TRANSPORTATION ELECTRIFICATION PARTNERSHIP

Federal Stimulus Proposal

Keeping America Working, Protecting Public Health, & Strengthening our Communities:
Supporting Vehicle Innovation and Manufacturing, Infrastructure Deployment, Public and Active Transit, Job Creation and Training, & Cleantech Economy via Startups & Small Businesses

Introduction

COVID-19 has created not just a public health crisis, but also an economic and a social one. With businesses shutting down, people are out of work. Unemployment is rising at unprecedented rates, and millions of Americans are facing severe economic hardship. ***Below are a set of recommendations for approximately $150 billion in federal stimulus to put people back to work through manufacturing, infrastructure, and innovation to boost the economy, create jobs, reduce air pollution, improve public health, protect vulnerable populations, and build climate resilience.***

Background

The public-private Transportation Electrification Partnership (TEP), convened and led by the Los Angeles Cleantech Incubator (LACI), is focused on building the Greater Los Angeles 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 Los Angeles 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, such as electric car manufacturing, electric bus manufacturing, airport and aircraft electrification, electric vehicle charging (hardware manufacturing, software and services), electric scooters, electric cargo bikes, and electric medium- and heavy-duty truck manufacturing.

LACI and TEP are committed to building on regional economic investment in transportation electrification. We are working with traditional industry leaders, emerging startups, small businesses, and academia to explore other important sectors within the transportation electrification ecosystem, such as electric ground equipment and aviation, battery technology and railcar manufacturing. Measures such as those proposed below would enable regional economies across the nation—including the LA region—to significantly advance technology and job growth in these growing sectors to make America more competitive in the global economy, and quickly put people back to work.

In doing so, we will also improve air quality and protect public health, given that studies have shown breathing polluted air makes individuals more susceptible to viruses, including COVID-19. Here in the LA region—known for its poor air quality—we are now experiencing some of the cleanest air in the world. These investments will help communities across our great nation benefit from cleaner air over the long-term, along with safer streets and quieter neighborhoods.

The items below focus on complementary job creation, with a multi-pronged approach that also improves public health, reduces risk, ensures equitable access to charging and electric vehicles, protects vulnerable populations, and creates more resilient communities.

Recommended Stimulus Priorities

1. **Investments in the Manufacturing, Assembly, and Adoption of Electric Vehicles (light, medium and heavy-duty): - $25 billion**
   A. **Extending the light duty electric vehicle tax credit, authorizing a new tax credit for electric vehicles and equipment of all types and sizes, and creating a scrap and replace program:** Under current law, the $7,500 EV tax credit begins to phase out once an automaker sells 200,000 qualifying EVs. Today, automakers are approaching and exceeding this cap. As the EV market matures, it is critical that the EV tax credit remains in place to benefit all customers and communities. The Driving America Forward Act, S.1094 & H.R. 2256, would increase the per-manufacturer cap on qualifying EVs by an additional 400,000 vehicles. We encourage an increase to this level or removing the per-manufacturer cap and creating a time-based program.

   In addition, we recommend the creation of a Clean Fleet Transition Accelerator program that would allow consumers to trade in older, inefficient vehicles for new vehicles, preferably EVs.

   Furthermore, we recommend additional targeted incentives also to ensure that low and moderate-income Americans are able to purchase EVs from the emerging second-hand market. The Clean Cars 4 All program in California is a successful example of providing up to $9,500 in incentives for lower-income Californians to replace old polluting cars with new or used electric vehicles.

   Expanding the EV tax credit for light duty vehicles as well as authorizing a credit for other types of EVs will spur growth and innovation in domestic manufacturing; enhance our nation's energy security; reduce emissions and improve local air quality. In addition, local auto dealers and vehicle and equipment dealers will benefit from the local sales tax revenues.

   Finally, we recommend measures, including rebates and tax credits, that directly and fully fund the cost of electric buses. Providing further funding to existing programs, such as the Federal Transit Administration's Low or No Emission Vehicle Program and the

EPA's Targeted Airshed Grant Program, will be important to incentivize the purchase of electric buses.

B. **Point of Sale Rebates:** In addition, we recommend immediate additional short-term point of sale cash rebates for all types of EVs, structured to be promptly credited to dealerships. This will also help dealerships increase sales and bring needed sales tax revenues to local and state governments.

C. **Grant and loans for US assembly and manufacturing:** We also support grants and no- or low-interest loans to develop and accelerate U.S. manufacturing of electric cars, trucks, ground equipment, and buses (transit and school buses) as well as the development of zero emission trains, aviation and sea craft. This can be achieved in great part by A) utilizing the existing $17.7 billion authorized Advanced Technology Vehicles Manufacturing Loan Program (ATVM) at the US DOE Loans Program Office (LPO); and B) expanding the LPO's ATVM program beyond light duty to include medium and heavy duty vehicles, ground equipment, and other electric technologies. Companies such as BYD Motors and Proterra have chosen to locate electric vehicle manufacturing facilities in the Los Angeles region, and support for manufacturing and assembly will foster growth in this section in the LA region and across the country.

D. **Purchasing collaboratives:** We support tools enabling local and state governments to bid together on the purchase of electric vehicles in large quantities, thereby lowering the cost and removing friction from the purchasing process. This initiative could build off of the Climate Mayors Electric Vehicle Purchasing Collaborative, which is a turnkey, one-stop, online procurement portal providing U.S. cities, counties, state governments, and public universities equal access to competitively bid on EVs and charging infrastructure, innovative financing options, best practices, and other forms of expertise.

2. Zero Emission Infrastructure Investments: - $85 billion. We recommend significant funding for infrastructure and grid modernization to support the deployment of zero emission transportation technologies, including connected distributed energy resources (DER). Where possible, we encourage skilled and trained workforce requirements and the use of certified electricians that are trained and certified by programs such as the Electric Vehicle Infrastructure Training Program.

A. **Medium and Heavy Duty Charging:** $15 billion for medium and heavy-duty vehicle charging to be administered by state government, transit agencies, or regional agencies. This investment is critical to add at truck stops and plazas, overnight truck yards, and other strategic locations, such as at ports and airports. As an example, the LA region is a key 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 Ports of Los Angeles and Long Beach. However, goods movement through the Ports represents, in aggregate, the largest source of air pollution in the region. The goods movement industry is vital to the region's economy, and represents a large portion of vehicles on the road. The LACI-convened multisectoral Transportation Electrification Partnership has called for **60% of all medium-duty delivery trucks in Los Angeles County to be electric by 2028; 40% of**

short haul and drayage to be zero emissions and 5% of long haul trucks to be zero emission. Further, we have estimated the **need for 95,000 chargers to support zero emissions goods movement** in LA County alone. Finally, LACI and the Partnership have committed to ensuring that the truck-heavy I-710 freeway corridor is the first zero emissions goods movement corridor in the nation. Achieving these aggressive goals will significantly reduce climate and air pollution emissions and send a strong signal to the marketplace. LACI-commissioned research by Gladstein, Neandross and Associates that estimates that installing the needed charging infrastructure, labor costs, and utility upgrades to electrify the I-710 freeway corridor will total between $2.5 to $3 billion. Funding of the scale proposed here could enable a transformation not only in the LA metropolitan area, but across the country, as well as provide opportunities where possible for local hire through community benefit agreements, which are an effective mechanism to ensure charging infrastructure projects include workers living local to a project, as well as other targeted hiring policies, such as US Veteran hiring, are achieved.

B. **Light Duty Charging Infrastructure:** $10 billion for EV charging infrastructure for light duty vehicles via state government, transit agencies, and/or regional agencies. As an example, the Transportation Electrification Partnership estimates the need for 84,000 public and workplace chargers in LA County by 2028 in order to achieve needed climate and air pollution reductions. Achieving infrastructure deployment of this scale not only in LA County, but in other regions across the country will require significant investment. We encourage electricity panel upgrades and direct installations of EV charging infrastructure in multi-unit dwellings to address equity in cities and to create strong local job opportunities. In addition, one shovel ready type of charging infrastructure project that has been successfully implemented by the City of Los Angeles is to deploy curbside charging infrastructure on streetlight poles to serve renters and other drivers who do not have access to charging at home; such projects do not require trenching and, thus, can be completed in a timely manner. Another innovative type of charging infrastructure project that would address numerous goals at once is to locate high-speed charging centers in key locations across metro areas, predicated on brownfield redevelopment. Such centers would be open to the general public, but a portion of the charging ports could be prioritized for TNC/ride-hailing use; these spaces could integrate businesses such as coffee shops, cafes and small food markets as co-tenants in the space, providing a variety of services to surrounding communities and creating local jobs. Funding would be required to support the utility make-ready work to handle the electricity load, which could also require battery storage and/or solar generation to address peak loads, as well as grants for building construction. Note: Funding of the scale proposed here aligned with an independent study conducted by McKinsey & Company.

C. **Transit and School Bus Charging and Vehicles:** $11 billion for transit and school bus charging via states, transit agencies and school districts. As an example, the State of California requires that all of the estimated 12,000 transit buses in the state be zero emission by 2040 or sooner. The Los Angeles County Metropolitan Transportation

Authority (LA Metro), which has the second largest transit bus fleet in the nation, has committed to transitioning its full fleet a decade earlier, by 2030; Culver City and Santa Monica have similarly committed to converting their municipal bus fleets to electric by 2030; Los Angeles Mayor Eric Garcetti has pledged for LADOT to meet this goal for its fleet by 2028. The success of these policies will set a strong example for other transit agencies across the country and it is critical that there is sufficient investment in infrastructure to support this transition. Given the harmful health impacts to children from diesel exhaust, the rapid transition to electric school buses is critical for improving public health and reducing greenhouse gas emissions. Furthermore, electric school bus fleets have the potential to serve as an important component of resiliency efforts, serving as mobile energy storage solutions, providing emergency backup power during emergency situations. The California Energy Commission (CEC) has administered the School Bus Replacement Program, providing one-time funding of $75 million from Proposition 39 for the replacement of old diesel school buses with battery electric school buses in disadvantaged and low-income communities throughout the state. In addition, approximately $14 million was allocated for charging infrastructure to operate the buses. With this combined funding, the CEC is able to fund 233 buses (12,185 seats for students) and the accompanying charging infrastructure. However, school districts had applied to replace an additional 1,300 school buses via this program for which there was not enough funding; an additional $422 million in bus purchases and $79 million in infrastructure would be needed to transition these buses. Given the number of school buses across the country, funding at the scale proposed here would be well spent.

D. **Local and State Government Fleets:** $5 billion for local and state government fleets charging infrastructure and utility upgrades.

E. **21st Century Distribution Grid:**

   $20 billion for utility upgrades to support EV infrastructure buildout via state governments and/or to utilities directly.

   $10 billion for solar, storage and solar+storage distributed energy installations via utilities, transit agencies, and local and state governments, with priority for tying to charging for public use for resiliency in times of wildfires, extreme weather events, and other disasters.

   $10 billion for multifamily and commercial charging, solar and storage. Support for commissioning and retrofitting of existing buildings to include more onsite grid and panel capacity upgrades be more energy efficient through on-site generation, storage and EV charging.

F. Low-Income Customer Assistance

a. $4 billion for support for the Low-Income Home Energy Assistance Program (LIHEAP). As Congress provides support for growth in clean transportation and energy, it is vital that all Americans continue to have access to affordable electricity. The current COVID-19 pandemic has forced more than 16 million Americans out of the workforce and into unemployment. This recent surge is straining LIHEAP. In addition to the assistance programs provided directly by utilities, LIHEAP provides short-term assistance to the most vulnerable Americans in paying their utility bills. Having access to affordable energy has

never been more critical and Congress should help struggling Americans by including an additional $4.3 billion in LIHEAP funding, which would assist approximately over 11 million households.

b. We also support additional funding for the U.S. Department of Energy's (DOE) Weatherization Assistance Program, which reduces energy costs for low-income households by increasing the energy efficiency of the homes while ensuring the resident's health and safety. Such programs are important to reducing energy demand while adding EV infrastructure to affordable housing and multi-unit dwellings.

G. **Unlocking Private Capital by Optimizing Existing Economic Tools including Opportunity Zones.** By leveraging existing tools, we can help unlock private capital to align with the priorities and benefits noted above. Below are two ideas:

Opportunity Zones (OZ): While this tool is often seen as providing benefit for real estate investments that were already happening, there are some OZ real estate investments occurring that are building community assets in and with low income communities. However, we are not seeing the use of OZs for investment in cleantech startups, small businesses, and green infrastructure in low-income communities. By building on current OZ tax benefits and by creating a sweetener or even requirement for other assets, things like DC fast chargers for light-duty EVs, chargers for medium and heavy duty trucks and buses (along with the actual vehicles that they charge), solar and storage installations to provide grid balancing and demand response benefits, and more; there could be a modified version of the OZ that also channels actual investments in startups in these communities delivering key technologies for climate action.

New Market Tax Credits and Community Development Finance Institutions: These tools could be optimized to bring other investments and lending programs to the above and below strategies.

3. Investments in Public Transit and Reduce Vehicle Miles Traveled - $25B

We recommend support for the transition to all forms of zero emissions public transit solutions--including capital costs as well as critical operations and maintenance--and improvement projects that make streets safer for walking and biking, waterways and airspace, improving quality of life, and other measures, including:

A. Support for zero emissions public transit investments including grants to help cover the cost of electrifying bus rapid transit lines (e.g., LA Metro’s Orange Line), electrification pilots for diesel-powered regional commuter rail lines, and microbility solutions for first/last mile needs (e.g., e-bike share, EV car share, etc.).
B. Support for Safe and Complete Streets, especially around station areas, including shade and other amenities for transit riders. These needs include funding for business interruption during construction and include anti-displacement requirements.
C. Support for construction and maintenance of active transportation infrastructure including dedicated bicycle lanes (Class IV), bikeway networks, and sidewalk

improvements and amenities. For example, improving walkability and bikeability of LA communities is paramount for community health. LA aims to totally eliminate traffic-related fatalities by 2035. Infrastructure improvements focused on walkability and bikeability not only serve community health, but they also create a safer roadway network for users of innovative first/last mile technologies that can expand affordable, electric mobility options.

D. Support for tree planting and maintenance. The urban forest is an essential part of a healthy community, made up of trees on both public and private lands. Spread equitably and supported by other urban greening measures, a well-managed urban forest throughout LA County can deliver shading from heat for pedestrians and transit riders while also supporting community health and well-being.

4. Workforce Development and Job Training - $12.5B

A. $5 billion for workforce development for under/unemployed, veterans, formerly incarcerated, and upskilling or retraining for those currently employed in the fossil fuel industry including pre-apprenticeship programs and state-approved joint labor-management apprenticeship programs with labor—distributed via state agencies, local government, state or local building and construction trades councils and/or community colleges. For example, a soon to be released green jobs focused report from LACI by HR&A projects that there could be 600,000 green jobs created in Los Angeles County by 2050, with significant investment by the public sector. Projections for Los Angeles County identify the largest number of job openings transportation and materials moving occupations, and construction and extraction occupations. This is further amplified by the impact of public investment, including Measure M, which will create a short-term need for increased construction workers, and a long-term need for additional transportation workers.

B. $1 billion for workforce training and deployment for paid internships or apprenticeships for emerging jobs like EV charging station maintenance, battery storage maintenance, etc. $500 million of these funds would be to nonprofit incubators (e.g. LACI, etc.) and/or their partners (see below).

C. $5.5 billion for community colleges and universities to provide accelerated certification programs for under/unemployed to rejoin the workforce.

D. $1 billion for state-approved joint labor-management apprenticeship programs to fund pre-apprenticeship programs, expand apprenticeship opportunities and provide training and certification to journeymen and apprentices in emerging technologies such as EV charging infrastructure and energy storage systems.

E. Priorities for small businesses and cleantech startups, including firms owned or led by women and people of color (in addition to standard MBE/WBE prioritization) and for state-approved joint labor-management apprenticeship programs. Projects that hire locally should be prioritized to benefit the communities where projects are located. Projects that have already been bid out and for which there has been an executed contract should also be prioritized.

5. Support for Innovation Ecosystem of Cleantech Startups, Small Businesses, Underrepresented Founders, Incubators/Accelerators, and Pilots - $2.5 billion
Startups and small businesses are the engine of every local and regional economy. Targeting resources to this sector is critical to help entrepreneurs continue America's leadership in technology innovation, restart small businesses, and help put people back to work.

A. **$500 million in emergency loans and grants for cleantech startups and small businesses delivering solar, storage, EV, and related solutions that reduce energy use, emissions,** etc. Grants are key as businesses whose revenue has precipitously dropped (e.g., solar installers, EV charging installers, let alone restaurants, hotels, etc.) are difficult to pay back with no cash flow, and the same is true for pre-revenue startups. These funds can also help meet the gap in capital markets for cleantech startups between seed/angel investing and later stage series A /series B rounds.
B. $500 million in targeted funding for startups and small businesses founded by women and underrepresented people of color through targeted pilots and other forms of support via US EDA and SBA.
C. $500 million in funding for nonprofit cleantech and innovation incubators via the U.S. Economic Development Agency (EDA) in collaboration with SBA and DOE OTT.
D. **$1 billion for early stage research and development** of cleantech and zero emission mobility innovations.
E. $1 billion for shovel ready pilots (innovations and technologies for EV charging innovations, zero emissions mobility, storage, waste, etc.) deployed by startups and small businesses via local governments targeting low income communities that suffer disproportionate impacts from air quality and lack of last/first mile solutions via eligible nonprofits (e.g., LACI, etc.).
F. Green job training and paid internships with startups and partner organizations to train the unemployed/underemployed, formerly incarcerated, veterans, etc. and provide paid internships to work with startups and small businesses. $500 million of the above job training and paid internships would be allocated to work with startups and small businesses.