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The Power of Partnership to Advance Markets: A Case Study on the Los Angeles Region's Transportation Electrification Partnership

Matt Petersen, Michelle Kinman, Alex Mitchell

Los Angeles Cleantech Incubator (LACI), 525 S Hewitt St., Los Angeles, CA 90013, matt@laci.org

Summary

The Los Angeles Cleantech Incubator has convened the Transportation Electrification Partnership, an unprecedented partnership bringing together local officials, utilities, state regulators and industry leaders to accelerate transportation electrification and zero emissions goods movement in the Greater Los Angeles region by the time the world arrives for the 2028 Olympic and Paralympic Games. Through its Zero Emissions 2028 Roadmap, this regional collaboration has set a bold greenhouse gas and air pollution reduction goal, along with a clear timeline and ambitious targets, guided by shared commitments to equity and economic development, while serving as an example for other regions in the U.S.

Keywords: electric vehicle, medium-duty, heavy-duty, policy, municipal government

1 Transportation Electrification Partnership

In May 2018, the Los Angeles Cleantech Incubator (LACI), a non-profit organization focused on creating an inclusive green economy, convened the Transportation Electrification Partnership to accelerate progress towards transportation electrification and zero emissions goods movement in the Greater Los Angeles (LA) region in advance of the 2028 Olympic and Paralympic Games.

Los Angeles is known the world over for being the nation's car capital, with heavy traffic, urban sprawl and the worst air pollution in the country. With greenhouse gas (GHG) emissions and air pollution from Southern California's transportation sector on the rise, time is of the essence and the LA region is uniquely positioned to lead the convergence towards a zero emission transportation future.

More than twenty-five influential partners have now embraced this vision through the Zero Emissions 2028 Roadmap goal of 25 percent additional reduction in GHGs and air pollution by 2028 through specific ambitious targets for various sectors. The Partnership is governed by a Leadership Group comprised of the heads of the California Air Resources Board, City of Los Angeles Mayor Eric Garcetti, Los Angeles County, Los Angeles County Metropolitan Transportation Authority (Metro), Los Angeles Department of Water and Power, Southern California Edison and LACI. This leadership is complemented by an Advisory Group including leading automakers, electric vehicle supply equipment (EVSE) companies, labor organizations, start-ups, and other public sector agencies and utilities.

While each of the partners is engaged in individual efforts to advance transportation electrification, the theory of change guiding the Partnership is that uniting diverse partners with a strong vision, clear timeline, and ambitious goals will unlock innovation, transform markets and strengthen communities throughout the region in ways not possible without collaboration.

What follows is an overview of the Partnership’s guiding principles and sectoral targets, a sense of how we are working together to advance policies and pilot projects to help achieve these targets, and some of the universal lessons that have emerged, including the importance of setting an overarching bold regional goal to guide the partnership, bringing unexpected public and private partners together united behind that goal, creating a sense of urgency and milestones to spur the hard work of making progress towards the Partnership’s ultimate goal, and taking the time to build a foundation of trust among members in order to nimbly navigate local, regional and state policies together to move the needle.

2 Zero Emissions 2028 Roadmap

In September 2018, the Partnership released its first Zero Emissions 2028 Roadmap, setting forth the overarching commitment that guides the Partnership [1]. While the State of California has the strongest set of transportation electrification policies in the nation, the partners pledged to help the LA region go further, faster by working together. Specifically, the partners committed to move toward an additional 25 percent reduction in GHG emissions and air pollution—beyond the current trajectory—in LA County by 2028 through accelerating transportation electrification.

To achieve this ambitious goal, the Partnership put forth equally ambitious—yet broad—target ranges for the deployment of electric vehicles and charging infrastructure. For instance, to accelerate the electrification of vehicles for people movement, the first version of the Roadmap’s targets included ensuring 20 to 45 percent of all passenger cars in LA County are electric by 2028, 80 to 100 percent of buses owned by Metro and the Los Angeles Department of Transportation (LADOT) are electric, and 60,000 to 130,000 public chargers are installed. Similarly, to facilitate the electrification of goods movement, the Roadmap targets called for 25 to 50 percent of all medium-duty delivery trucks to be electric, 10 to 40 percent of all drayage trucks on the road to be zero emissions, and 10,000-100,000 chargers installed to support these vehicles.

2.1 Guiding Principles

In addition to these numeric targets, we issued a set of four guiding principles that inform all of the actions of the Partnership.

- First, the Partnership is guided by the principle that when visitors and athletes arrive for the Olympics, people and goods can move emissions-free throughout the region. By 2028, we will demonstrate to the world that the region is firmly leading the way to an equitable zero emission transportation future. Our Partnership is committed to advancing and supporting initiatives that create zero emissions transportation options to and from all of the Olympic venues, including working with stakeholders to develop a recommended zero emissions mobility strategy for the games, establish zero emission zones around all the Olympic venues by ensuring electric transit options to and from all of the venues, and adopt policies to encourage mode shift and reduce congestion during the Games.
- The second principle informing the Partnership is to eliminate range anxiety by ensuring sufficient charging infrastructure. More electric vehicles are driven in the LA region than in any other area of the country, yet much work remains to be done to support increased adoption. Our Partnership is committed to working towards a 2028 in which it is as convenient to charge your car as it is to fill up your tank with gas today. This includes a future in which drivers can easily access a nearby charger—regardless of what neighborhood they are in or which direction they are heading; charge their vehicle no matter their income and with a variety of payment types; and make informed decisions on where to charge, with upfront, easily understood information on the price of charge at that location and at that time.
- Third, the Partnership is committed to enhancing equity through improved air quality, good jobs and access to mobility. Working hand-in-hand with community leaders, the Partnership is committed to reducing air pollution’s disproportionate impact on low-income communities and addressing the lack of adequate mobility solutions, including pursuing incentives that help all communities access EVs,

charging infrastructure, first and last mile solutions, and zero emissions transportation solutions; prioritizing equitable mobility access in each policy and pilot we advance, and adopting innovative policies and programs to empower residents in severely impacted communities to fully participate in mobility innovations.

- Finally, the fourth principle is to grow the Greater LA regional economy through transportation electrification. Given the LA region is home to the western hemisphere’s busiest shipping ports, international airports and major original equipment manufacturers (OEMs), transportation electrification will provide far-reaching benefits to our economy. Already, at least two dozen electric mobility companies have established a significant presence in LA County—founding their companies, establishing North American headquarters, and/or locating manufacturing and assembly operations here. These companies include those focusing on a range of technologies, including electric car manufacturing, electric bus manufacturing, electric vehicle supply equipment (EVSE) manufacturing and software, electric scooter companies, electric cargo bike companies, and electric medium- and heavy-duty truck manufacturing. The Partnership is committed to building on regional economic investment in transportation electrification; and working with traditional industry leaders, emerging players, and academia to explore other important sectors within the transportation electrification ecosystem, such as electric ground equipment and aviation, battery technology and railcar manufacturing.

3 Zero Emissions 2028 Roadmap 2.0

With the guiding principles and the overarching 25 percent emissions reduction commitment serving as our North Star, the Partnership conducted extensive modeling to refine the broad target ranges put forth in the inaugural Roadmap, and to extract key policy ideas, pilot needs and other findings.

We reviewed multiple platforms for modeling GHG emissions and transportation, ultimately selecting the Climate Action for Urban Sustainability (CURB) model developed by the World Bank in partnership with C40 Cities Climate Leadership Group [2]. This model was already in use by the City of LA and, as a GHG policy tool, was most closely aligned with the overarching Partnership goal of reducing emissions 25 percent beyond existing commitments.

We modified CURB to better address the Partnership’s specific focus areas, including transportation electrification and mode shift by using CARB’s Mobile Source Emissions Inventory (EMFAC) databases to construct a comprehensive GHG transportation inventory [3]. We then reviewed more than 900 state, regional, and local policy commitments and assumptions, and incorporated them as assumptions into the model, to align with current leading thinking. Throughout the course of the modeling, we worked closely with relevant experts from utilities, government and industry within and outside of the Partnership—holding more than two dozen meetings with 30 stakeholders—to ensure our process was robust and well-vetted.

Based on these analytics, the Partnership developed more precise targets for electric vehicle adoption and associated charging infrastructure in LA County by 2028, which form the basis of the 2.0 version of the Zero Emissions 2028 Roadmap, published in November 2019 [4].

3.1 A Three-Pronged Call to Action

In order to achieve the Partnership’s emission reduction goal, the members have all committed to work individually and collectively on policies, pilots and other actions to advance the following three-pronged call to action.

- First, achieving the 25 percent emission reduction goal will require significant adoption of light-duty passenger electric vehicles. Specifically, accelerating the adoption of light-duty passenger electric vehicles to be 30 percent of all vehicles on the road in LA County, and at least 80 percent of all vehicles sold by 2028. We are also calling for 84,000 public and workplace chargers in LA County—refined from our original range of 60,000 to 130,000—to support these vehicles.
- Second, achieving the aggressive emissions reduction goal is not feasible through electrification alone; it will also be necessary to shift more than 20 percent of all trips in single occupancy vehicles to zero emissions public and active transit by 2028.

- Third, it is critical to move rapidly to electrify the goods movement sector. It is necessary to ensure 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 sure that the I-710 freeway is the first zero emissions goods movement corridor in the nation. We are calling for 60 percent of all medium-duty delivery trucks in LA County to be electric, 40 percent of all drayage and short-haul trucks to be zero emissions, and 5 percent of heavy-duty long haul trucks to be zero emissions by 2028 to meet the Partnership’s goals.

The Partnership members agree that we must work together to achieve these measures—and doing so will take the integrated work of all the Partnership members and many others. Our collective action will also help the LA region be more competitive for the resources needed to facilitate this transition, and support the actions and policies needed at the state or other levels.

4 From Roadmap to Action

In her introductory letter to Roadmap 2.0, CARB Chair Mary D. Nichols wrote, the “report doubles down on the bold steps we must take to accelerate clean air and climate action in Los Angeles and across the state...Let’s get to work.” [5]

Having taken the time to unite all of the Partnership behind the Roadmap 2.0 targets, we can now move more nimbly together to advance policies and pilot projects needed to help achieve these targets. Already, in the first few months since publishing the Roadmap 2.0, we have engaged in a number of timely and critical policy and funding debates. In some cases, we have officially taken joint action, such as submitting a letter from 17 of the Partnership members, urging the California State Administration and Legislature to increase the amount of funding proposed in the annual state budget for zero emissions transportation solutions and charging infrastructure. In other cases, we have coordinated individual actions such as members providing public comment in support of an ordinance to increase the requirements for EVSE installation in new construction in the City of LA. Given that the Partnership includes public agencies that are the lead decision-making bodies for some of these policies, the full Partnership of more than twenty-five members is not always able to sign on. Nevertheless, LACI is able to ensure communication among members and align positions in the background, ensuring that those members who are in a position to take a public position are coordinating to advance the Roadmap 2.0 targets.

Even as the Partnership weighs in on current policy and funding proposals, we are also creating a detailed Action Plan, prioritizing near and long-term interventions that the Partnership will focus on to advance our shared goals. Working together, we are identifying which policies and other interventions will move the needle the farthest towards our goals, who the lead decision-makers are for each intervention, which stakeholders are involved, what market and political barriers we can expect, and the projected cost of implementing the intervention, among other factors.

- As we seek to achieve our light-duty vehicle goals, we are exploring the creation of consistent incentives to ensure consumer electric vehicle adoption, including significant support for low-income, vulnerable and disadvantaged communities to access EVs as well as public and active transit. We are also exploring policies to accelerate the transition of ride hailing vehicles to electric, such as those that leverage ride hailing fees to facilitate EV adoption by ride hailing drivers. On the infrastructure side, we are analysing policies to provide up-front incentives for charging infrastructure, streamline permitting and interconnection, waive permitting fees in certain use cases, pilot charging infrastructure solutions in multi-unit dwelling and install curbside charging solutions and DC Fast Charging plazas.
- Similarly, as we advance our mode shift goals, we are exploring ways to support the creation of a world-class public transit system—including 100 percent electric buses on the road—as well as explore tools such as Metro’s forthcoming congestion pricing study to encourage more discretionary transit riders to shift out of their cars and reduce single occupancy vehicle trips, and amplify considerations of equity including minimizing undue cost burdens on individuals with limited options. In addition, we are exploring first and last mile solutions such as e-bikes, scooters, EV car sharing and other programs. Finally, we are committed to supporting and investing in active transit solutions such as bike lanes, zero emissions zones, and safer streets throughout LA County.

- Finally, on goods movement, we are committed to aggressively increasing the public investment in zero emissions vehicles and infrastructure, while focusing efforts toward creating the nation’s first zero emissions freight corridor along the I-710 freeway. Doing so will require providing up-front incentives for medium and heavy-duty vehicles as well as infrastructure, and streamlining permitting and interconnection for the infrastructure in order to reduce the long timelines currently required to install and provide electrical service for charging facilities serving medium and heavy-duty trucks.

By taking the time now to create a coordinated Action Plan for the next eight years, with an immediate focus on the next two years, we positioning the Partnership to maximize our efforts. We have set bold targets for the LA region, and we know that achieving those goals will take innovation, collaboration and a multi-year commitment to putting in place the policies and pilot projects needed to advance markets and transform the way people and goods move throughout our region.

5 Piloting Solutions to Create a Zero Emissions Transportation Future

In order to achieve the goals and objectives in the Roadmap, LACI is focused on innovative zero emissions transportation pilots that can unlock barriers in the areas of light duty vehicle adoption, mode shift and goods movement. LACI’s pilots are focused on accelerating commercialization of emerging zero emissions technologies and bringing social, environmental and economic benefit to the communities most impacted by poor air quality.

5.1 Zero Emissions Mobility and Community Pilot

LACI is collaborating with community partners—including community-based organizations and technology providers—in disadvantaged, low-income communities in LA County to scope, build, operate, and provide ongoing maintenance and technical assistance for zero emissions mobility pilot projects. Through our Zero Emissions Mobility and Community Pilot Project, we are now executing projects in the Pacoima and San Pedro neighborhoods of Los Angeles as well as in the cities of Huntington Park and Long Beach. In each of these projects, we are working to deploy innovative and accessible zero emissions transportation alternatives to address transportation challenges identified by the communities.

- In Pacoima, LACI is working with community-based organization Pacoima Beautiful to launch community facing, on-demand, shared electric vehicles and a streamlined EV education and test drive portal with startup companies Envoy and Electrum DRIVE.
- In San Pedro, we have partnered with the Housing Authority of the City of Los Angeles (HACLA) Rancho San Pedro to create an EV car share pilot project with startup company Envoy to test different shared EV membership plans to identify market price points, address payment models for the unbanked population, and specific community use cases to develop a replicable and sustainable program model. HACLA will recruit a team of Rancho San Pedro residents to be program Ambassadors to conduct outreach, education, and membership sign-up activities.
- In Huntington Park, LACI's corporate partner, Southern California Edison, alongside environmental justice organization Communities for a Better Environment will design and build innovative curbside EV fast chargers utilizing existing utility electrical and mounting infrastructure to deliver a repeatable method for quickly and cost-effectively installing curbside EVSE. The focus will be on locations that will serve multi-family affordable housing complexes. The findings will support other cities in streamlining and optimizing curbside fast charging deployment and costs.
- In Long Beach, LACI has partnered with the Conservation Corps of Long Beach to deploy zero emission mobility technology to assist their at-risk youth workforce in responsibly addressing conservation and restoration projects along the Lower LA river. The pilot includes a focus on workforce development with introduction to green career pathways and LEV maintenance training for Conservation Corps members.

These pilot projects are a key element of enacting the principles and goals of the Partnership and will help bring the benefits of the green economy to neighborhoods that may lack zero emissions mobility, yet are burdened with poor air quality from various sources.

5.2 Voluntary Last-mile Zero Emissions Delivery Zone Pilot

Taking the lead from low emission zones pioneered in Europe and Asia, LACI is preparing to pilot a last-mile zero emissions delivery zone, covering a 1-3 mile radius in a dense area of Los Angeles County for at least one year, with the voluntary participation of major players in last-mile delivery.

This pilot grew out of early ideation by Partnership members and aligns with the Roadmap 2.0 target for 60 percent of all medium-duty delivery trucks in the County to be electric by 2028; it also aligns seamlessly with other Los Angeles goals linked to medium-duty trucks. The City of Los Angeles, for example, has committed to a zero emissions zone covering people and goods movement by 2030 in partnership with the global nonprofit C40 [6]. Moreover, LA's Green New Deal calls for 100 percent of urban delivery vehicles to be zero emission by 2035 [7].

The timing of the pilot would coincide with the commercial arrival of electric medium-duty trucks, whether from legacy players like Peterbilt, BYD, and Mitsubishi Fuso, or from a growing number of startups like Arrival, Rivian, XOS, Chanje, Workhorse, and CityFreighter. It would also coincide well with the growth in e-cargo bike sales in the US, particularly for use in fleets for goods delivery [8].

Of course, pulling off such a pilot will take both smart thinking and strong execution. Decision-makers will need to consider a range of policy carrots and sticks to help ensure that the right incentives are in place, including the all-important notion of curb access for zero emissions vehicles vs. non-zero emissions vehicles. We will need the right initial delivery partners and we will need to make certain the zone has the optimal density and radius. And finally, we will have to ensure that sufficient infrastructure for both electric medium-duty trucks and e-cargo bikes are in place.

In March 2020, LACI issued a call for business improvement districts and community-based organizations to self-nominate and explore the possibilities for undertaking the pilot in their community. Intended outcomes will be focused on reducing air pollution, reducing traffic congestion via smaller footprint vehicles such as e-cargo bikes, reducing noise pollution, and creating precedent for cities in Southern California to develop policies on zero emissions goods deliveries. LACI and the Partnership members look forward to selecting and working with one of these communities to further develop, secure additional funding for and implement this first-of-its-kind pilot in the United States.

5.3 I-710 Electrified Goods Movement Corridor

In 2017, the mayors of Los Angeles and Long Beach signed a joint declaration that includes a goal for all on-road drayage trucks serving the Ports to be zero emissions by 2035 [9]. As shown by multiple research studies, including recent research by UCLA's Luskin Center, waiting until the early 2030s to implement zero emissions trucks and the supporting infrastructure would lead to significantly more stranded assets and notably worse air quality and public health outcomes [10].

In the autumn of 2018, LACI partnered with CARB, the California Energy Commission, and the Ports of Los Angeles and Long Beach to issue an Request for Information (RFI) on Zero Emissions Trucks, Infrastructure and Pilot Concepts for Goods Movement [11]. With 39 respondents across startups and incumbents, vehicle manufacturers and infrastructure providers, the RFI demonstrated significant product development in the battery electric drayage truck space.

Furthermore, the RFI specifically asked about readiness to participate in a 50 to 100 zero emissions on-road drayage truck deployment at the Ports of Los Angeles and Long Beach. Seven vehicle manufacturers, both incumbent and startup, replied in the affirmative, with six offering battery electric drayage solutions. Subsequent responses to RFI questions around product launch timeline indicated that 2020 and 2021 would be feasible, and that the deployment of EV charging infrastructure at locations that align with drayage duty cycles would be an essential factor in the success of such a deployment.

Despite a zero emissions drayage market that has product either on the road (e.g., BYD) or is soon to arrive, today's patchwork of unconnected pilots has not yet convinced fleet purchasers that their next drayage truck must be zero emissions. Without a coordinated multi-stakeholder planning process, it will take years before

fleet operators see enough of a seamless charging network, in both density and distribution, for them to feel confident in purchasing zero emissions drayage trucks.

LACI proposes to pool resources from key agencies and organizations to create a “seamless electrified corridor” pilot along the critical and heavily utilized lower I-710 freeway corridor—a coordinated pilot for emerging medium- and heavy-duty electric trucks, charging infrastructure, and behavior changes.

Starting with an initial deployment of 50 to 100 zero emissions drayage trucks with 1-2 fleet operators, LACI plans to develop a coordinated infrastructure corridor along the I-710. In the initial deployment, this would involve piloting at least three different types of EV infrastructure locations: third party logistics yards, warehouses and truck stops, with the latter two potentially offering co-mingled medium-duty charging.

We aim to test the most suitable EV infrastructure location typologies for drayage, the ability to co-mingle medium-duty and heavy-duty charging, the ability to use zero emissions mobile charging as an opportunity charge solutions, the degree to which combining EV infrastructure with energy storage alleviates demand charges and grid constraints, and how much a “big bang” infrastructure deployment can build a market among Southern California fleet purchasers, sending strong market signals to drayage truck OEMs.

Given our strong partnerships with public sector agencies and industry leaders alike, our role as a respected convenor, and our clear focus on advancing transportation electrification in the greater LA region, LACI is uniquely positioned to coordinate the multiple stakeholders whose insights will be critical to ensuring the proper framework is in place before zero emissions trucks are deployed. We are working now to secure funding for this project and hope to be in a position to begin implementation by the end of 2020.

6 Lessons Learned Together

The hard work of achieving our shared goals has only begun, yet we have learned the following important lessons by coming together to launch this Partnership and by setting the most aggressive regional transportation electrification goals in the nation:

- Getting the Partnership off the ground and building initial excitement about the vision would not have been possible without engaging a set of influential leaders including elected officials, key agency leaders, senior utility executives and leading corporate from the beginning. Matt Petersen convened the Partnership to determine how we can best move towards transportation electrification, and Los Angeles Mayor Eric Garcetti, CARB Chair Mary Nichols and the late Ron Nichols of Southern California Edison all readily embraced the idea of using the 2028 Olympics as a forcing function for change, and provided the leadership needed to attract other key partners to the table.
- LACI’s role as the convenor and catalyst to drive the Partnership forward is key. While each of the Partnership members is leading by example on transportation electrification, it requires dedicated time and thought leadership to establish shared goals that go beyond the jurisdiction or business model of any one partner and to sustain collaborative work towards these shared goals, ensuring that the sum is greater than each of the parts. As an independent non-profit organization with a clear focus on innovation in zero emissions transportation, LACI is well poised to keep our fingers on the pulse of the transportation electrification ecosystem and work with our partners to identify and implement creative zero emissions solutions across the region.
- The fact that the Partnership is regional in nature is both unprecedented and essential. Our core targets are focused on LA County—itsself comprised of 88 distinct cities—and our aim is to influence the development of transportation innovation throughout the greater metropolitan area, an area that also includes Orange, Riverside, San Bernardino and Ventura Counties. Regional collaboration across geographic and political boundaries is challenging, but vital. Residents and visitors alike require a seamless travel experience as they move throughout the region. Working regionally can also help to achieve scale in ways that working in one city alone could not accomplish. Bringing a regional approach and ambitious regional goals to bear on state level policies can also move the needle, paving the way for stronger statewide regulations and policies. Finally, a regional approach is essential to ensure that actions are coordinated and that the region is able to secure funding from the state and federal government for transportation projects.

- Our regional effort has inspired a parallel multi-stakeholder collaboration in the Houston region. Houston Mayor Sylvester Turner reached out to LACI to provide advice to his team as they established their own public-private partnership, modeled after the Transportation Electrification Partnership, and created an Electric Vehicle Roadmap for the region. The EVolveHouston coalition has set an ambitious goal for 30 percent of new car sales in the Greater Houston area to be electric by 2030, looking ten years out from today and setting interim goals along the way [12].
- It has also proven motivating to connect the Partnership goals to a specific, meaningful moment in time, creating a sense of urgency. Just as the LA region worked together to implement significant transportation improvements ahead of the 1984 Olympic Games, area leaders are tying much needed transportation measures to the upcoming Games. Most notably, in 2017 Los Angeles Mayor Garcetti, as acting Chair of the LA Metro Board, introduced the “Twenty-Eight by ’28 Initiative” to accelerate and complete 28 major road, transit and bicycle projects in LA County by the time the world arrives for the Games [13]. So too, we are rallying around the Games as our deadline by which to achieve the Partnership’s zero emissions transportation goals, with key milestones along the way.
- As we have worked together, we have learned that there is a balance to strike between taking the time to establish a strong foundation and create a set of goals that unifies the full Partnership, and then shifting into action mode to bring those goals into reality. The connective tissue, and the ensuing trust, between the partners during the ambition setting stage has become vital as we have subsequently moved into advancing policies and pilots. The shared goals now serve as a litmus test for whether or not to pursue an individual policy or pilot project; whether or not an intervention will advance our Partnership goals has become the key question upon which we base action.
- Finally, we have recognized that achieving these goals will take the individual and collective work of all of the partners, and many other actors; the responsibility cannot fall to one leader, agency or business alone. Delivering on the promise of the Partnership will require time, resources and thought leadership from all of our members.

Athletes who have set their sights on competing in the Olympic Games plan strategies to achieve that ultimate goal, chart their progress, assemble a team of trainers and supporters, and train daily across a variety of disciplines. In that spirit, the Transportation Electrification Partnership has set bold goals in the Zero Emissions 2028 Roadmap, convened key partners from multiple sectors needed to advance progress, and is working now to put in place policies, pilot projects and other interventions needed to create an equitable zero emissions transportation future for the LA region, and set an example for regions across the country. Through collaboration, we will unlock innovation, transform markets and strengthen communities throughout the Los Angeles region.

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Author



Matt Petersen is President and CEO of the Los Angeles Cleantech Incubator (LACI), which is creating an inclusive green economy by unlocking innovation, transforming markets, and enhancing community. Prior to joining LACI, he was appointed by Mayor Eric Garcetti as the first ever Chief Sustainability Officer for the City of Los Angeles. Serving as CSO for four years, Petersen was the chief architect of the groundbreaking Sustainable City pLAn, led efforts to make LA a global leader in EVs, and helped create the Climate Mayors. Matt co-founded Global Green USA and led the organization for 19 years as President and CEO, pioneering the greening of affordable housing, schools, and cities as well as helping grow the solar sector. Petersen is chair of the Climate Mayors board, and a board member of Habitat for Humanity of Greater Los Angeles, Center for Environmental Health, and the Sir Edmund Hilary Institute for International Leadership.