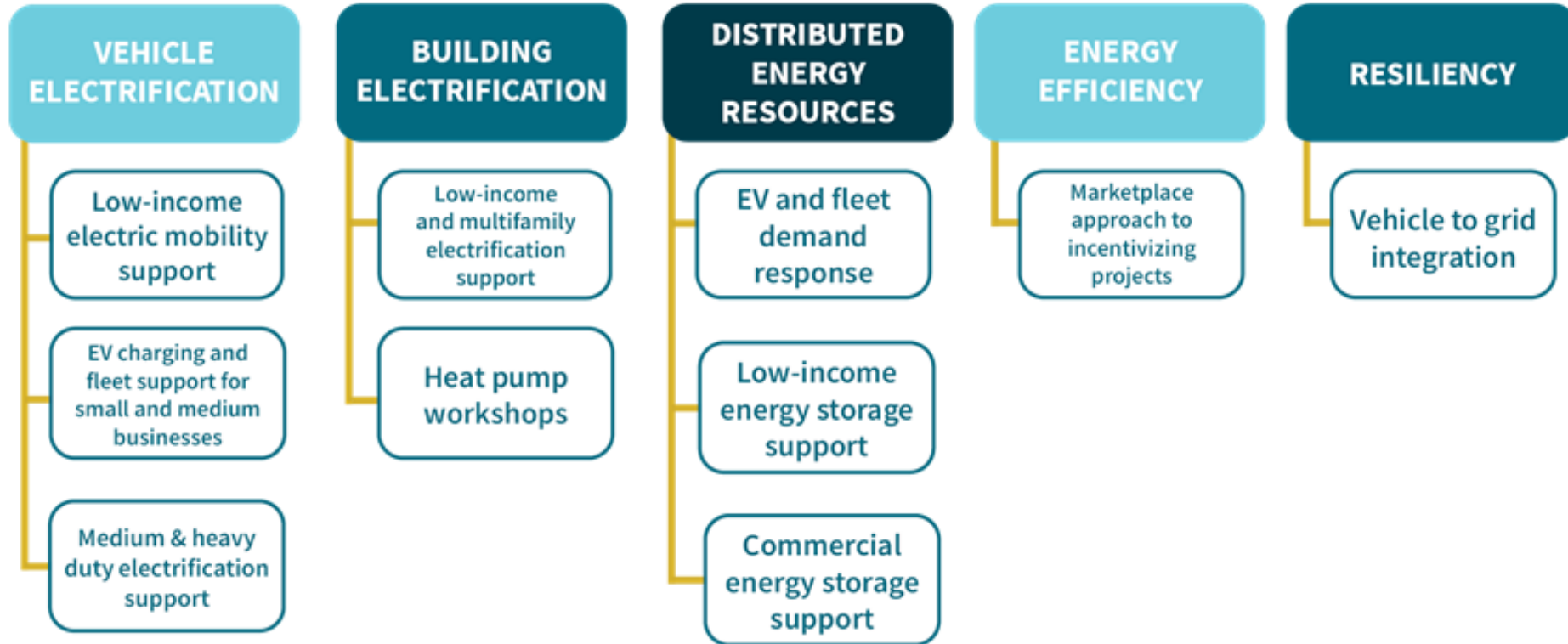
Program	Description
SJ Cares Expansion	Work with City and County public assistance agencies to explore expanding automatic enrollment in SJ Cares.
Emergency Bill Assistance	Provide funds for overdue bill payment to households at risk of falling into homelessness.

RECOMMENDED NEAR-TERM SJCE RESILIENCY PROGRAMS

Program	Description
Solar + storage at critical City facilities	Work with San José Clean Energy-funded program manager in Public Works to add microgrids to critical City facilities, potentially through a power purchase agreement or feed-in tariff.

LONG-TERM PROGRAM RECOMMENDATIONS

2025 &
beyond

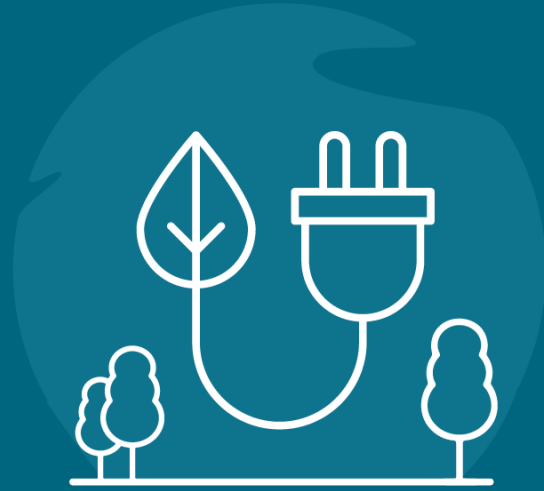


QUESTIONS?

- Recommendation: Accept report on SJCE's Programs Roadmap update.



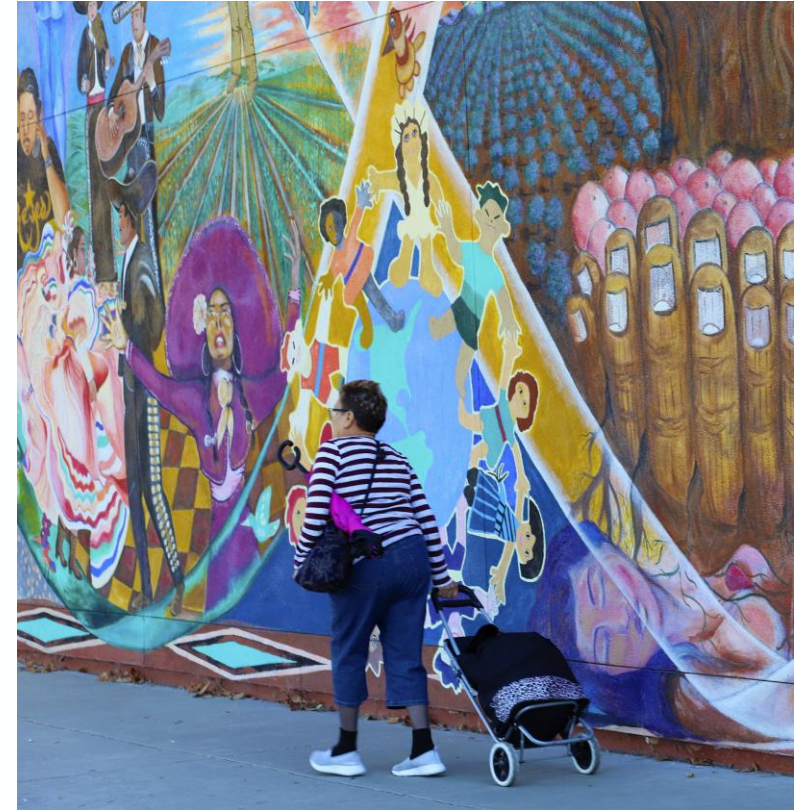
- Staff
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EXTRA SLIDES

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

