



Clean Transportation



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Clean Transportation

Inland SoCal – Let's Make it Happen!

December 5, 2024

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Data Visualization, Program Evaluation, User Experience, Market Research



Center for
Sustainable
Energy®

About Center for Sustainable Energy

Focus Accelerate adoption of clean transportation and distributed energy through effective and equitable program design and administration

Clients Governments, utilities and the private sector

Approach Data-driven and software-enabled approach
Deep domain expertise
Customer-focused team
Fee-for-service business model ensures independence

Vision A future with sustainable, equitable and resilient transportation, buildings and communities



We have one mission – Decarbonize.®

\$4B+ Program Management Portfolio



EV Incentive Programs: \$2.3B+

- CA – Clean Vehicle Rebate Project
- CT – CHEAPER
- DE – Clean Vehicle Rebate Project
- MA – MOR-EV
- NJ – Charge Up New Jersey
- NY – Drive Clean NY & Truck Voucher
- OR – Clean Vehicle Rebate Program
- VT – PEV, Replace Your Ride, E-Bikes
- Utility EV programs (PG&E, SCE)

Over 600,000 rebated vehicles



EV Charging Incentive Programs: \$500M

- CA – CALeVIP
- MA – MassEVIP
- NJ – Residential Charger Program
- NY – Charge Ready New York
- PA – EVSmart

Funding issued for:
6,000+ L2 chargers
1,400+ DCFC connectors



Distributed Energy: \$1.3B

- CA – Solar on Multifamily Affordable Housing
- CA – Self-Generation Incentive Program
- TBA - Solar For All programs

8,400 projects funded

Let's Take the Lead on Clean Transportation

In Inland SoCal, we can leverage our assets to advance clean transportation for our communities and beyond.



Incentivize
local market
transformation



Build
our own
infrastructure



Advocate
for cohesive
policy



**Work
Together** for
win-win
innovations

Why Clean Transportation Matters

Climate

Transportation is the largest source of U.S. greenhouse gas emissions (GHG) ([U.S. EPA, 2022](#))

- 57% Light-duty (LD)
- 23% Medium- and heavy duty (MD/HD)
- 20% Aircraft, Other, Rail, Ships and Boats

Money

An EV can save a driver \$6,000-\$12,000 over vehicle lifetime vs. gas car ([Consumer Reports, 2023](#))

Health

No tailpipe emissions -> less pollutants -> fewer premature deaths ([Choma et al](#))

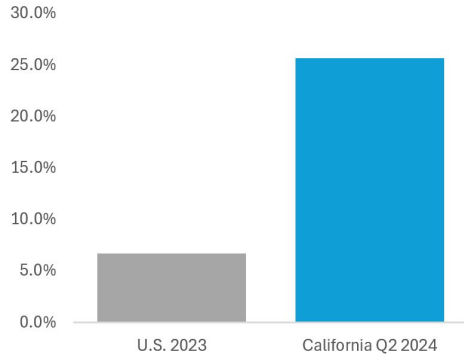


Why Incentivize EVs?

Over 10 years, California LD EV incentives have helped transform the market.

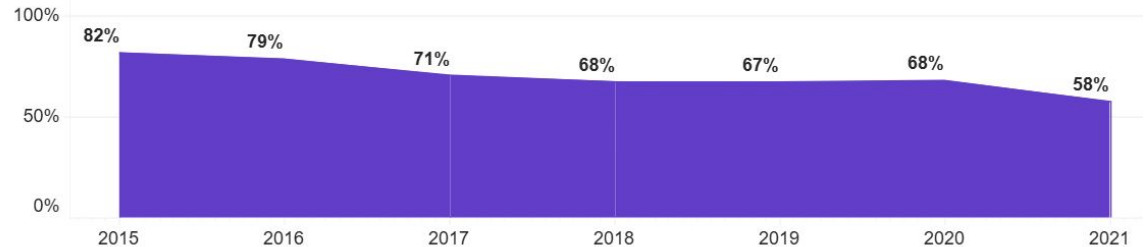
California ahead of U.S. in EV adoption

Percent of vehicles sold that are EVs



How Much of the EV Market Did the Programs Capture Over Time?

Cumulative incentives issued divided by cumulative EVs on the road in California. | Not filterable





Why Incentivize EV and EVI in Inland SoCal?

EV and charging infrastructure adoption is growing, but we will still need incentives to meet our decarbonization goals.

- Inland SoCal is behind the rest of the state in LD EV and EVI adoption
 - 11.5% of all cars and trucks registered in California [\(CA Department of Motor Vehicles, 2022\)](#)
 - 9.3% of all EVs registered in California (CA Department of Motor Vehicles, 2022)
 - 4.3% in San Bernardino County
 - 5% in Riverside County
 - Combined, Riverside and San Bernardino counties have
 - 2x **less L2** EV charging than San Diego County
 - 40% **more DCFC** charging (mostly on long distance routes)
- MD/HD EV and EVI sales are increasing due to regulatory pressure, but cost is an order of magnitude greater than LD

Goal

100% zero-emission



LD sales
2035



MD/HD
sales
2045

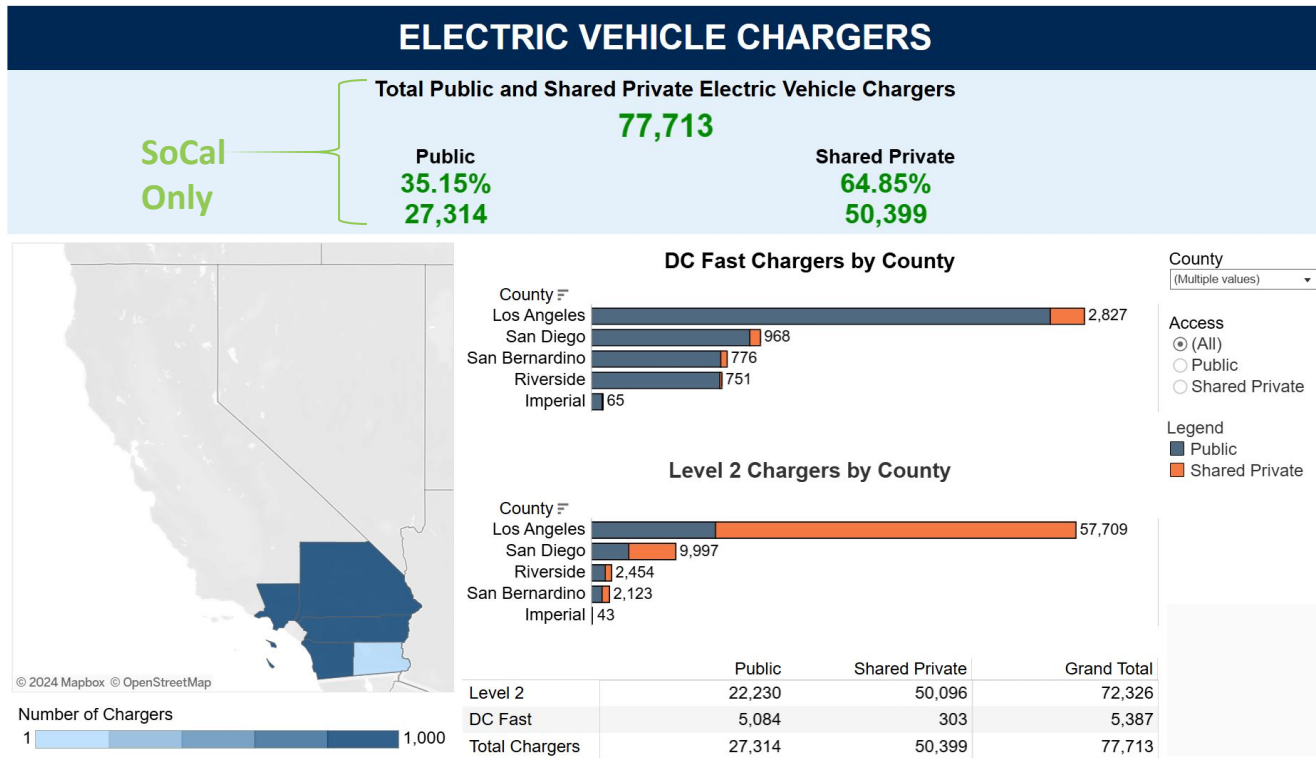
Inland SoCal Needs More Charging Options

Statewide

- 150,000 public or shared private chargers installed
- 500,000 at home chargers

Inland SoCal

- Our region is behind LA, Orange, and San Diego Counties in available public chargers



LD EV incentives issued in Inland SoCal:

Riverside County: 23,819

Breakdown by Equity Community:



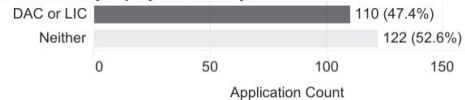
San Bernardino County: 19,905

Breakdown by Equity Community:



Imperial County: 232

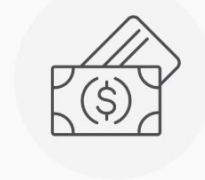
Breakdown by Equity Community:



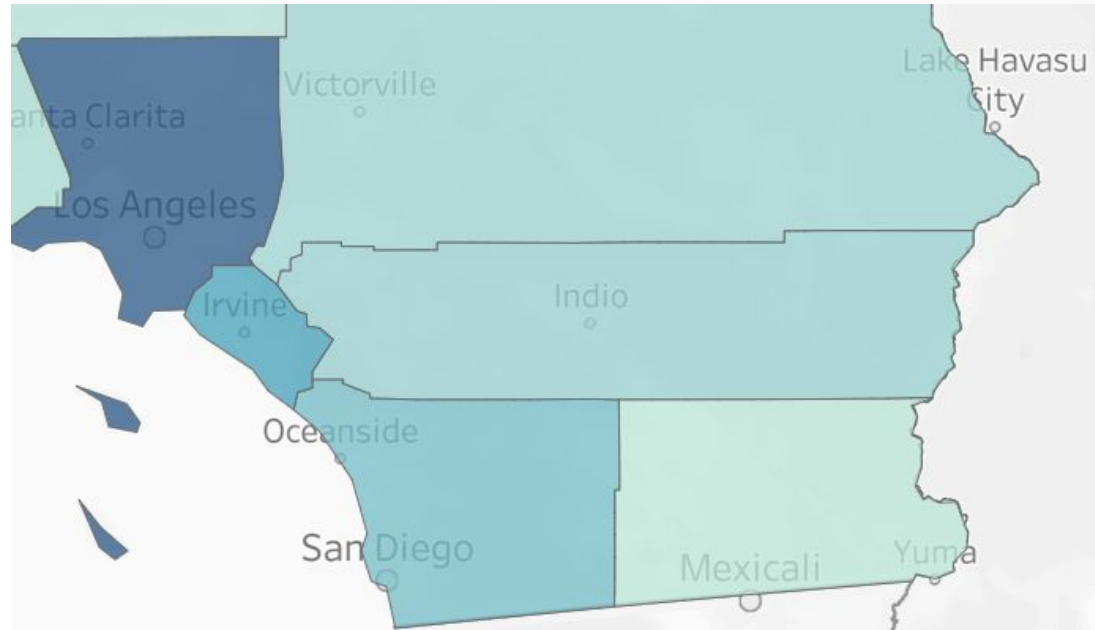
\$128,593,624
Funds Distributed



43,956
EVs Incentivized



\$35,177,011
Funds Distributed
to DACs/LICs





Regional Plan Focus on Clean Tech, Manufacturing, and Cybersecurity Will Support Ecosystem of Related Jobs

Using logistics as an example...

Thrive Inland SoCal
Regional Economic Plan's
Clean Tech and Advanced
Manufacturing **strategies**
support pathways for
skilled workforce in
clean transportation

- Regional charging hubs near logistics facilities can **create opportunity for more efficient use of charging resources** by generating constant electrical demand
- As logistics industry automates...
 - Advanced manufacturing can use logistics spaces and build products for clean transportation industry
 - We can **replace lower-wage jobs with higher-wage, higher skilled jobs** in manufacturing, EV and EVI higher-voltage operations, cybersecurity to protect infrastructure assets
- Training and workforce development pipelines linking training to apprenticeships and degrees/credentials support career pathways
 - CSU San Bernardino is training cybersecurity and IT professionals
 - RCCD trains electricians and EV/EVI workforce



Advocate for Coherent Policies that Support Communities and Clean Tech Ecosystem

Inland SoCal collaboratives need to advocate for policies that will help efficiently accelerate clean power options

Concerns...

- Growing electric demand must be carbon-free by 2045: SCE increased 10-year growth forecast by another 35%
- Significant barriers to establishing strong distributed energy systems with charging that benefit communities (permitting delays, power sharing, grid capabilities)
- Risk of technology obsolescence for expensive, long-term MD/HD electrification investments (water district fleets, drayage fleets)
- Workforce not prepared to address operations and maintenance needs

Policy changes could help...

- Support distributed generation projects with power sharing agreements and clean air commitments for communities that host charging hubs – leverage commercial/industrial locations for solar+storage
- Continue to ensure that tribal communities have true sovereignty over transportation and building electrification choices
- Make sure it costs more for companies to pay penalties for polluting MD/HD trucks than it would to install and maintain MD/HD charging infrastructure
- Support apprenticeship and training and job placement programs for local EV/EVI workforce



Work For Win-Win Innovative Projects

We must work together across sectors and interests to secure funding for Inland SoCal clean tech projects that improve work, life, and transportation

How can **you** make change happen?

- Which specific communities and organizations are willing to pitch a collaborative clean energy and transportation project?
- Which partnerships can support career pathway development in clean transportation?
- What funding sources can you help bring to the region?

Thank you

Thank you to colleagues who informed this presentation:

- CSE: Rick Teebay, Stephanie Furnish, Cori Erickson, Daniel Flores, Cecilia De La Fuente Chavez, Crista Gregg
- AQMD: Todd Warden
- IEGO: Matthew Mena
- IELI: Hillary Jenks
- GreenLane Infrastructure: Andrea Pratt
- LA County Sanitation Districts: Diane Engler
- Santa Clarita Valley Water Agency: Jesus Martinez Ramirez

Current EV and EVI Incentives for Inland SoCal



Vehicles

- Driving Clean Assistance Program
 - EV purchase incentive
 - Financing assistance
 - Scrap and replace option - Clean Cars 4 All
- SCE Pre-Owned EV Rebate
 - Used EV incentive
- Replace Your Ride
 - EV voucher
- Hybrid and Zero-Emission Truck and Bus Voucher Incentive Project
 - Funding open for Transit, Drayage truck, Innovative Small e-Fleets (rent, lease, truck-as-a-service)

Infrastructure

- Driving Clean Assistance Program
 - Home charging and public charging incentives
- SCE Charge Ready Home
 - Panel upgrade to support charging
- CALeVIP
 - Incentives to install publicly-accessible EV chargers
 - 2025: DC fast charger program begins
- Communities in Charge
 - Incentives to install private and public L2 chargers



58

Reserved
DC Fast Charger Ports



337

Reserved
Level 2 Ports



158

Operational
DC Fast Charger Ports



169

Operational
Level 2 Ports

\$91,901,075
Funding
Applied For

\$4,412,000

Funding
Reserved



\$4,976,875

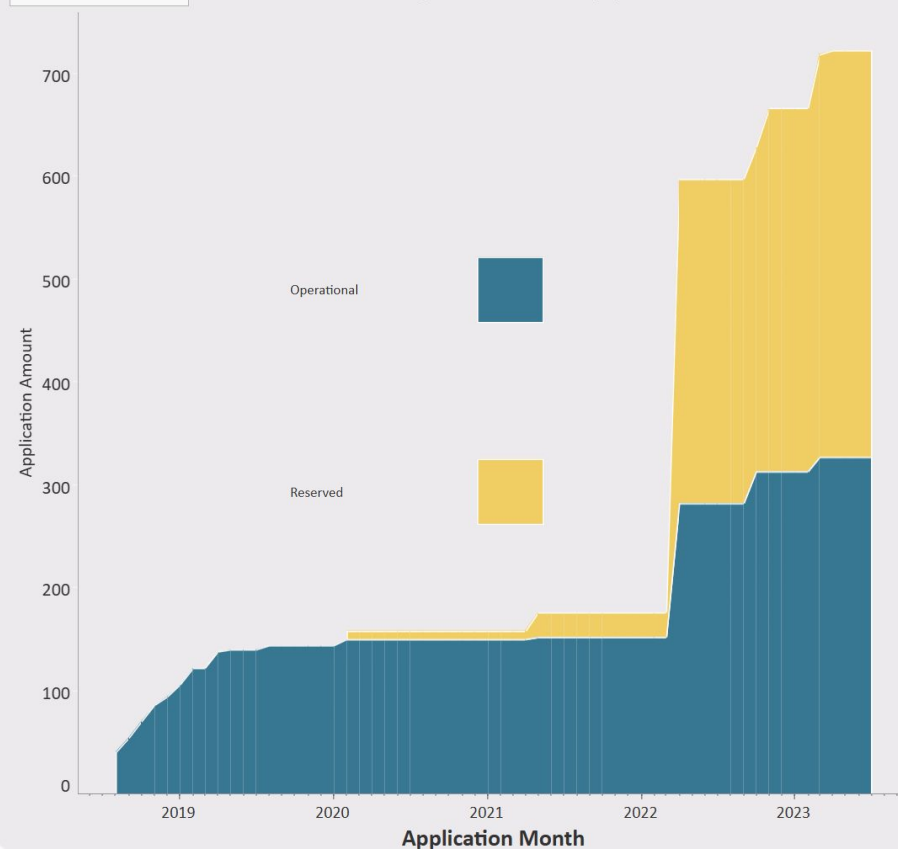
Funding
Issued

- The CALeVIP program is helping increase LD public charging throughout Inland SoCal
- Likely offering new DCFC funding in 2025
- Projects can take 18+ months to complete

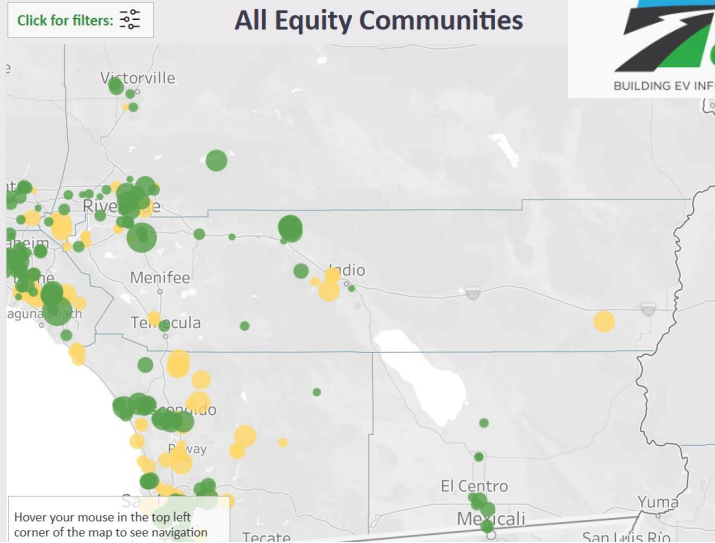


Total Ports by Current Application Status

Click for filters: [Filter icons]



All Equity Communities



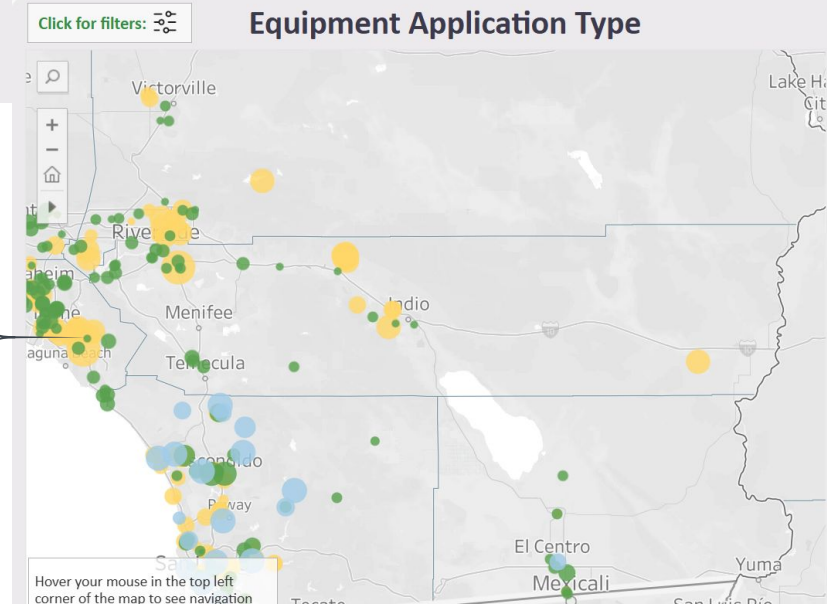
- Equipment Application Type
 - Applicant Type
 - Main Site Uses
 - Site Type
 - All Equity Communities
 - Disadvantaged Communities
 - Low Income Communities
 - Air District
 - Utility Provider
 - Network Provider
- Show/Hide Received Applications
Hide Received Applications

Equity Community ■
Not an Equity Community ■

Rebate Statistics Dashboard

- Intentional investment in equity communities
- Desert regions underserved

Equipment Application Type



Click for filters: [filter icons]

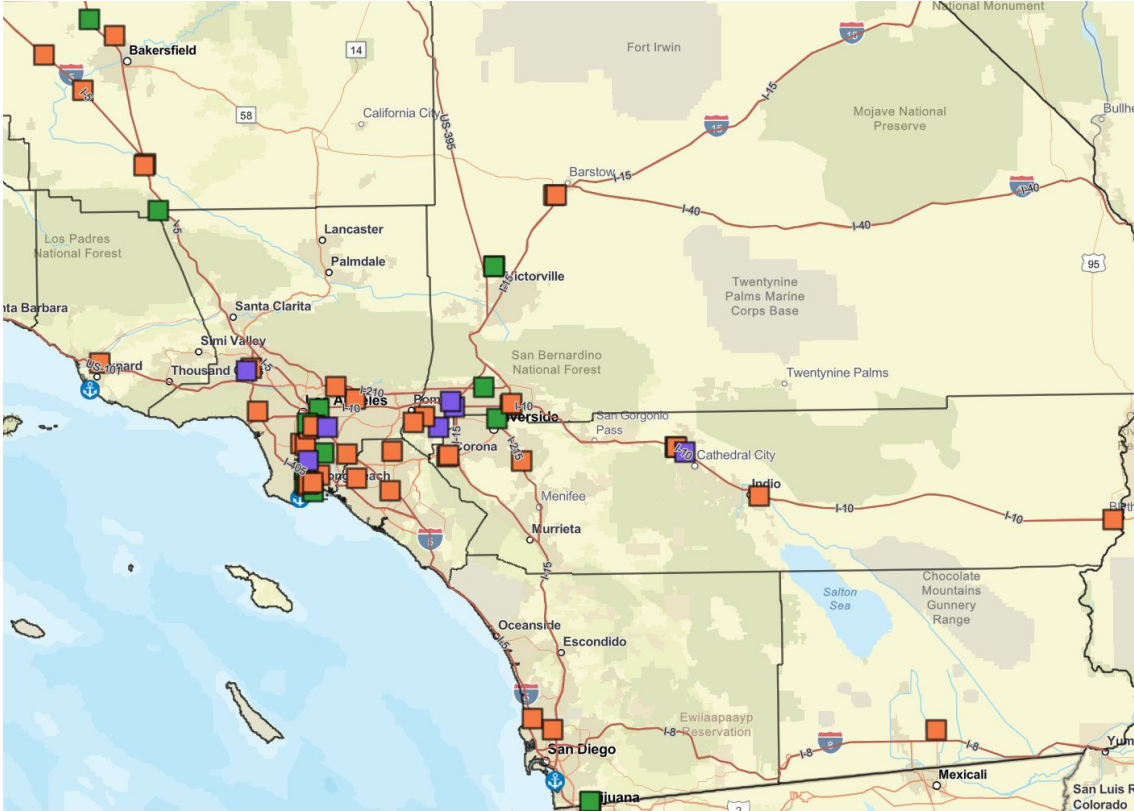
- Select Data View
- Current Application Status
 - Incentive Project
 - Equipment Application Type
 - Applicant Type
 - Main Site Uses
 - Site Type
 - All Equity Communities
 - Disadvantaged Communities
 - Low Income Communities
 - Air District
 - Utility Provider
 - Network Provider
- Show/Hide Received Applications
Hide Received Applications

Combination Application
DC Fast Charger ■
L2 ■

Substantially more L2 than DCFC funded to date
<https://calevip.org/rebate-statistics>



Medium-and Heavy-Duty Zero Emission Vehicle Charging and Hydrogen Infrastructure



Beta Version of Dashboard

- Includes locations under development and operating
- Estimated transit infrastructure included in private charging and infrastructure totals

- Charging
- Hydrogen
- Both



California Energy Commission 2024. California Energy Commission MDHD ZEV Station Development in California - Beta Version. Data Last Updated October 8, 2024. Retrieved 11/27/2024 from <https://www.energy.ca.gov/data-reports/energy-almanac/zero-emission-vehicle-and-infrastructure-statistics-collection/mdhd-zev>.



Communities in Charge: EV Charging Installation Incentive Program



December 5th, 2024

About GRID Alternatives



- At GRID, we believe that a successful transition to clean energy must include *everyone*.
- GRID's core areas of work include solar & storage, clean mobility, workforce development, and policy.
- GRID Alternatives helps underserved communities achieve their clean energy goals while providing financial savings and job training opportunities to improve their members' quality of life.



Image: Menominee Sustainable Development Institute
Photo Credit: Tribal Solar, Instagram, 8 August, 2024

Why Does My Community
Need Clean Transportation?

Air Pollution in the Inland Empire

Ozone Ranking	State	County	WA
1	California	San Bernardino	175.2
2	California	Riverside	128
3	California	Los Angeles	114.8
4	California	Tulare	103
5	California	Kern	87.5
6	California	Fresno	52.2
7	Arizona	Maricopa	47.7
8	Colorado	Jefferson	40.3
9	California	Placer	29.3
10	Colorado	Douglas	26

Image: *Most Polluted Places To Live Ozone Ranking*
Image Credit: *American Lung Association State of the Air 2024 Report*, American Lung Association, 2024.

- According to the American Lung Association, the Inland Empire has the **highest concentrations** of ozone pollutants in the country
- Continued exposure to particulate pollutants include: increased health risks, such as **decreased lung capacity and asthma**, disproportionate **environmental burden** for communities of color, and **wildlife & ecosystem degradation**.

Benefits of EVs and EV Charging Stations



Savings on gas & maintenance



Reduced greenhouse gas emissions



Clean air & health benefits

Background: What are the types of electric vehicle charging stations (EVCS)?



Level 1
120V
1-3 miles charged
per hour



Level 2
240V
10-25 miles charged
per hour



Level 3
Fast Charger
Up to 300 miles
charged per hour



COMMUNITIES IN CHARGE

Incentives for Level 2 EV Chargers
Where Communities Live and Gather

**Funding Wave 3 is open from November 14th, 2024
to January 31st, 2025 with \$30M in available
funding.**

Program Partners



Implementer



Funder



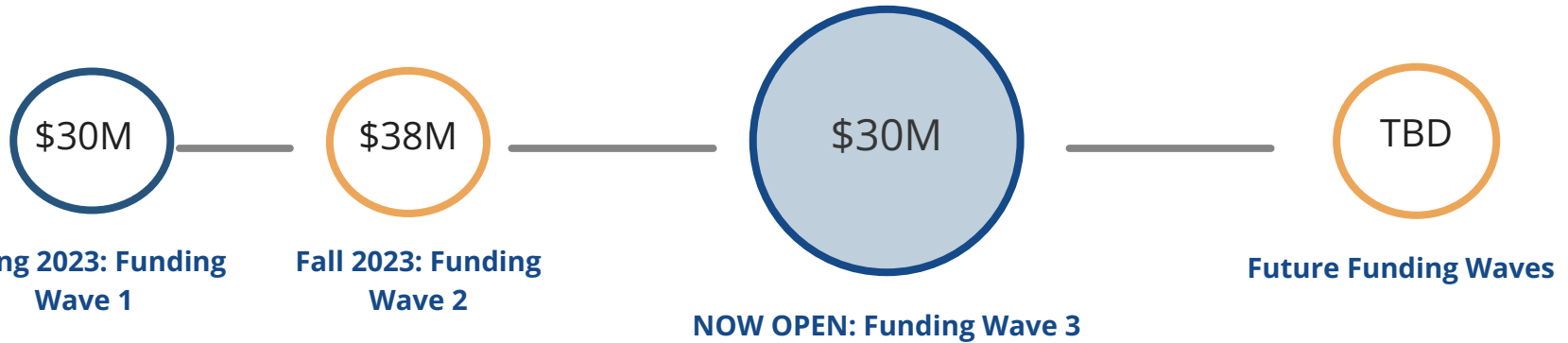
**Equity and Outreach
Partner**



TETRA TECH

**Application
Processing**

Communities in Charge Funding Waves



Funding Wave 3 Regional Allocations

Region	Proportion of Funds
Northern	\$5,000,000
Southern	\$10,000,000
Eastern	\$6,000,000
Central	\$9,000,000



Key Program Details

Rebate eligibility:

- Sites must install a **minimum of 4 connectors** & up to a maximum of 20 connectors at each project site
 - Workplaces and multi-family housing may install up to a maximum of 40 connectors
- Applicants may apply for multiple project sites
- Applicants must select from the lists of [eligible equipment](#) and [network providers](#)

Sample of eligible project costs:

- Level 2 charging equipment
- Planning and engineering design
- Electric panels and transformers
- Warranties from the OEM
- Service level agreements (SLAs) to maintain & repair the charging stations
- Networking agreements
- Demand management equipment and software
- Installation materials such as wires, conduit, etc.
- ADA upgrades required for the EV chargers
- On-site project signage

Project Site Eligibility

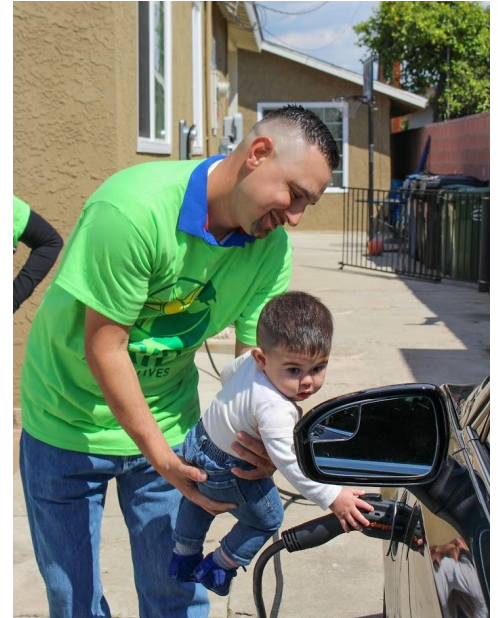
- Most commercial, local government, and multi-family project sites are eligible
- Charging may be private (ex. for employees or tenants only) or publicly available for all

Examples of eligible project sites:

- Government buildings: City halls, community centers, libraries, public parks
- Hospitals, clinics, and other healthcare facilities
- Houses of worship
- Parking lots and parking garages
- Vehicle yards for light-duty fleet vehicle charging
- K-12 schools, colleges, universities, and school district offices
- Workplace parking
- Multi-family housing (5+ units)

All applicants must be:

- The property owner, lessee, or authorized representative
- The one who incurs the cost of the project



Community Connections



Multi-Family Housing in Charge



Tribes in Charge



Healthcare in Charge



Schools in Charge



Congregations in Charge



Nonprofits in Charge



Local Governments in Charge



Workplaces in Charge

Incentive Amounts

























Eligible Incentives for Level 2 EVSEs	Amount Per Connector
Base Incentive	Up to \$6,500 or 100% of eligible project costs, whichever is less
Multi-family Housing Project	Additional \$2,000 towards eligible costs*
Project site for Tribal government, Tribal entity, or non-governmental organizations serving Tribal communities	Additional \$3,500 towards eligible costs

*An eligible Tribal Applicant whose Multi-Family Housing Project Site is located on Tribal lands may be eligible to receive \$12,000 per eligible connector towards eligible costs.

IMPORTANT NOTE: Incentive stacking is not permitted except applicants may participate in federal tax credit incentive programs or California Air Resources Board (CARB) Low Carbon Fuel Standard Program (LCFS)

Communities in Charge Application Process

Readiness Tiers & Application Checklist

Required Documents Checklist		Tier 1	Tier 2	Tier 3	
Required:		Site Verification Form			
Optional:		Final Site Design			
Not Applicable:		Issued Building Permit			
		Preliminary Site Design			
		Building Permit Application			
		Community Connection Documentation			
		Letters of Support			

Rubric Points

Community Connection	Points Awarded (Max of 10)
Project Site is a defined Community Connection	10
Priority Populations Designation	Points Awarded (Max of 5)
DAC and LIC, or Tribal and LIC	5
DAC or Tribal Only	4
LIC Only	3
Local Support	Points Awarded Per Letter (Max of 3 per application)
Letter of Support from Community-Based Organization serving the same community as the Project Site	1
Maximum Possible Points Per Application:	18

Note: All rubric scoring is secondary to your readiness tier.

Application Scoring: Readiness Tier & Rubric Score

	Regions			
Award Order	Northern	Southern	Central	Eastern
First	<u>Readiness:</u> Tier 1 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 1 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 1 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 1 <u>Rubric Score:</u> Highest to Lowest
Second	<u>Readiness:</u> Tier 2 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 2 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 2 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 2 <u>Rubric Score:</u> Highest to Lowest
Third	<u>Readiness:</u> Tier 3 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 3 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 3 <u>Rubric Score:</u> Highest to Lowest	<u>Readiness:</u> Tier 3 <u>Rubric Score:</u> Highest to Lowest

Preparing an application for Communities in Charge

1. Get to know your key partners

2. Get to know your site

3. Get to know your budget

4. Prepare your application & documents

Application Best Practices

- 1:** Connect with GRID Alternatives as early as possible for questions about getting started.
 - 2:** Work with an EVITP-certified contractor to get an initial site assessment. Many contractors will perform the site assessment for little or no cost.
 - 3:** If your site is eligible, apply as a Community Connection to boost your application score.
 - 4:** Review the application checklist to determine what readiness tier best fits your project timeline and needs.
- Bonus:** Support EV and Level 2 charger adoption in the Inland Empire by spreading the word about the Communities in Charge program.





Thank You!

Be sure to check our booth in the Assistance Lounge!

Fill out the interest form below to learn more:



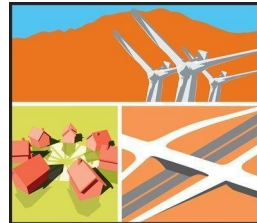
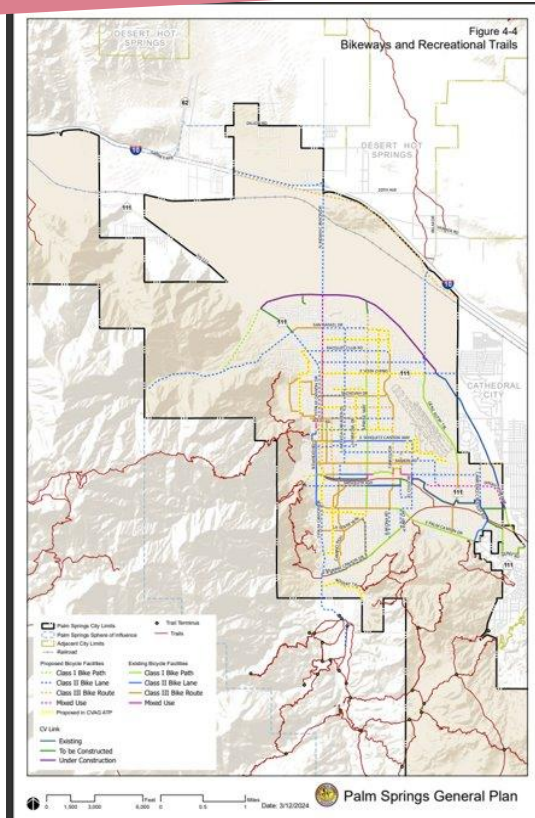
Clean Transportation in the City of Palm Springs

Lindsey-Paige McCloy
City of Palm Springs, Office of Sustainability

Who's Coming and Going?



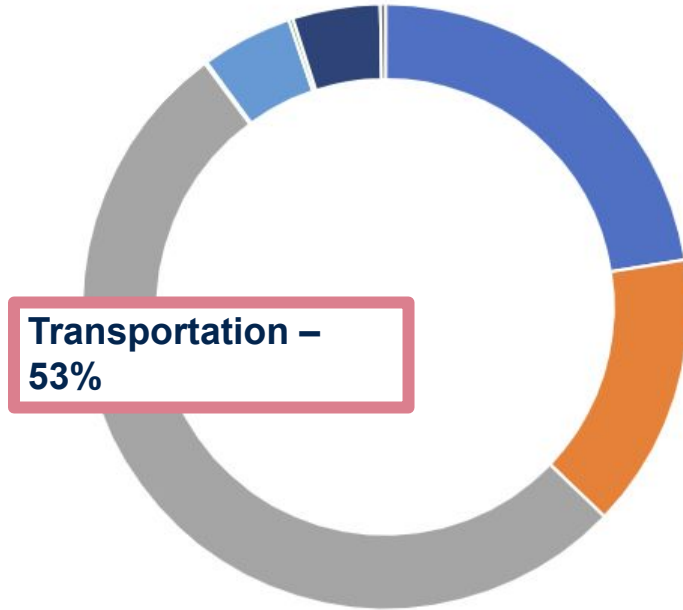
Transportation System Players



CVAG



Transportation Emissions and Goals



**Transportation –
53%**

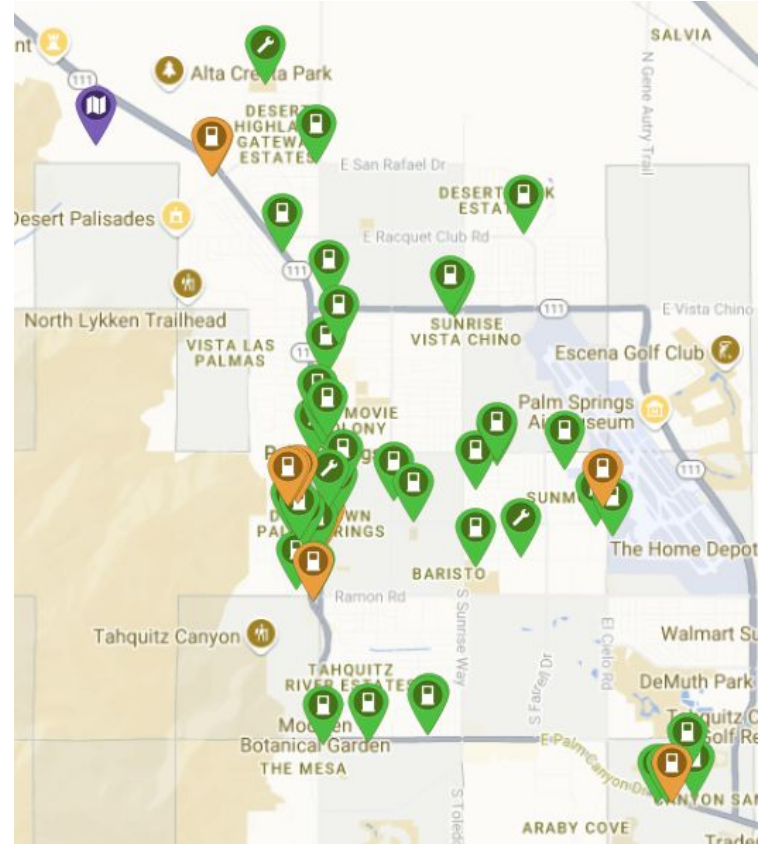
**2020 Estimated
GHG**

- Transportation makes up the largest single share of our emissions
- Citywide, we're in alignment with the State's goals of an 85% reduction by 2045 and a 40% reduction by 2030
- Reductions in total transportation GHG emissions to date can generally be attributed to improving fuel economy standards
- We're focused on the following areas:
 - Increasing active transportation
 - Increasing the share of EV trips for private vehicles and our City fleet



Project Example: Electric Vehicle Infrastructure

- High rate of EV ownership and rental
- City-owned chargers have been provided since 2011!
 - About half of the stations on this map are City-provided stations
 - Until summer 2022, all L2 stations provided free charging
 - Currently, about half of the City-provided chargers were installed through a license agreement
- 2023 and 2024 – intense focus on maintenance
 - Went from a 40% available rate to 90%
 - It Is Possible and You Can Fix Them



More Data! Transportation Habits

Primary Mode of Transportation	
Car (Gas)	68.84%
Electric or Hybrid Vehicle	20.47%
Motorcycle / Moped	0%
Public Transit	2.79%
Bike	2.79%
Walking	4.19%
Rideshare (Uber, Lyft,..)	0%
Carpool	0.47%
Other	0.47%

Secondary Mode of Transportation	
Car	15.81%
Motorcycle / Moped	1.86%
Bike	24.65%
Walking	31.6%
Rideshare (Uber, Lyft,...)	20.93%
Carpool	8.37%
Other	6.98%



Project Example: Heat and Shade Study

- Our Climate Action Roadmap requires a shift away from single-occupancy fossil fueled vehicles toward active, shared, low-carbon transportation
- Our climate can make that difficult, especially due to the characteristics of our population
- We recently received grant funding to execute a study to understand:
 - How does heat impact our transportation network?
 - Is shade distributed equitably in our city?
 - How might we improve heat safety to encourage low-carbon transportation?



Thank You!

Lindsey-Paige McCloy
City of Palm Springs, Office of Sustainability

