



**CPUC EPIC Strategic Goals
Grid Modernization Workshop**
September 6, 2023



LACI'S IMPACT

We are reducing Greenhouse Gas emissions, improving air quality, creating jobs, and building an inclusive green economy. We're also helping our startup companies make economic, social and environmental impact.



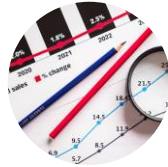
340

Startups served



\$697M

In funding



\$323M

In revenue



2565

Jobs created



\$573M

In long term
economic
impact



Top 10

UBI globally
ranked
incubator











LACI'S MISSION IN ACTION

Building an inclusive green economy, with a focus on Southern California

PRIORITIES

STRATEGIES IMPACT

	UNLOCKING INNOVATION through startups	MARKET TRANSFORMATION with partnerships	ENHANCING COMMUNITY on campus and in our neighborhoods	
 <p>TRANSPORTATION Transit & freight systems that are connected, shared and electric</p>	Incubating and accelerating clean tech startups and helping commercialize their technologies	Accelerating clean tech adoption and system change by engaging key stakeholders and decision makers	Working in collaboration with local communities, identifying sustainability challenges, creating opportunities and building a workforce pipeline	 <p>ENVIRONMENTAL GHG reduction, renewable energy generation, water savings and waste diverted</p>
 <p>CLEAN ENERGY Integrated energy generation and storage systems</p>	EXECUTIVES IN RESIDENCE BEST-IN-CLASS COACHING AND ADVICE	TRANSPORTATION ELECTRIFICATION PARTNERSHIP	DIVERSITY & INCLUSION PROGRAM	 <p>SOCIAL Employment for minorities and the previously excluded, Increased female employment</p>
 <p>SMART, SUSTAINABLE CITIES Circular economy: resilient food, water & waste systems</p>	INVESTMENT PREP AND ASSISTANCE SHARED SERVICES	CLEAN ENERGY PARTNERSHIP	WORKFORCE DEVELOPMENT	 <p>ECONOMIC Engagement with disadvantaged communities, jobs created, hiring from workforce development programs</p>
	ACCESS TO HIGH-VALUE RESOURCES	PILOTS & DEMONSTRATIONS	WOMEN IN CLEANTECH	

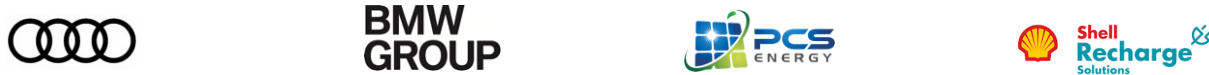


LACI Transportation Electrification Partnership (TEP)

LEADERSHIP GROUP



ADVISORY GROUP FOUNDING PARTNERS



ADVISORY GROUP ASSOCIATE PARTNERS



ADVISORY GROUP SUPPORTING PARTNERS



* CEC Commissioner Patricia Monahan is an advisor to the Leadership Group.

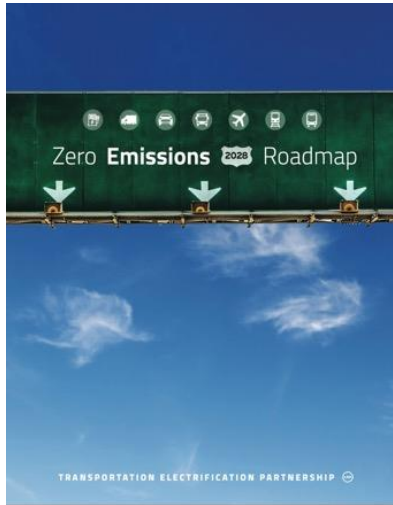
**Shell Recharge Solutions and bp pulse fleets are grandfathered into TEP from corporate acquisitions of Greenlots and AMPLY POWER.



LACI created the Transportation Electrification Partnership (TEP) in 2018 as an unprecedented regional public-private collaboration to accelerate deep reductions in climate and air pollution by the time of the 2028 Olympic and Paralympic Games by pursuing bold targets, pilots, initiatives, and policies that are equity-driven, create quality jobs, and grow the economy.

TEP 2028 REGIONAL CALL TO ACTION

In September 2018, TEP set a regional goal to move toward an **additional 25% reduction in GHG emissions and air pollution** by accelerating transportation electrification ahead of the 2028 Olympic and Paralympic Games. This 3-pronged call to action guides the individual and collective actions of the partnership.



1

Accelerating the adoption of light-duty passenger EVs to be 30% of all vehicles on the road and at least 80% of all vehicles sold



2

Shifting over 20% of all trips in single occupancy vehicles to zero emissions public and active transit



3

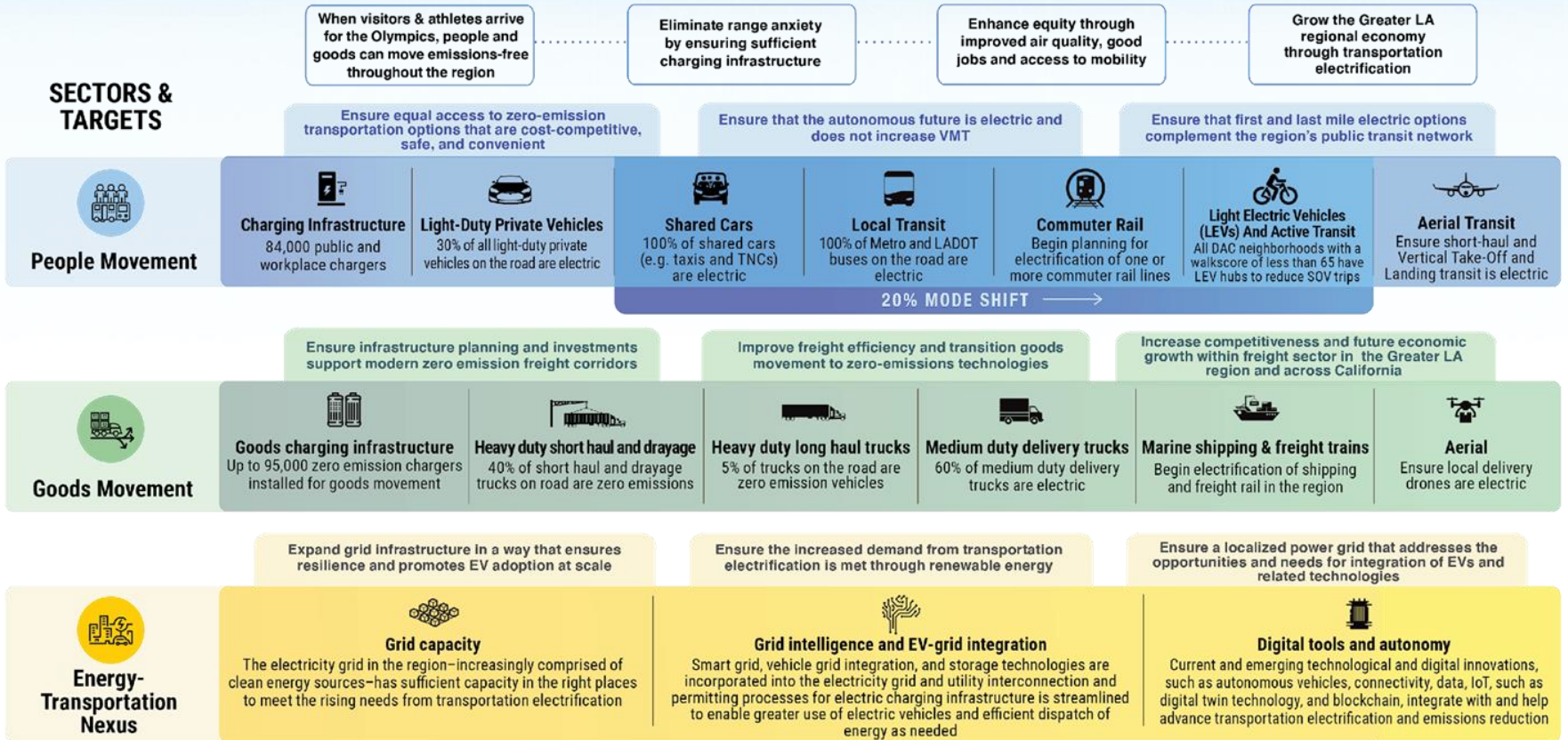
Ensuring all public investment into goods movement infrastructure advances zero emission solutions

Ensuring the I-710 is the first goods movement corridor in the nation with ample charging infrastructure to support the transition to 40% zero emission drayage trucks by 2028 and 100% by 2035.



Zero Emissions 2028 Roadmap Targets

Accelerate transportation electrification in the Greater LA region towards an additional 25 percent reduction in GHG emissions and air pollution by 2028 to build on our region's leadership



TEP has achieved critical funding, policy and pilot wins



Created “elbow room” with our bold regional targets for Governor Newsom to lead with ambitious statewide Zero Emission Vehicle (ZEV) goals



Proposed a comprehensive \$150bn federal stimulus package to Congress in April 2020, jumpstarting dialogue with Members of Congress and then the Biden Transition Team on the importance of federal investment in zero emission transportation



Passed CA legislation to create the nation’s first ZEV Equity Advocate in state government



Developed and implemented 10 pilots with community-based organizations and tech providers (EV car share, neighborhood EVs, e-bikes)



Created the nation’s first Zero Emission Delivery Zone in Santa Monica



Secured \$7.5M in Federal and Regional funding for EVSE for drayage trucks serving the Port of LA

LACI COMMUNITY MOBILITY PILOTS LAUNCHING in 2022-2023

Pico Gardens

EV Car Share + Level 2 Charging
EV Concierge Service
DC Fast Charging for TNC Drivers and Public



Huntington Park & Santa Monica

Curbside Charging



South LA

E-bike Lending Library



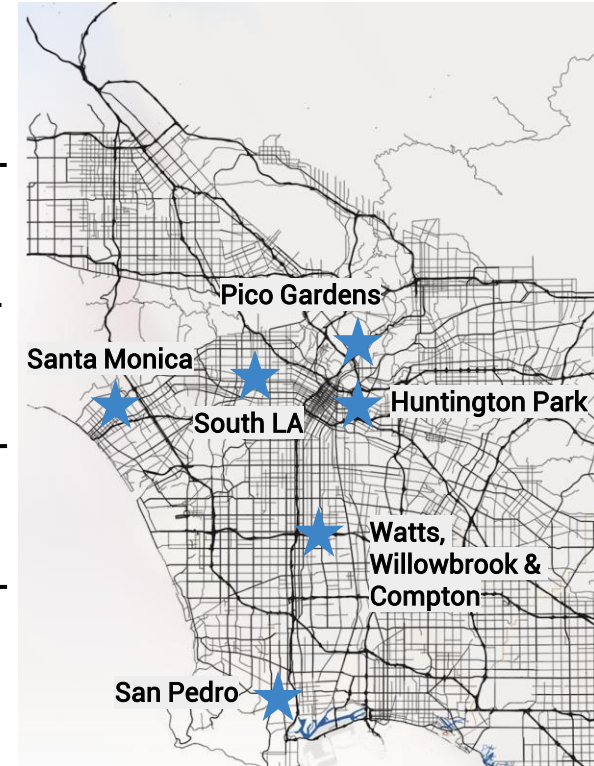
Watts, Willowbrook & Compton

E-bike Lending Library



San Pedro

E-bike Share
Complementing EV Car Share



ELECTRIFYING THE I-710 CORRIDOR

Working hand-in-hand with the Mayor's Office and the Port of LA, LACI is leading regional assessments, implementing grants, securing funding for, and influencing regulations to accelerate adoption of Class 8 zero emission trucks and infrastructure along the I-710 Corridor.

LACI Highlights

- Convened 20 local supporters to [request \\$3.3B in the 2022-2023 State Budget](#) for zero emissions goods movement solutions
- Created a series of **video testimonials from truck drivers** on the benefits of driving electric trucks
- Supported the Port of LA and Port of Long Beach to dedicate 100% of **Clean Truck Fund** revenues to zero emission solutions
- Participating in **Metro's I-710 ZE Truck Working Group**, for which we secured the participation of **senior Biden Administration officials** to speak on the need to focus funding on electric truck infrastructure
- Awarded \$3M from both the **Mobile Source Air Pollution Reduction Review Committee (MSRC)** and **LA Metro** to fund electric truck infrastructure project at POLA
- Finished a **CEC-funded Investment Blueprint** for Heavy-Duty Charging to Support; Battery-Electric Drayage along the I-710 Corridor, working in partnership with the **Coalition for Environmental Health and Justice**
- Leading a second **CEC-funded Blueprint in partnership with LA28** entitled "Going for Gold: A Blueprint to Catalyze Medium- and Heavy-Duty Charging Infrastructure Investments in the LA Region Preceding the 2028 Games"
- Participating in the CEC and CARB funded **California Joint Electric Truck Scaling Initiative**, being led by AQMD



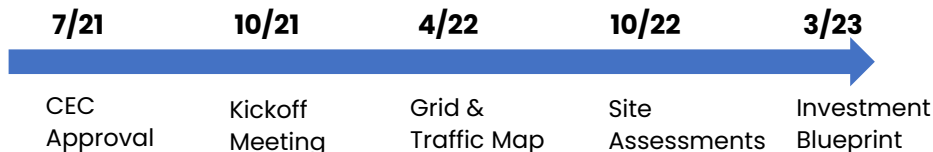
An Investment Blueprint for HD Charging To Support Battery-Electric Drayage Along the I-710 Corridor

Plan

LACI created an investment blueprint for heavy-duty charging depots adjacent to the busy I-710 freight corridor that can support battery electric trucks serving the San Pedro Bay Ports. Following a selection framework that incorporated grid infrastructure, drayage duty cycles, and community priorities, LACI identified priority locations for public and private heavy-duty charging infrastructure and associated cost structures.

The final blueprint provides a high-level budget for infrastructure deployments that will enable 40%, then 100% zero emission drayage at the San Pedro Ports, extrapolated from specific site evaluations.

Timeline



Products

1. Drayage Density Traffic Map
2. Grid Transmission and Distribution Analysis
3. Site Selections and Assessments
4. Charging Depot Business Model
5. Corridor Charging Investment Blueprint

10x Impact

- Successfully electrifying a critical goods movement region sets a precedent for other intermodal regions in CA and the U.S.
- Accurately assessing costs of depot provides fleets and facilities with information to speed transition

Partners & Supporters



Project Goals



Immediacy: What facilities can support electrified drayage operations today?



Community Input: What kind of facilities are priorities for electrification in the community?



Investment: What is the scale of capital investment needed for truck charging depots?



Business Models: How can different businesses incorporate sustainable operating models for heavy-duty charging?



Replicability: How can the process for prioritizing the 'low-hanging fruit' depots be replicated across different intermodal trucking operations?

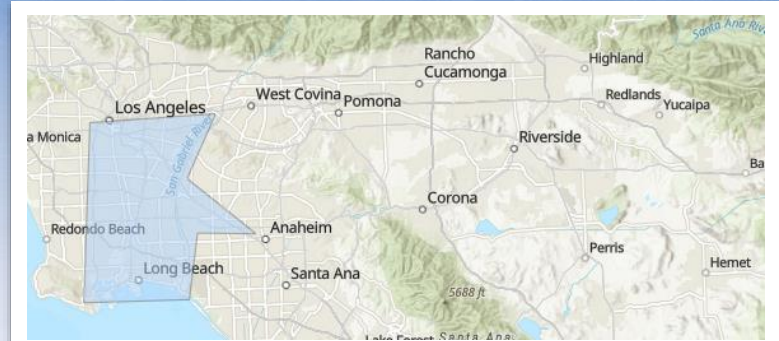
Estimated Financial and Facility Infrastructure Investment is Required to Support ZE Transition *just within 710 Corridor*

Est. Investment in 710 Corridor for 40% ZE Drayage by 2028

Depot Size (# of EVSE)	# of Depots
10	10
25	10
50	8
Depot Total	28
Charger Total	750
Total Investment	\$278,163,600

Est. Investment in 710 Corridor for 100% ZE Drayage by 2035

Depot Size (# of EVSE)	# of Depots
10	25
25	25
50	20
Depot Total	70
Charger Total	1,875
Total Investment	\$695,509,000



Study Area addresses approximately $\frac{1}{3}$ of the truck traffic and infrastructure required to meet 40% and 100% targets

LACI's Input on Strategic Goals Workshop: Four Core Elements



Pathways: Critical Actions necessary to support 2045 zero carbon goals

- Transmission and Distribution Infrastructure
 - Size and speed to deployment
- Decentralized grid
 - V2X reliability and costs
 - Pricing structures (ratepayer funded)



Roles: Best-positioned stakeholders to lead innovation investment?

- Growing Federal investments in research (Applied R&D)
 - CEC/Federal Cost-Share
- Closer to demonstration, the more local the entity - RD&D can partner with local entities
 - Need private sector buy-in



Gaps: Key challenges for achieving zero carbon goals and addressing barriers more quickly?

- Battery size, weight and energy density improvements (and long-term storage)
- Grid security and resiliency
- Policy and permitting (proactive investment)



Outcomes: Clear, measurable and reasonable targets to develop EPIC portfolios and program evaluations

- Cost per kWh, kW, etc.
- Footprint per kW for high-voltage equipment
- Energy or money saved

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