

TRANSPORTATION ELECTRIFICATION PARTNERSHIP



# 2028

Zero Emissions

# Roadmap

2020 ANNUAL REPORT





# Table of Contents

- 3 TEP Mission Statement
- 4 TEP Members
- 5 Letter from TEP Chair and LACI CEO Matt Petersen
- 6 TEP Year in Review
- 7 Testimonials
- 9 Call to Action
- 10 Zero Emissions 2028 Roadmap Targets
- 11 2020 Policy Highlights
- 15 Pilot Projects
- 19 EV Maintenance Workforce Development Training Program
- 20 TEP Partner Wins
- 24 TEP 2021 Priorities
- 26 Thought Leadership in Action
- 27 TEP Summit
- 29 Acknowledgements
- 31 Join Us!



# TEP Mission Statement

The Transportation Electrification Partnership (TEP) is 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.

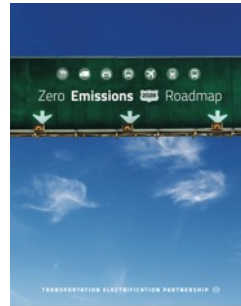
**May 2018**

Partnership launched with Leadership Group



**September 2018**

Roadmap 1.0 released, setting 25% emission reduction goal.  
**18 partners**



**November 2019**

Roadmap 2.0 released, with detailed targets to achieve 25% goal.  
**25 partners**



**May 2020**

Near-term and longer term interventions identified. Pilot work begun.  
**27 partners**



**December 2020**

TEP Summit convened to reflect on progress and next steps.  
**31 partners**



# Transportation Electrification Partnership Members

## LEADERSHIP GROUP



The **Leadership Group** is the governing body of the Partnership with top principals representing each organization and includes the key entities needed to accelerate zero emissions mobility and goods movement by the time of the 2028 Olympic and Paralympic Games.

## ADVISORY GROUP FOUNDING PARTNERS



The Leadership Group is complemented by a growing and influential **Advisory Group**, comprised of representatives key to achieving the Partnership goal and targets, including: leading automakers, industry organizations, public sector agencies, startup companies and labor organizations.

## ADVISORY GROUP ASSOCIATE PARTNERS



## ADVISORY GROUP SUPPORTING PARTNERS



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



# Letter from TEP Chair and LACI CEO Matt Petersen

Amidst the early days of the pandemic here in greater Los Angeles, walking the streets was safer, neighborhoods were quieter, and the air cleaner—the cleanest in decades thanks to fewer cars and trucks on the road.

This is the Los Angeles we want to welcome the world to in 2028 for the Olympic and Paralympic Games, and to be our reality every day of the year. We can create this future with a booming economy and no public health crisis.

Indeed it's the vision of our Transportation Electrification Partnership (TEP) and our [Zero Emissions 2028 Roadmap](#), released in November 2019 with the boldest of such targets in the nation: reducing climate and air pollution by accelerating transportation electrification while growing our economy, creating green jobs, and ensuring equity and access to mobility for all.

Our work is cut out for us, as a few months later in early September, thanks to extreme heat brought on by the climate crisis, Los Angeles experienced the [worst smog in almost 30 years](#). And of course, extreme fires later filled our air with smoke.

Over the past year, our growing partnership has responded to the changing landscape created by the global pandemic. Since March 2020, TEP has:

- Put forth a bold, comprehensive \$150 billion [transportation electrification stimulus plan](#) to restart our economy and put people back to work;
- Proposed a [statewide EV authority](#) to accelerate progress here in LA and across California to provide the accountability and financing tools needed; and
- Deployed four [pilots in disadvantaged communities](#)—which suffer from disproportionate share of air pollution—in LA to provide shared e-bikes, EVs, and electric shuttles.

There is much work to be done. We invite you to join us as TEP advances innovative policies and pilots to unlock and scale solutions in electric mobility, active and public transit, and zero emissions goods movement. Together, we can welcome the world in 2028 to a region in which people and goods can move emissions free with clear blue skies every day of the year, and lead the fight in tackling the climate crisis.

In partnership,  
Matt Petersen





# TEP Year in Review



## \$150 Billion

Stimulus package for zero emissions transportation proposed to Congress



## 56

New graduates of LACI's EV maintenance workforce development program



## 5

New TEP members welcomed in 2020



Selected Santa Monica as the first city in the U.S. to host a voluntary last-mile zero emissions delivery zone

## 73

Organizations nationwide supporting TEP federal stimulus proposal



Introduced Senate Bill 633 (Stern) to create the California EV Authority

## 15

Prioritized fifteen policy and pilot interventions to advance TEP goals

## 4

Launched four zero emissions mobility pilots with and within disadvantaged communities





# Testimonials



***"We know that this Transportation Electrification Partnership is a national model and a force multiplier in the fight of our lives."***

*We know the model works, we know it can transform not only our ecology but our economy, but our case studies and data can't just be a success story for LA or southern California. They have to be a foundation for a new national policy, a new American approach to electrifying your cities and forcing a carbon free future."*

— MAYOR ERIC GARCETTI  
TEP Summit, December 10, 2020

***"The momentum that already exists here is pretty spectacular and it's what gives me a lot of hope for this region, but also, frankly, for the planet. When you give people the opportunity to buy into the vision and be a part of it, they will come together and actually help forge the solutions."***

— MARY NICHOLS  
Chair, California Air Resources Board  
TEP Summit, December 11, 2020



***"Metro is proud to be part of the Leadership Group of the Transportation Electrification Partnership. We believe in the importance of working regionally with our private sector partners to unlock solutions to our biggest challenges. I am excited to see all the new startups and innovations in the transportation electrification space."***

— PHIL WASHINGTON  
CEO, LA Metro • TEP Summit, December 10, 2020

***"BMW is privileged to be in this dynamic Partnership with Los Angeles' leading thinkers and actors to advance our shared goal of accelerating zero emissions mobility. We look forward to what we can achieve together in 2021."***

— LISA  
ERRION  
SAUMS  
Vice President  
of Government  
and  
External Affairs



***"TEP has been valuable in getting local and state stakeholders working collaboratively toward meeting the LA region's transportation electrification and zero emissions goods movement goals in preparation for the LA 2028 Olympics and Paralympic Games."***

— NANCY SUTLEY  
Senior Assistant General Manager of External and  
Regulatory Affairs and Chief Sustainability Officer,  
LADWP



***"TEP brings together an unprecedented level of partnership united in a mission for zero emissions mobility. That laser focus is inclusive of the urgency to eliminate harmful emissions from Los Angeles communities who have long suffered the air pollution impacts from our goods movement and passenger vehicle transportation systems. The powerful commitment of this group to center equity in transportation electrification is what keeps us at the table."***

— GARY GERO  
Chief Sustainability Officer  
KRISTEN TORRES PAWLING  
Sustainability Program Director, County of Los Angeles





# Testimonials

**"The Transportation Electrification Partnership is unique in that it brings together a wide range of parties –** from private companies, government agencies and community organizations –all with a shared aim of making the Los Angeles region the leader in adoption of transportation electrification. From its inception, TEP has been committed to this mission and to producing cleaner, healthier air as well as economic growth for our region. Through collective action, bringing more electrification to disadvantaged communities will be achieved. Edison is proud to be a founding member of this forward- thinking group that is pushing for innovative solutions that will benefit Southern California communities for generations to come."

– DREW MURPHY  
Senior Vice President,  
Strategy and Corporate Development,  
Edison International



**"For more than 10 years Nissan has been a pioneer in the global EV marketplace** with the LEAF and the upcoming Ariya crossover, driving innovation to enrich people's lives. Nissan and TEP share the goals of accelerating EV adoption and developing clean energy solutions to achieve a sustainable, zero-emissions future. Private-public partnerships to develop and test key mobility pilots in cities such as Los Angeles are key to achieving this sustainability."

– RACHEL NGUYEN  
Director, Global Upstream Planning, Nissan North America



**"What we do locally here in LA and in the state of California makes a huge difference...** When we hardwire equity into our decision making, what we're saying is that we are purposefully going to democratize the benefits of our climate change policies."

– KEVIN DE LEÓN  
Councilmember District 14, Los Angeles City Council  
TEP Summit, December 10, 2020

**"LACI's Transportation Electrification Partnership is a model for other regions** seeking to electrify transportation. By bringing together key players in the electric vehicle ecosystem, the Partnership is laying the groundwork to achieve its ambitious targets by the 2028 Olympics. As California faces increasing threats from climate change, the urgency to electrify transportation has never been greater."

– PATRICIA MONAHAN  
Commissioner, California Energy Commission



## Our Thanks

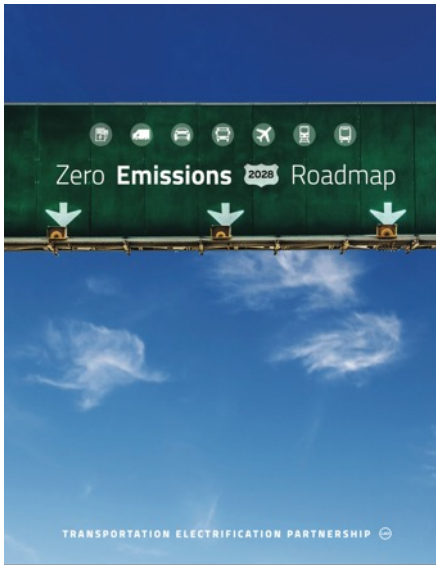
As Mary Nichols ends her remarkable tenure as Chair of the California Air Resources Board, where she has truly led the fight against the climate crisis, LACI and the members of the Transportation Electrification Partnership would like to thank her for her role in founding TEP so that we can go further, faster together. Mary's vision and leadership have been instrumental to the creation and success of the Transportation Electrification Partnership-- she has truly served as a North Star for the ambitious work we have undertaken together. Thank you Mary!





# Call to Action

In September 2018, the Leadership Group set a goal to move toward an additional 25% reduction in greenhouse gas emissions and associated air pollution through accelerating transportation electrification by the time the world arrives in Los Angeles for the 2028 Olympic and Paralympic Games. To achieve this goal, the members all commit to work individually and collectively on policies, pilots, and other actions to reach the targets in the Zero Emissions 2028 Roadmap (p. 9) along with the following three-pronged call to action.



1

Accelerating the adoption of light-duty passenger vehicles (EVs) to be 30 percent of all vehicles on the road and at least 80 percent of all vehicles sold by 2028



2

Shifting over 20 percent of all trips in single occupancy vehicles to zero emissions public and active transit by 2028



3

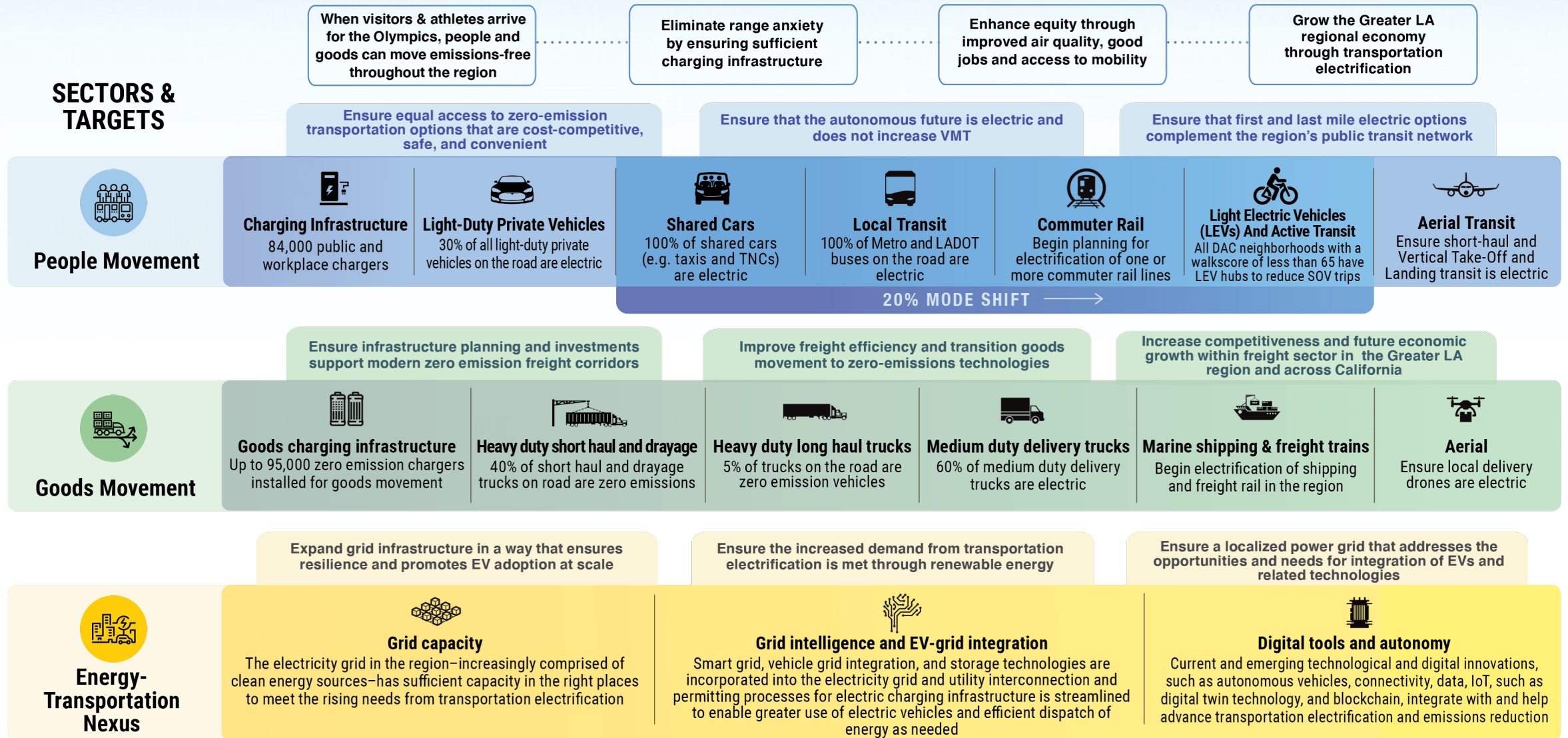
Ensuring that by 2028, all public investments into goods movement, freight vehicles (i.e. trucks and cargo handling equipment) and related infrastructure to support goods movement will advance zero emissions solutions, and ensure that I-710 is the first zero emissions goods movement corridor in the nation





# 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





# 2020 Policy Highlights: Federal

## ***TEP submitted a \$150 billion federal stimulus proposal***

In April, LACI and members of TEP proposed to Congress a \$150 billion transportation electrification stimulus package to help restart our economy, put Americans back to work, build our nation's infrastructure, support innovation, and clean our nation's air to protect public health. This type of spending is critical to providing immediate economic stimulus and job creation, as well as to creating a foundation for future economic development while creating more resilient communities.

The “*Keeping America Working, Protecting Public Health, & Strengthening our Communities*” proposal includes a comprehensive set of recommendations in the following categories:

- Zero Emissions Vehicle Manufacturing, Assembly and Adoption - \$25 billion
- Zero Emissions Infrastructure Investment - \$85 billion
- Zero Emissions Public and Active Transit - \$25 billion
- Workforce Development, Job Training & High-Quality Workforce Standards - \$12.5 billion
- Innovation Ecosystem, Cleantech Startups & Related Small Businesses, Prioritizing those Started by Underrepresented Founders - \$2.5 billion



## ***National coalition supports the proposal that could create 2.3 million U.S. jobs***

An additional 48 businesses and organizations, for a total of 73, in 14 states joined the call for the TEP stimulus proposal, urging Congress to make unprecedented investments in the nation's transportation infrastructure in direct response to the economic and health crisis caused by the COVID-19 pandemic.



Research from the firm [HR&A Advisors estimates](#) that the proposed \$150 billion in stimulus investment would create up to 2.3 million jobs across the U.S, with 1.4 million jobs expected to build out our nation's zero emissions transportation infrastructure.



# 2020 Policy Highlights: State

## ***A Bold New Executive Order***

As LACI's Matt Petersen wrote in [The Hill](#), Governor Newsom's EV executive order (N-79-20) will help make California more breathable again, requiring only zero emissions passenger cars be sold in California in 2035, with sales of medium and heavy-duty trucks required to be zero emissions by 2045, and drayage trucks by 2035.

The new state goals are consistent with the ambitious targets (p. 9), TEP set in Nov 2019 for light-duty vehicles, mode shift, and goods movement for the LA region in order to advance climate equity, reduce air pollution, and more by the time the world arrives for the 2028 Olympic and Paralympic Games.

## ***Advanced Clean Truck Rule***

The California Air Resources Board approved the nation's [first electric truck standards](#), requiring over half the trucks sold by manufacturers in the state to be zero emissions by 2035.

LACI is proud to have supported the groundbreaking rule, which will [require](#) truck and heavy-duty vehicle manufacturers to gradually increase the number of zero emissions trucks they sell to individuals and commercial fleets starting in 2024. This measure will inform future state guidelines on zero emissions truck requirements and impact air quality and greenhouse gas emissions beyond California's borders.

## ***Clean Transportation Plan***

The California Energy Commission (CEC) approved a [\\$384 million plan](#) for critical clean transportation investments to boost the adoption of zero emissions cars and trucks and help the state reach its climate, clean energy and public health goals. The plan focuses on closing gaps in zero emission fuels and infrastructure to support Governor Gavin Newsom's executive order phasing out the sale of new gasoline-powered passenger vehicles by 2035.





## 2020 Policy Highlights: State



### ***California Electric Vehicle Authority***

Reaching our regional and state transportation electrification goals will require multiple agencies to succeed, and there is a need for increased coordination and shared accountability for results. Budgets are strained, and new and creative funding sources and finance solutions are needed. The economic growth, equity and job creation opportunities are vast in this expansive transformation and need to be connected to the targets and the policies to achieve results.

LACI and members of TEP are calling for the creation of a California Electric Vehicle Authority, led by an EV czar in the Governor's Office to:

- Serve as the unified face of transportation electrification and zero emissions goods movement, coordinating across statewide efforts to update interim targets, create clear responsibility and ensure accountability.
- Create a set of financing tools to support the transition and economic development, including examining where existing sources of financing can be enhanced and leveraged, while identifying new sources that can be used to unlock private capital.

We believe the California Electric Vehicle Authority is critical to securing the state's recovery through the equitable deployment of EV programs in the coming years, making California a world leader in EV deployment, design, development, manufacturing, supply chain, and infrastructure.

State Senator Henry Stern (CA) introduced Senate Bill 633, which would create this Authority in the Governor's office to help secure the state's recovery through equitable deployment of EV programs in the coming years and ensure that California meets its critical zero emissions transportation and climate goals. LACI and TEP will continue to advocate for this critical legislation in 2021.



# 2020 Policy Highlights: Los Angeles Region

## ***Recommendations to Metro's Traffic Reduction Study***

TEP partner LA Metro has undertaken a study of how to reduce traffic by managing roadway demand through congestion pricing and providing more high-quality transportation options to make it easier for everyone to travel. To aid in this study, LACI and TEP members have recommended that Metro incorporate policies and infrastructure to support the adoption of zero emissions vehicles. Recommended actions include expanding zero emissions public and active transit, investment in zero emissions infrastructure, and purposeful advancement of equity in disadvantaged communities. These types of measures are critical to accelerating transportation electrification and laying the foundation for an inclusive zero emissions future.

## ***LADWP Enhances EV Rebate Program***

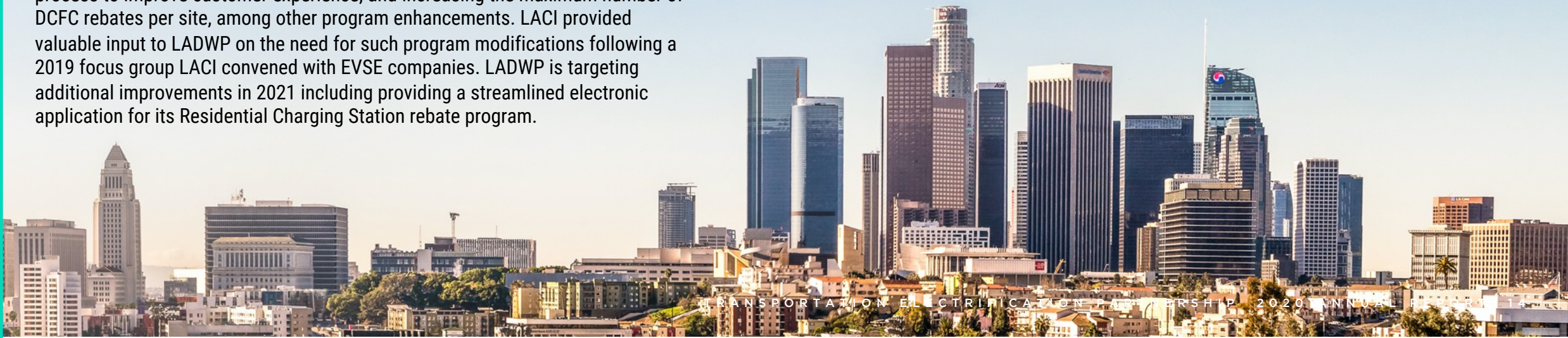
Over the past year, the LADWP has implemented a number of changes designed to improve its Used EV, and Commercial EV Charging Station Rebate Program, including increasing the rebate amount for Used EV rebates and providing a digital application for the Used EV rebate program, a streamlined application reservation process to improve customer experience, and increasing the maximum number of DCFC rebates per site, among other program enhancements. LACI provided valuable input to LADWP on the need for such program modifications following a 2019 focus group LACI convened with EVSE companies. LADWP is targeting additional improvements in 2021 including providing a streamlined electronic application for its Residential Charging Station rebate program.

## ***Action Plans to 2028***

LACI and TEP members have developed action plans for a number of key interventions necessary to achieve our Roadmap 2.0 goals and targets, including action plans for:

- Electrifying TNC fleets
- Identifying and implementing first/last mile solutions
- Expanding bike lane networks
- Expediting/harmonizing EVSE permitting & interconnection
- Fostering the development of commercial light and heavy-duty vehicles for which there are not options at scale today
- Shaping implementation of the Clean Truck Fund

These action plans outline best practices and case studies from other regions, opportunities and challenges in the LA region, key questions that need to be addressed, and a step-by-step process for adopting policies and taking other actions to achieve progress towards 2028. LACI and the members of TEP will work together in 2021 to implement the initial steps outlined in these action plans.





# Zero Emissions Community Mobility Pilots

LACI launched four Zero Emissions Mobility and Community Pilots in 2020 with and within disadvantaged communities. These pilots are bringing the benefits of the green economy to neighborhoods that often lack access to zero emissions mobility solutions, yet are burdened with poor air quality. The path to a zero emissions future includes addressing community needs as well as key technology, business model and educational challenges. Lessons from these projects will be shared and used to inform new projects and policy recommendations.

## Pacoima

Together with the community-based organization [Pacoima Beautiful](#), LACI startup [Envoy](#), and TEP member Nissan of North America, LACI launched the Pacoima Electro-Share community EV car-share program. The Nissan Leafs are stationed at the community center inside the [Housing Authority of the City of Los Angeles'](#) (HACLA) San Fernando Gardens housing development in Pacoima, providing direct and affordable access to EVs that are powered by a resilient charging solution using off-grid technology from [BEAM](#).



## San Pedro

LACI, the [Housing Authority of the City of Los Angeles](#) (HACLA), LACI startup [Envoy](#), and TEP member Nissan of North America launched the [Rancho San Pedro Electric Car Share](#) in San Pedro. This pilot is providing a zero emissions transportation option to the members of the affordable housing community, helping residents to connect to the City of Los Angeles and neighboring communities more easily. The program's commitment to the community includes affordable hourly rates and training from Envoy to HACLA's Community Coaches– resident ambassadors who conduct outreach and enrollment.





# Zero Emissions Community Mobility Pilots

## Leimert Park

LACI, in partnership with a consortium of community partners, is bringing zero emissions mobility to the South LA neighborhood. The Leimert Park pilot provides commuter and courier e-bike rentals from [Zoomo](#) and neighborhood electric vehicle shuttles from [Circuit](#), a LACI startup. In addition, [Chewbox](#), a Watts-based ghost kitchen and delivery service, and also a LACI startup, will expand their service offering to include South LA Cafe specialties to patrons across LA County. The pilot is a six-month deployment that focuses on local workforce development and local business partnerships.



## Long Beach

LACI partnered with the Conservation Corps of Long Beach to test 10 e-cargo bikes from LACI startup [URB-E](#) for use by at-risk young adults who are restoring a stretch of the Lower Los Angeles river to rebuild wildlife habitats, restore native species and provide space for residents to engage with nature. Due to COVID-related program delays at the Conservation Corps, the URB-Es have been repurposed for other uses for the time being.



# Zero Emissions Delivery Zone Pilot

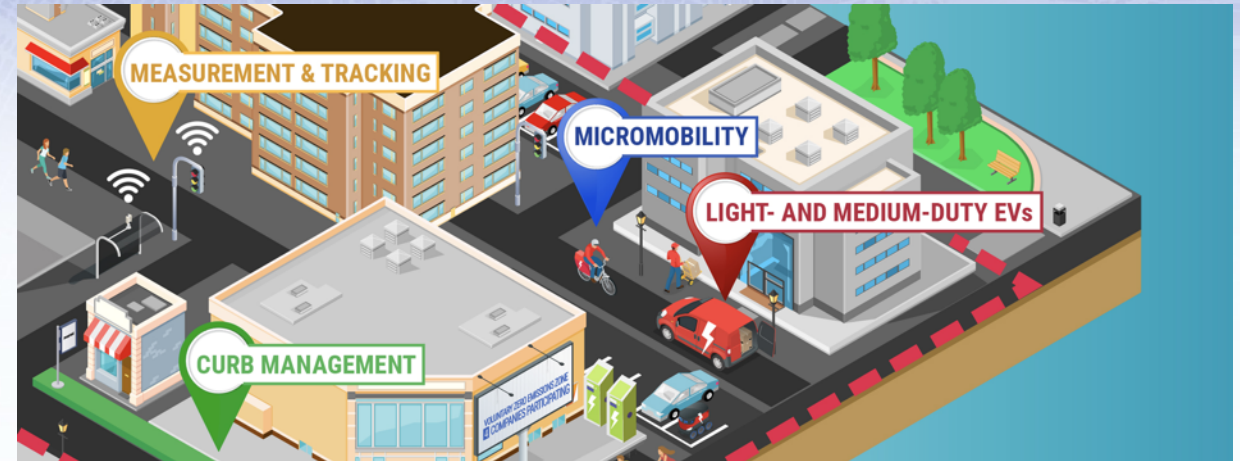
LACI has partnered with the City of Santa Monica to pilot a voluntary zero emissions delivery zone, the first of its kind in the U.S. Through this pilot, delivery partners have committed to utilize zero emissions vehicles to transport goods within a 1 square mile zone in downtown Santa Monica.

This pilot is aimed at jumpstarting progress towards the Partnership's goal for 60% of medium-duty delivery trucks in LA County to be electric by 2028, which would drastically improve air quality in the region.

We expect this pilot will allow cities in Southern California and across the nation to develop the confidence to mandate zero emissions delivery zones and the phase-out of medium-duty diesel trucks. It will also allow cities and corporations to develop "ahead of the curve" logistical and operational best practices involved in a zero emissions delivery zone, including the deployment of smaller footprint delivery methods, such as e-cargo bikes and the use of curb management solutions.

More than 85 technology providers expressed interest in applying innovative technologies for use in the delivery zone.

The zone will officially launch in Q1 2021.



## LEADERSHIP TEAM



## DELIVERY PARTNERS COMMITTED



## OTHER STAKEHOLDERS INVOLVED





# I-710 Battery Electric Truck Infrastructure Pilot

## ***Background***

The LA region is a gateway for goods entering California and the nation as a whole, with 40% of all the goods that enter the U.S. traveling through the San Pedro Bay Ports. LA Metro estimates that upwards of 36,000 truck trips occur daily on the I-710, with the number expected to increase by up to 50% by 2035. At the same time, medium- and heavy-duty trucks comprise the second largest categories of GHG emissions in the transportation sector, and goods movement represents the region's largest source of air pollution. Stemming from exposure to these truck emissions, low-income residents and communities of color surrounding the I-710 freeway experience disproportionate rates of respiratory and other harmful illnesses.

## ***Problem***

The scarcity of charging infrastructure for heavy-duty trucks in the region is a key barrier to achieving TEP's goal for 40% of drayage trucks on the road to be zero emissions by 2028, which would put our region on track to achieve the goal set by the San Pedro Bay Ports and Governor Newsom for 100% zero emissions drayage by 2035.

## ***Solution***

LACI and TEP partners are coordinating regional efforts to prioritize affordable and accessible infrastructure deployments, working with public agencies, truck manufacturers, fleets, utilities, charging infrastructure companies, private investors, insurance companies and community-based organizations to remove barriers to deploying the needed infrastructure at scale.

In addition, LACI has conducted detailed site assessments for half a dozen strategic properties that are primed for investment as charging depots for public or private fleets. We aim to secure funding in 2021 to jumpstart these pivotal infrastructure deployments along the I-710 corridor.



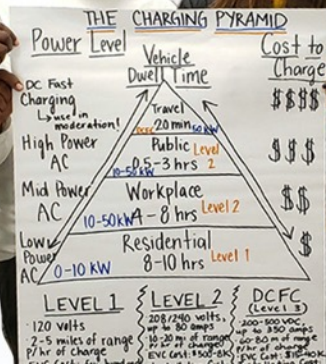


# EV Maintenance Workforce Development Training Program

Workforce development training is a critical component of LACI's multi-pronged approach towards empowering underrepresented groups to participate in the green job market. Our three-month fellowship program provides unemployed and underemployed participants from underrepresented groups in Los Angeles County with experiential training, certification, and direct connections with job opportunities at LACI startups and partner organizations.

We have trained two cohorts in Electric Vehicle Supply Equipment (EVSE) Maintenance. Fifty-six participants from underrepresented groups graduated with Electrical Safety in the Workplace certification, and completed their EVSE Network Technician Training, with electives in Project Management and Computer Aided Drafting and Manufacturing. In addition to gaining job skills in this sector, these graduates have become new, powerful advocates to their communities about the benefits of transitioning to electric vehicles.

*"I worked in all the local oil refineries in the city. And, I worked there to support my family. Now, since I know more about clean tech, I'm excited to go back to my community and surrounding areas and educate them on the benefits of clean technology." – Clyde Ellis, Cohort 2 Fellowship Graduate*





# TEP Partner Wins



## **Mayor Garcetti** celebrated the completion of new bus and bike lanes in downtown Los Angeles

**Mayor Garcetti** [celebrated](#) the completion of the 5th and 6th Street Improvements Project, bringing new dedicated bus and bike lanes and pedestrian safety improvements to two critical thoroughfares in Downtown Los Angeles. The project improvements are located between Flower Street and Central Avenue along both 5th and 6th streets. The improvements include:

- Dedicated bus lanes to enhance service and efficiency for transit users;
- Protected bike lanes to create a safe and well-connected network that better facilitates east-west travel through Downtown; and
- Improved road conditions with repaved and restriped lanes along both streets.

The project supports the goals laid out in [Mayor Garcetti's 25th Executive Directive](#), "L.A.'s Green New Deal: Leading By Example," which calls for new bus infrastructure improvements to improve transit speeds by 30% by 2028 along with a comprehensive citywide network of protected bike lanes.



## **LA Metro** debuted its first electric bus

In July, **LA Metro** debuted its first electric bus on the G Line (Orange). This deployment is the first of 40 electric buses that will be put into service by the end of 2020. The fleet includes the deployment of the electric buses, associated charging equipment, and infrastructure improvements and will be capable of recharging at various points along the G Line (Orange) to support its 24/7 operation. LA Metro has committed to transitioning its full fleet of buses to zero emissions by 2030.



## **The California Public Utilities Commission** approved **Southern California Edison's Charge Ready 2** program

State officials gave **Southern California Edison** the green light to expand its electric car charging infrastructure program, known as Charge Ready 2. This program will add about 38,000 new chargers throughout the utility's 50,000-square-mile service area and will expand access to electric vehicle charging, with an emphasis on underserved markets, including disadvantaged communities and multi-family dwellings.



## **Clean Power Alliance** launched energy career pathways scholarship program

**Clean Power Alliance** created a \$150,000 scholarship program spread among seven community colleges throughout Los Angeles and Ventura Counties. The scholarship program is intended to support students enrolled in eligible energy career pathways, such as electric vehicles and advanced transportation technology, energy and environmental science, and alternative energy.

# TEP Partner Wins



## **ENGIE Impact** partnered with GUHSD to advise on full school bus fleet electrification

**ENGIE Impact** partnered with Grossmont Union High School District in San Diego on school bus fleet electrification. ENGIE Impact is supporting the District's comprehensive planning efforts to fully transition its 67 buses from fossil fuels to electric over the next two decades. By advising on optimal technology selection, sizing, and funding options for buses, charging infrastructure, and clean energy supply, ENGIE Impact is helping GUHSD secure the most cost-effective and reliable solutions throughout the fleet lifetime. Efforts are already underway to explore similar opportunities for comprehensive fleet electrification planning with school districts in LA and around the country.



## **Mayor Garcetti** announced largest single order of electric buses in the U.S.

In February, **Mayor Garcetti** announced that the Los Angeles Department of Transportation (LADOT) placed the [largest single order for electric buses](#) in U.S. history. LADOT's purchase will add 155 zero emission buses to the city's fleet. The record-breaking order helps advance the core goals of Mayor Garcetti's Executive Directive – "[L.A.'s Green New Deal: Leading By Example](#)" – which includes measures to make LADOT's bus fleet entirely emissions-free in time for the opening ceremonies of the 2028 Olympic and Paralympic Games.



## **The City of Pasadena** partnered with **Tesla** to open the largest EV public fast charging station in the nation

The **City of Pasadena** announced the opening of the Marengo Charging Plaza as part of the city's *PowerUp Pasadena* campaign. With a total of 44 chargers, 24 Superchargers installed by TEP partner Tesla and 20 fast chargers installed by the City of Pasadena, the Marengo Charging Plaza is the largest public electric vehicle fast-charging plaza in the nation.



## **AMPLY Power** partnered with Anaheim Transportation Network to manage their electric bus fleet

LACI startup **AMPLY Power** has partnered with the Anaheim Transportation Network (ATN) to manage all aspects of charging for its 46 electric buses. This 20-year contract is the first of its kind and largest Fleet Charge Management Services agreement to date, which covers the management of ATN's charging operations from system design, installation, equipment purchase, operations and maintenance for a fixed price per kWh consumed. ATN estimates \$4.8M of fuel savings over the course of this partnership.



# TEP Partner Wins



## **East Bay Community Energy** expanded renewable and storage portfolio

Northern California TEP member **East Bay Community Energy** expanded its renewable energy and battery storage portfolio, adding 225 MW of solar power capacity, along with 80 MW/160 MWh of battery energy storage. These new projects will be built in southern California and are scheduled for completion by December 2022. Each contract includes a contribution to a Community Investment Fund and a commitment to use union and/or prevailing wage labor.



## **Greenlots** partnered with EV Connect to enable convenient access to EV charging stations

To improve the electric vehicle driver experience, EV Connect and **Greenlots** announced the completion of the driver roaming integration between the companies' charging networks. Users of the EV Connect charging smartphone application will be able to locate, initiate sessions, and pay for charging at Greenlots charge stations and vice-versa, later this year. EV Connect and Greenlots will use the Open Charge Point Interface (OCPI) interoperability standard to allow seamless communications between the two networks and establish highly functional, cross-network roaming.



## **PCS Energy** reached 10,000 EV charger milestone and donates first EV

**PCS Energy** has installed over 10,000 EV chargers in the Los Angeles area for residents to utilize in an effort to increase the adoption of electric vehicles and promote renewable energy. PCS Energy also donated its first electric vehicle through a partnership with Go Green, a new digital series from Lucia Entertainment and The Solutions Project focused on helping intergenerational families in LA access clean energy solutions.



CULVER CITY

## **Culver City** received a grant from SCAG to prepare a citywide electric vehicle infrastructure plan

**Culver City** received a grant from the Southern California Association of Governments to prepare a City-Wide Electric Vehicle Infrastructure Plan by early 2022, with the goal of fostering the transition from fossil fuel to electric powered vehicles. The Plan will contain strategies for activating all property types – City facilities, residential single and multifamily dwellings, and commercial properties. The grant was awarded shortly before the City's Transportation Department was recognized by the California Transit Association with the Distinguished Transit Agency of the Year Award for 2020.



## **Nissan** celebrated the 10th anniversary of the Nissan LEAF electric car

On December 2, 2020 Nissan celebrated the 10th anniversary of the Nissan LEAF electric car and the delivery of 500,000 LEAF vehicles since the model was first introduced. Produced at plants in Japan, the U.S. and the U.K., the zero-emission Nissan LEAF is sold in 59 markets around the world. Nissan estimates that LEAF owners have driven their cars approximately 16 billion kilometers (approximately 10 billion miles)<sup>1</sup> cumulatively, worldwide, preventing more than 2.5 billion kilograms<sup>1</sup> of CO<sub>2</sub> emissions from entering the atmosphere."

<sup>1</sup> Distance and CO<sub>2</sub> data based on Nissan Global Data Center calculation (as of October 2020). Calculation: total distance driven (GDC data, based on approximately 50% of global LEAF volume) / number of Carwings-registered vehicles x total global sales number



# TEP Partner Wins



## **Mayor Garcetti** announced new Request for Information for zero emissions truck program at the Port of Los Angeles

In October, Mayor Garcetti [announced](#) a Request for Information (RFI) to solicit proposals to expand the use of zero emissions technology at the Port of Los Angeles. The RFI will help advance the goal shared by the mayors of Los Angeles and Long Beach to transition all drayage trucks serving the San Pedro Bay port complex to zero emissions by 2035. The RFI invites the private sector to provide crucial input to the Port of Los Angeles, the largest and busiest container port in the Western Hemisphere, as it explores strategies to accelerate the development and adoption of zero emissions trucks at scale.



## **Proterra** partnered with Optimal Electric Vehicles, LLC to produce the first all-electric low-floor cutaway shuttle bus in North America

Optimal Electric Vehicles, LLC and **Proterra** [have partnered](#) to leverage Proterra's battery technology and charging systems for the development of the industry's first all-electric low-floor cutaway shuttle bus in North America. This project will leverage Proterra's high-performance battery systems and Optimal's automotive design to create this exciting new vehicle.



## **The City of Santa Monica** adopted an EV Charger Reach Code

**The City of Santa Monica** has adopted amendments to the CalGreen Building Standards Code, requiring 100% of parking spaces in new multi-family buildings to support EV charging, and 40%-60% in other building types.



## **South Coast AQMD** approved \$27 million in funding to replace polluting trucks with zero emission counterparts

As part of the Volkswagen Environmental Mitigation Trust program, LACI partner **South Coast AQMD** has recently approved [\\$27 million in funding](#) to replace higher-polluting vehicles with zero emissions alternatives. The program will replace freight trucks, waste haulers, dump trucks, and concrete mixers with engine model years from 1992 to 2012 that are in compliance with all applicable regulations.



# TEP 2021 Priorities

## Overarching Priorities



Secure federal stimulus funding to support TEP Priorities



Create California Electric Vehicle Authority (CEVA) to support TEP Priorities



Engage regularly and identify opportunities to collaborate with key allies in the NGO and CBO communities








Conduct equity-centered EV communications campaign



Build upon the soon-to-be-released LACI-USC Dornsife Public Exchange research study of economic development potential for zero emissions transportation in the LA region to advance supply side policies and tools to further the growth of related businesses in the region



# TEP 2021 Priorities

	Light Duty 	Mode Shift 	Goods Movement 
Policy 	<ul style="list-style-type: none"> <li>• Enforce permitting legislation &amp; expedite interconnection</li> <li>• Electrify TNCs</li> <li>• Educate auto dealers on importance of EV promotion</li> </ul>	<ul style="list-style-type: none"> <li>• Enact pricing mechanisms</li> <li>• Electrify transit buses</li> <li>• Identify and implement first/last mile solutions</li> <li>• Support bike lane network build out</li> </ul>	<ul style="list-style-type: none"> <li>• Target Clean Truck Fund revenues to zero emissions solutions</li> <li>• Unlock solutions to insurance barriers to battery-electric truck and infrastructure deployment</li> <li>• Enact pricing mechanisms, including exploring a feebate for heavy-duty trucks</li> <li>• Advocate for strong Advanced Clean Fleet Rule at CARB</li> <li>• Accelerate development of LD/MD commercial vehicles with no electric options at scale today</li> </ul>
Pilots 	<ul style="list-style-type: none"> <li>• Implement, evaluate and scale Zero Emissions Community Mobility pilots</li> <li>• Secure funding for innovative charging infrastructure pilot to provide residents of multi-unit dwellings access to DCFC</li> <li>• Develop pilot on vehicle-to-grid integration</li> </ul>	<ul style="list-style-type: none"> <li>• Implement, evaluate and scale Zero Emissions Community Mobility pilots</li> </ul>	<ul style="list-style-type: none"> <li>• Implement Zero Emissions Delivery Zone in Santa Monica</li> <li>• Secure funding for I-710 Battery Electric Truck Infrastructure pilot</li> </ul>
Workforce Development/ Green Jobs	<ul style="list-style-type: none"> <li>• Run EV maintenance fellowship program</li> </ul>	<ul style="list-style-type: none"> <li>• Implement, evaluate and scale Zero Emissions Community Mobility pilots</li> </ul>	<ul style="list-style-type: none"> <li>• Secure funding to implement I-710 Battery Electric Truck Infrastructure pilot, prioritizing union labor</li> </ul>

# Thought Leadership in Action

Thank you to the following events for featuring LACI and members of TEP as speakers to share our **Call to Action** with a wide cross-section of audiences:

- BMW Group Mobility Lab
- Calstart Policy Summit
- CoMotion LA
- EVS33 paper
- Forth webinar on EV Economic Recovery: National Stimulus
- Harbor Trucking Association webinar on Zero Emissions Drayage
- Los Angeles Business Council Sustainability Summit
- LAEDC e4 Mobility Alliance Policy and Industry Working Group
- Reuters Mobility: Executive Leaders Conference
- Tennessee Advanced Energy Business Council webinar
- UCLA Sustainable LA Grand Challenge Sandpit 2020
- Verde Exchange
- Veloz webinar

Thank you to the following outlets for covering TEP and our policy proposals:

- [Santa Monica to Pilot Zero Emissions Delivery Zones](#), **CleanTechnica**
- [LA accelerates efforts to make its famous traffic electric](#), **E&E News**
- [LA coalition proposes \\$150 billion in nationwide stimulus for vehicle electrification](#), **Electrek**
- [US' first zero emissions delivery zone](#), **Electrek**
- [California City of Santa Monica maps first U.S. zero-emission delivery zone](#), **GreenBiz**
- [Electrifying transportation will jumpstart the U.S. economy and protect public health](#), **The Hill**
- [Newsom's Executive Order will help make California breathable again](#), **The Hill**
- [Investing in clean transportation technologies can help put California to work](#), **Los Angeles Daily News**
- [Southern California has seen the cleanest air amid the coronavirus pandemic](#), **KTLA**
- [Pilot program looks to create zero emissions delivery zone in Santa Monica](#), **Santa Monica Daily Press**
- [Santa Monica, CA to pilot zero emissions delivery zone](#), **Smart Cities Dive**
- [Transportation Electrification Partnership proposes \\$150B federal stimulus proposal](#), **Smart Cities Dive**
- [An LA-led, public-private partnership pitches a \\$150B green infrastructure package to Congress](#), **TechCrunch**
- [California Wants Cars to Run on Electricity. It's Going to Need a Much Bigger Grid](#), **Wall Street Journal**

BMW  
GROUP



CoMotion» LA



E&E NEWS

electrek

GreenBiz



Los Angeles Daily News



VERDEXCHANGE  
CONFERENCE

VELOZ



THE WALL STREET JOURNAL



# TEP Summit

*In December, we hosted LACI's first-ever TEP Summit to bring together policymakers, industry leaders, startups, academic experts and advocates to share progress towards TEP's ambitious targets, reflect on the year in transportation electrification, and frame the opportunities and challenges for 2021.*

Over 700 people registered to join us for eight hours of programming, which included a Fireside Chat with Mary Nichols in her final week as Chair of the California Air Resources Board, a keynote by LA Mayor Eric Garcetti, and a showcase of several LACI startups rolling out new clean technologies from electric airplanes to EV car sharing. Our seven panels offered important and timely conversations around advancing equity and climate justice, pairing public and private sectors to overcome barriers, and how to convene critical stakeholders to accelerate transportation electrification and zero emissions goods movement here in LA and around the country.

TRANSPORTATION  
ELECTRIFICATION  
PARTNERSHIP

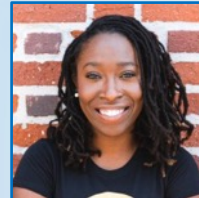
# Summit



Congressman Peter DeFazio



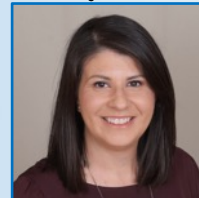
LA Mayor Eric Garcetti



Kameale Terry, ChargerHelp!



Phil Washington



Veronica Padilla-Campos

## DAY 1

Keynote: [Congressman Peter DeFazio \(OR\)](#)

Panel: ["Federal Stimulus for Zero Emissions Transportation"](#)

Moderator: **Matt Petersen** (LACI)  
**Tom Ashley** (Greenlots)  
**JoAnn Covington** (Proterra)  
**Madeline Janis** (Jobs To Move America)  
**Rick Stockburger** (BRITE Energy Innovators)

[Spotlight on LACI Startup in Transportation Electrification – ChargerHelp!](#)

[Remarks by Los Angeles Mayor Eric Garcetti](#)

Panel: ["How TEP has Inspired Regional Initiatives"](#)

Moderator: **Spencer Reeder** (Audi of America)  
**Ryan Martin** (LDR Houston)  
**Pamela Frank** (ChargEVC, New Jersey)  
**John Cerveny** (NY-BEST)  
**Jorge Madrid** (Energy Foundation)

[Spotlight on LACI Startup in Transportation Electrification – SparkCharge](#)

Panel: ["Advancing Equity in Transportation Electrification"](#)

[Panel opening remarks: Phil Washington \(CEO, LA Metro\)](#)

Moderator: **Estelle Reyes Madrid** (LACI)  
**Councilmember Kevin de León** (Los Angeles City Council)  
**Veronica Padilla-Campos** (Pacoima Beautiful)  
**Adrian Martinez** (Earthjustice)  
**Aminah Zaghab** (Energy Foundation)

[Startup Showcase featuring Ampaire, CERO Bikes, Envoy, JUMPWatts](#)

# TEP Summit

## DAY 2



Mary Nichols

Fireside Chat: [Creating the Transportation Electrification Partnership, a statewide EV Authority, federal stimulus proposal and the collaboration needed for a zero emissions future](#)

**Mary Nichols** (Chair, California Air Resources Board)  
**Matt Petersen** (President & CEO, LACI)



Nancy Sutley

Panel: [“Creating a California Electric Vehicle Authority”](#)

Moderator: **Clinton Moloney** (ENGIE Impact)  
**Nancy Sutley** (LADWP)  
**Drew Murphy** (Edison International)  
**Jennifer Kropke** (BEW Local 11 & National Electrical Contractors Association Los Angeles County)  
**Brett Hauser** (Partners Group)



Patrick Duan

Panel: [“Electrifying Small and Mid-Size Heavy-Duty Truck Fleets”](#)

Moderator: **Michelle Kinman** (LACI)  
**Vic Shao** (AMPLIFY Power)  
**Weston LaBar** (Harbor Trucking Association)  
**Patrick Duan** (BYD Motors Inc.)  
**Michael Samulon** (Mayor Garcetti’s Office of Sustainability)



Lauren Faber O'Connor



Matt Nelson



Kate Weber

Panel: [“Preview of the Santa Monica Zero Emissions Delivery Zone”](#)

Moderator: **Kelly Schmandt Ferguson** (LACI)  
**Ariana Vito** (City of Santa Monica)  
**Steven Moelk** (IKEA)  
**Rachel Nguyen** (Nissan North America)  
**Charles Jolley** (Urb-E)

Panel: [“Raising Ambition in 2021”](#)

Moderator: **Kristen Torres Pawling** (County of LA)  
**Patty Monahan** (Commissioner, California Energy Commission)  
**Lauren Faber O'Connor** (Mayor Garcetti’s Office of Sustainability)  
**Matt Nelson** (Electrify America)

Preview: [The LACI-USC Dornsife Public Exchange Study on Economic Development Potential for the LA Region in Zero Emissions Transportation](#)

**Kate Weber** (Academy in the Public Square, Director of Public Exchange, USC Dornsife)  
**Matt Petersen** (LACI)



# Acknowledgements

## Leadership Group

Lauren Faber O'Connor, Dominique Hargreaves, Michael Samulon, Office of Mayor Eric Garcetti; Mary Nichols, Sydney Vergis, California Air Resources Board; Gary Gero, Kristen Torres Pawling, Minh Le, County of Los Angeles; Nancy Sutley, George Payba, Los Angeles Department of Water & Power; Phil Washington, Jim Gallagher, Mark Vallianatos, LA Metro; Drew Murphy, Michael Backstrom, Southern California Edison; and Advisors Commissioner Patricia Monahan and Ben De Alba, California Energy Commission

## Advisory Group Founding Partners

Spencer Reeder, Audi of America; Lisa Errion Saums, Michelle Bogen, Angela Konert, Maik Schwalm, BMW Group; Clinton Moloney, Karim Farhat, ENGIE Impact; Craig Newman, Christine Cole, Itai Dadon, Angela Lockwood, Itron; Rachel Nguyen, Michael Bunce, Nissan North America; Paul Jennings, Joe Pekarovic, Ryan DeFlavio, Danilo Toskovic, PCS Energy

## Advisory Group Associate Partners

Stella Li, Vincent Pellecchia, BYD Motors; Andreas Lips, Thomas Ashley, Mark Smit, John McLean, Idine Ghoreishian, Greenlots; Matthew Nelson, Normal Now sponsored by Electrify America

## Advisory Group Supporting Partners

Vic Shao, Simon Lonsdale, Rob Kelly, Rosalyn Jeffries, AMPLY Power; Drew Kidd, Burbank Water & Power; Ted Bardacke, Gina Goodhill, Tyler Aguirre, Clean Power Alliance; Rolando Cruz, Joe Susca, Culver City; Jessie Denver, East Bay Community Energy; Herbert Garcia, Glendale Water & Power; Tunisia Johnson, Lisa Trifiletti, City of Inglewood; Jennifer J. Kropke, International Brotherhood of Electrical Workers, Local Union 11 / National Electrical Contractors Association – Los Angeles County; Stephanie Wiggins, Lisa Colicchio, Michelle Stewart, Metrolink; Marvin Moon, Mauricio Mejia, Pasadena Water & Power; Ariana Vito and Francie Stefan, City of Santa Monica; Bryan Cope, Southern California Public Power Authority; Brittany Caplin, Proterra; Wayne Nastri, Matt Miyasoto, Sarah Rees, Ian MacMillan, South Coast Air Quality Management District; Rohan Patel, Francesca Wahl, Noelani Derrikson, Tesla

## HR&A Advisors

Judith Taylor, Danny Fuchs, Tim Quinn, Stephanie Margolis, Mara Basich-Pease, Jamison Dague

## Fehr & Peers

Jeremy Klop, Chelsea Richer, Ravi Patel

## LACI

Matt Petersen, President & CEO; Alex Mitchell, Senior Vice President of Unlocking Innovation; Michelle Kinman, Director of Transportation; Jack Symington, Transportation Program Manager; Shevonne Sua, Transportation Program Assistant; Kelly Schmandt Ferguson, Director of Pilots; Jesse Clarke, Pilots Manager, Zachary Pettit, Pilot Projects Analyst; Jillian Misrack, Vice President of Development; Barbara Wise, Grant Proposal Manager; Forrest Lee, Development Assistant; Estelle Reyes, SVP of Enhancing Communities; Daniel Ferguson, Director of Workforce Development; Jose Hernandez, Community Engagement Manager; Sharon Segado, Training Coordinator; Michael Swords, VP Government Affairs; Anthony Reyes, Vice President of Marketing and Communications; Clare Le, Senior Director of Marketing and Events, Vince Vicari, Manager, Communications & Marketing; Melissa Flores, Community Coordinator; Jacob Mendez, Facilities Tech Coordinator, Damita Adams, Executive Assistant to CEO

**Publication Design:** John Susoeff, Creative Consultant, LACI

# Acknowledgements

## ***Funders of Activities in this Report***

- Energy Foundation
- California Workforce Development Board
- Governor's Office of Business and Economic Development
- Bentley Foundation
- Wells Fargo
- Annenberg Tech

## ***Guest Speakers for Internal 2020 TEP Meetings***

- Congresswoman Debbie Dingell (MI)
- Congressman Mike Levin (CA)
- Congressman Tim Ryan (OH)
- California Insurance Commissioner Ricardo Lara
- Eric Bruins, Office of LA Councilmember Mike Bonin
- Bob Stojanovic, ABB
- Kaitlin Coari, Samantha Lustado, Katherine Perez, Cole Roberts, Arup
- Maik Schwalm, BMW Group
- Ben De Alba, California Energy Commission
- Alex Kaufman, Center for Sustainable Energy
- Adam Long, Kiyoshi Iwai, Cero Bikes
- Heba El-Guindy, Culver City
- Chelsea Davidoff, CycleHopZ
- Samantha Weaver, East Bay Community Energy
- Fred Johring, Golden State Logistics
- Elliot Treharne, Greater London Authority
- Idine Ghoreishian, John McLean, Greenlots
- Brendan Riley, GreenPower Motor Company
- Steven Moelk, IKEA
- Jon Walker, Lyft
- Kevin Shin, Los Angeles County Bicycle Coalition

## ***Advisors***

- Boris von Bormann
- Brett Hauser
- Mark Vallianatos, Ryan Wiggins, Los Angeles County Metropolitan Transportation Authority
- Connie Llanos, Los Angeles Department of Transportation
- Landon Lin, Yamen Nanne, Eric Taylor, Los Angeles Department of Water & Power
- Lisa Colicchio, Metrolink
- Carter Rubin, Natural Resources Defense Council
- Mauricio Mejia, Pasadena Water & Power
- Adonia Lugo, People for Mobility Justice
- Kyle Cherrick, Pick My Solar
- Rick Cameron, Port of Long Beach
- David Libatique, Port of Los Angeles
- Tom Boyle, Quik Pick Express
- Melodee Black, Southern California Edison
- Mike Saxton, Yaniv Lewis, Evan Rosenberg, SRECTrade
- Tony A. Williamson, Total Transportation Solutions Incorporated (TTSI)
- Stephanie Ly, TransPower
- Adam Gromis, Uber
- Conner Prochaska, U.S. Department of Energy
- Dr. Ana Unruh Cohen, U.S. House Select Committee on the Climate Crisis
- Kate Weber, USC Dornsife Public Exchange
- Garrett Brinker, Via



# **Join us!**

## ***About LACI***

Founded in 2011 as an outcome of a public-private partnership with the City of Los Angeles and its Department of Water & Power (LADWP), the Los Angeles Cleantech Incubator (LACI), is focused on clean energy, zero emissions transportation, and sustainable cities. Our mission is to create an inclusive green economy by unlocking innovation, transforming markets, and enhancing communities. LACI aims to build a regional innovation ecosystem that supports the discovery and commercialization of clean technologies by creating new companies, de-risking the go-to-market process, and helping companies successfully deliver market-ready cleantech solutions along with accompanying jobs in Southern California and beyond. Learn more at [laci.org](https://laci.org)

## ***Transportation Newsletter***

Please visit [www.laci.org/transportation](https://www.laci.org/transportation) to sign up for our monthly Transportation Newsletter and join us in tackling the climate crisis via zero emissions transportation initiatives.