

Neighborhood and Freeway Traffic from Trucks and Automobiles

Background

A complex network of freeways, including the East Los Angeles Interchange (i.e., 5, 10, 60 and 101 Freeways), San Bernardino Split (i.e., 5, 10 and 101 Freeways) and Long Beach Freeway (i.e., 710 Freeway) pass through the East Los Angeles, Boyle Heights, West Commerce community. These freeways carry large volumes of traffic on a daily basis, for example, on a peak day the East Los Angeles Interchange carries over a half-million vehicles.¹

The East Los Angeles Interchange also serves as a vital transportation corridor that facilitates the movement of goods from the Ports of Los Angeles and Long Beach (Ports) by heavy-duty trucks. Approximately seven percent of the total volume of vehicles that travel through the East Los Angeles Interchange is comprised of heavy-duty truck traffic. Warehouses, railyards, and retail stores also attract truck traffic to the commercial and industrial corridors in the East Los Angeles,² Boyle Heights,³ West Commerce⁴ community. Community members report that trucks often travel near and through local neighborhoods to reach their destinations. The volume of vehicle traffic on freeways in this community impacts the local residents by exposing them to harmful air pollutants emitted by heavy-duty diesel trucks, passenger cars, and other vehicles.

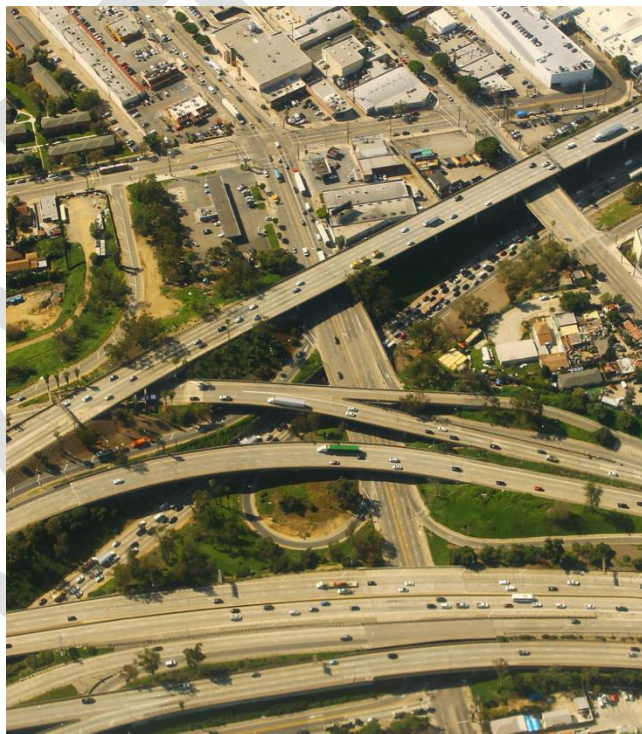


Figure 5-X: Aerial view of East Los Angeles Interchange

The amount of freeway and neighborhood truck traffic in the East Los Angeles, Boyle Heights, West Commerce community is likely to increase as a result of the expected increase in goods

¹ Caltrans, Traffic Volume, 2016, http://www.dot.ca.gov/trafficops/census/docs/2016_aadt_volumes.pdf, Accessed June 23, 2019.

² County of Los Angeles, East Los Angeles Community Plan, 2019, http://planning.lacounty.gov/view/east_los_angeles_community_plan, Accessed May 1, 2019.

³ City of Los Angeles, Boyle Heights Community Plan, 2018, <http://www.bhplan.org/>, Accessed May 1, 2019.

⁴ City of Commerce, General Plan, City of Commerce, 2018, <http://www.ci.commerce.ca.us/DocumentCenter/Home/View/152>, Accessed May 1, 2019.

movement activities in Southern California. These activities are largely driven by the anticipated growth in the volume of goods that are imported and exported through the Ports.⁵ This growth may lead to additional community air quality impacts resulting from increases in traffic volumes through local neighborhoods and freeway corridors.

Community Air Quality Priorities – Idling Trucks, Monitoring High Volume Roadways, Enhanced Enforcement of Existing Regulations and City Ordinances, Congestion, and Cleaner Technology Options

The East Los Angeles, Boyle Heights, West Commerce CSC identified air pollution from heavy-duty diesel trucks and passenger cars traveling on local neighborhood streets and freeways as an air quality priority. This priority is based on both community observations and data⁶ that shows the contribution of air pollution impacts from traffic volumes in the East Los Angeles, Boyle Heights, West Commerce community. To address these air quality impacts, the CSC prioritized the following:

- Increased enforcement of CARB’s Truck and Bus and Idling Rules to reduce diesel emissions (including during non-business hours),
- Traffic data collection (e.g., Automated License Plate Reader)⁷ at high traffic roadways to improve mobile source emissions information and provide data that could be used to identify potential new truck routes,
- Air measurements on roadways in and around the community to provide data that could be used to evaluate mobile emissions information,
- Establishing or improving designated truck routes,
- Improving the complaint systems designed to report illegal truck idling or truck travel on local roadways,
- Additional and new incentive funding opportunities to replace heavy-duty diesel trucks with zero-emission technologies once they become available, and near-zero emission technologies until that time,
- New regulations that require the use of zero-emission trucks, when they are available, and
- Enhancing outreach to commercial fleets, warehouses, and other facilities that operate heavy-duty diesel trucks in the community prioritizing zero-emission vehicles once they become available, and near-zero emission technologies until that time.

⁵ Southern California Association of Governments, *Goods Movement Appendix*, April 2016, http://scagrtpscs.net/Documents/2016/final/f2016RTPSCS_GoodsMovement.pdf, Accessed May 1, 2019.

⁶ South Coast AQMD, *Ambient Measurements of Air Toxic Pollutants at Resurrection Catholic School in Boyle Heights*, April 2012, <http://www.aqmd.gov/docs/default-source/air-quality/air-quality-monitoring-studies/bhpilotstudy-resurrection-catholic-school.pdf?sfvrsn=2>, Accessed June 25, 2019.

⁷ California Air Resources Board, “Improving On-road Vehicle Data: Automated License Plate Readers (ALPR) Portable Emission Acquisition System (PEAQS),” <http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/east-la/meeting-presentation-may26-2019.pdf>, Accessed May 16, 2019.

Ongoing Efforts

CARB's Airborne Toxic Control Measure (ATCM) places limits on idling of diesel-fueled trucks. This regulation is enforced by CARB and South Coast AQMD, and will be a focal point of the enforcement activities in AB 617 communities. CARB continues to address truck diesel emission reductions through existing and upcoming regulations, such as the Drayage Truck Regulation⁸ and the Truck and Bus Regulation,^{9,10} which include emission standard requirements. CARB is also responsible for enforcing the Commercial Vehicle Idling Regulation, where commercial vehicles (gross vehicle weight rating greater than 10,000 pounds) are prohibited from idling for more than five minutes.¹¹ In addition, to help cities address idling, CARB has developed an "Options for Cities to Mitigate Heavy-Duty Vehicle Idling" guidance document which includes options for cities to address heavy-duty vehicle idling emissions in their communities.¹²

CARB continues to work towards reducing residual public health risk from Transport Refrigeration Units (TRU)¹³ near distribution centers and other facilities where TRU activity is focused as well as achieve emission reductions while in transit, especially near the most impacted communities. Improving freight efficiency and transitioning to zero-emission technologies will help reduce toxic air contaminant emissions, criteria pollutant emissions, and greenhouse gas emissions. CARB has created advisories¹⁴ and forms¹⁵ to assist TRU owners in understanding compliance requirements as well as to ensure that all regulated entities (e.g., TRU owners, TRU operators, facilities that support TRU use, etc.) are aware of their responsibilities under this regulation.

⁸ California Air Resources Board, Update on California Actions to Minimize Community Health Impacts from Freight, March 2019, https://www.arb.ca.gov/board/books/2019/032119/19-3-2pres.pdf?_ga=2.79278740.1419761847.1559951314-1545453421.1552083450, Accessed June 13, 2019.

⁹ California Air Resources Board, "Truck and Bus Regulation Compliance Requirement Overview," <https://www.arb.ca.gov/msprog/onrdiesel/documents/FSRegSum.pdf>, Accessed June 3, 2019.

¹⁰ California Air Resources Board, "Truck and Bus Regulation On-Road Heavy Duty Diesel Vehicles (In-Use) Regulation," <https://www.arb.ca.gov/msprog/onrdiesel/onrdiesel.htm>, Accessed June 3, 2019.

¹¹ California Air Resources Board, Idling Programs: Commercial Vehicle Idling, May 2019, <https://www.arb.ca.gov/enf/diesel.htm#cmvidling>, Accessed June 13, 2019.

¹² California Air Resources Board, "Options for Cities to Mitigate HDV Idling," https://www.arb.ca.gov/enf/arb_options_cities_mitigate_idling.pdf, Accessed June 3, 2019.

¹³ California Air Resources Board, *Transport Refrigeration Units*, <https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit>, Accessed June 13, 2019.

¹⁴ California Air Resources Board, Transport Refrigeration Unit ATCM - Advisories, <https://www.arb.ca.gov/diesel/tru/advisories.htm>, Accessed June 13, 2019.

¹⁵ California Air Resources Board, Third Party Agreement Forms, https://www.arb.ca.gov/diesel/tru/tru_test.htm#mozToclid148869, Accessed June 13, 2019.

CARB has many new requirements that are also being considered that would further reduce emissions from trucks and TRUs. Table 5-1 below illustrates the key upcoming activities from U.S. EPA and CARB.

Table 5-1: Upcoming Rule Development/Activities from U.S. EPA and CARB

Agency	Proposed Action	Expected Decision	Expected Phase-in Period
U.S. EPA	<u>Cleaner Truck Initiative</u> ¹⁶ – In response to a petition from the South Coast AQMD, U.S. EPA has committed to updating its truck engine standard to reduce NOx emissions.	2020-2021	2024-?
CARB	<u>Transport Refrigeration Unit Regulation</u> ¹⁷ – Measure to reduce residual risk from TRUs by transitioning to zero-emission technologies.	2019	2025-2030
CARB	<u>Drayage Truck Rule</u> ¹⁸ – Updated regulation to transition to zero-emission trucks.	2022	2026-?
CARB	<u>Advanced Clean Truck Rule</u> ¹⁹ – Mandate for truck manufacturers to sell zero-emission trucks. By 2030, zero-emission truck/chassis sales would need to be 50% of class 4 – 8 ‘straight’ trucks sales and 15% of all other truck sales. Also requires fleet reporting.	2019	2024-2030
CARB	<u>Zero-Emission Fleet Rule</u> ²⁰ – Would require fleets to transition to zero-emissions.	2022	2024-?
CARB	<u>Heavy-Duty Low NOx Rule</u> ²¹ – Would set new statewide engine standards for trucks. 60-75% NOx reduction between 2024-2026. Additional reductions in 2027 and beyond.	2020	2024-?

South Coast AQMD funds projects to help develop zero-emission technologies for heavy-duty Class 7-8 trucks (e.g., battery electric and fuel cell). These projects are in the design and demonstration phase, and the technologies are not yet commercially available. Additionally, South Coast AQMD administers incentive programs for truck owners and operators to replace

¹⁶ U.S. EPA, Cleaner Trucks Initiative, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/cleaner-trucks-initiative>, Accessed June 13, 2019.

¹⁷ California Air Resources Board, Transportation Refrigeration Units, <https://ww2.arb.ca.gov/our-work/programs/transport-refrigeration-unit/new-transport-refrigeration-unit-regulation>, Accessed June 25, 2019.

¹⁸ California Air Resources Board, Update on California Actions to Minimize Community Health Impacts from Freight, March 2019, https://www.arb.ca.gov/board/books/2019/032119/19-3-2pres.pdf?_ga=2.79278740.1419761847.1559951314-1545453421.1552083450, Accessed June 13, 2019.

¹⁹ California Air Resources Board, Advanced Clean Trucks, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks/resources>, Accessed June 13, 2019.

²⁰ California Air Resources Board, Zero-Emission Vehicle Fleet, <https://ww2.arb.ca.gov/our-work/programs/zero-emission-vehicle-fleet>, Accessed June 13, 2019.

²¹ California Air Resources Board, Heavy-Duty Low NOx, April 2019, <https://www.arb.ca.gov/msprog/hdlownox/hdlownox.htm>, Accessed June 13, 2019.

older polluting trucks with trucks that are cleaner than required.²² For example, South Coast AQMD’s Voucher Incentive Program (VIP) is designed for smaller businesses with fleets of 10 or fewer vehicles that primarily operate within California.²³ VIP helps truck owners with older trucks to purchase newer trucks meeting the current emissions standards. The Carl Moyer Program²⁴ is another resource for truck owners to obtain cleaner trucks that would achieve emission reductions that are surplus to the regulations.

Another strategy could be the use of Automated License Plate Readers (ALPRs), which is currently being explored by South Coast AQMD staff in collaboration with CARB. These are high-speed, computer-controlled camera systems that can capture license plate numbers that come into their view. ALPR data, when cross-referenced with DMV data, can provide more information about vehicles (e.g., the chassis model-year and weight class for trucks), which can help build a picture of the fleet makeup that pass a specific location over time. Assumptions for relating chassis model year and engines installed on a chassis can be used to estimate emissions from heavy-duty diesel trucks. South Coast AQMD staff is exploring the possibility of using this information to notify heavy-duty diesel truck owners that may qualify for incentive programs to replace their truck with newer cleaner models. Moreover, the use of an ALPR system to collect this type of data would require the development of a policy that protects the privacy of the registered truck owners.²⁵ South Coast AQMD is actively looking into the feasibility of utilizing the ALPR system to address this community’s concerns but must first understand any possible issues or limitations.

Opportunities for Action

The CSC’s strategy to reduce the community’s exposure to air pollution from trucks and other vehicles is described in the actions below.

Action 1: Reduce Truck Idling
Course of Action:
<ul style="list-style-type: none">• Conduct focused enforcement for idling trucks in high traffic areas, prioritizing areas near schools and residential areas<ul style="list-style-type: none">○ Other areas prioritized by the CSC include areas near distribution centers and high traffic corridors such as Soto Street, 4th Street, and Whittier Blvd• Collaborate with the CSC to inform community members how to report idling trucks

²² South Coast AQMD, On-Road Vehicles, [http://www.aqmd.gov/home/programs/business/carl-moyer-memorial-air-quality-standards-attainment-\(carl-moyer\)-program/on-road-vehicles](http://www.aqmd.gov/home/programs/business/carl-moyer-memorial-air-quality-standards-attainment-(carl-moyer)-program/on-road-vehicles), Accessed June 3, 2019.

²³ South Coast AQMD, Voucher Incentive Program, <http://www.aqmd.gov/home/programs/business/business-detail?title=voucher-incentive-program&parent=vehicle-engine-upgrades>, Accessed June 3, 2019.

²⁴ South Coast AQMD, Carl Moyer Program, <http://www.aqmd.gov/home/programs/business/business-detail?title=heavy-duty-engines&parent=vehicle-engine-upgrades>, Accessed June 3, 2019.

²⁵ California Air Resources Board, “Improving On-road Vehicle Data: Automated License Plate Readers (ALPR) Portable Emission Acquisition System (PEAQS),”

<https://www.facebook.com/southcoastaqmd/videos/1248687388632139/>, Accessed May 23, 2019.

<ul style="list-style-type: none"> • Provide community outreach on existing city, county, CARB, and South Coast AQMD complaint systems on reporting idling trucks. If existing complaint/response system is determined to be ineffective, assess where improvements are feasible 	
Strategies:	
<ul style="list-style-type: none"> • Enforcement • Collaboration • Public Information and Outreach 	
Goals:	
<ul style="list-style-type: none"> • Conduct [<i>X amount of</i>] focused inspections and targeted sweeps within a [<i>insert proposed timeframe</i>] • Organize [<i>X amount of</i>] outreach events within a [<i>insert proposed timeframe</i>] to inform community members how to report idling trucks 	
Estimated Timeline:	
<ul style="list-style-type: none"> • Beginning fall of 2019, with quarterly updates to the CSC 	
Implementing Agency, Organization, Business or Other Entity:	
Name:	Responsibilities:
South Coast AQMD	<ul style="list-style-type: none"> • Conduct idling sweeps. May require coordination with local law enforcement • Organize outreach events in collaboration with local entities
CARB	<ul style="list-style-type: none"> • Coordinate idling truck inspections with the California Highway Patrol
CSC	<ul style="list-style-type: none"> • Work with South Coast AQMD and other local entities to disseminate information on how to report idling trucks in the community (e.g., outreach events and flyers)
References:	
<p>For more information regarding requirements for idling trucks: 13 CCR § 2485; https://www.arb.ca.gov/enf/diesel.htm</p>	

Action 2: Reduce Emissions from Heavy-Duty Trucks

Course of Action:

- Work with the city or the county to evaluate potential designated truck routes and identify resources to enforce these routes.
- Collaborate with local businesses, agencies, and organizations to conduct outreach to truck owners and operators in this community to provide information about community ordinances, restricted truck routes, trucking regulations, and available incentive programs

<ul style="list-style-type: none"> • Identify South Coast AQMD and other additional incentive funding opportunities to accelerate adoption of cleaner equipment and trucks • Target incentive funds for local small businesses and independent owner/operator (e.g., Voucher Incentive Program) • Participate in CARB’s rule development for future amendments to their truck regulations • Continue to develop Facility Based Mobile Source Measures (see Warehouse and Rail) • Conduct focused enforcement of CARB’s TRU Regulation, Drayage Truck Rule, and Truck and Bus Rule 	
Strategies:	
<ul style="list-style-type: none"> • Incentives • Public Information and Outreach • Collaboration • Regulation • Enforcement 	
Goals:	
<ul style="list-style-type: none"> • Organize <i>[insert number]</i> of incentive outreach events per year and provide biannual updates to the CSC • Provide biannual updates on CARB’s rule development for truck regulations, and seek community input on progress • <i>[CARB – CSC, please provide input to CARB regarding where enhanced enforcement should occur]</i> 	
Estimated Timeline:	
<ul style="list-style-type: none"> • 2020, when incentive programs are available, begin conducting incentive outreach events and provide quarterly or biannual updates to the CSC • CARB’s New Regulations phase in 2024-2030 • <i>[CARB Enforcement timeline]</i> 	
Implementing Agency, Organization, Business or Other Entity:	
Name:	Responsibilities:
South Coast AQMD	<ul style="list-style-type: none"> • Provide incentives and targeted outreach for truck incentive programs in this community • Provide updates to CSC. Present truck incentive projects that have been submitted and are being considered for Community Air Grants incentive funding • Provide training to community leaders or organizations that provide application assistance for incentive programs
CARB	<ul style="list-style-type: none"> • Continue rule development for amendments to the Drayage Truck Regulation

	<ul style="list-style-type: none"> • Conduct enforcement of existing Drayage Truck and Truck and Bus Rules
City and County Los Angeles, City of Commerce	<ul style="list-style-type: none"> • TBD
CSC members (including businesses, community organizations, and agencies)	<ul style="list-style-type: none"> • Work with South Coast AQMD to conduct outreach to truck owners and operators • Provide application assistance to potential applicants for incentive programs • Seek funding support to provide this service, e.g., through CARB Community Air Grants
References:	
<p>For more information regarding the CARB Drayage Truck Regulation: www.arb.ca.gov/drayagetruck</p> <p>For more information regarding the CARB Community Air Grants: https://ww2.arb.ca.gov/our-work/programs/community-air-protection-program/community-air-grants</p> <p>For more information regarding CARB Truck and Bus Regulation: https://arb.ca.gov/msprog/onrdiesel/onrdiesel.htm</p> <p>For more information regarding restricted truck routes in the general plans for this community:</p> <ul style="list-style-type: none"> • City of Los Angeles, Boyle Heights Community Plan: http://www.bhplan.org/ • City of Commerce General Plan: http://www.ci.commerce.ca.us/DocumentCenter/Home/View/152 • Los Angeles County East Los Angeles Community Plan: http://planning.lacounty.gov/view/east_los_angeles_community_plan 	

<h3>Action 3: Utilize Existing Traffic Information and New Technology to Identify Older Trucks for Incentive Programs</h3>
<p>Course of Action:</p>
<ul style="list-style-type: none"> • Gather existing traffic information from local authorities and other available databases, implement new technology (e.g., ALPR) to collect useful data on truck traffic, and assess the potential impact of truck emissions near schools and residences <i>[Ask CSC to prioritize specific locations, understanding that there may be some restrictions in terms of where such a system can be placed]</i> • Explore the possibility of using ALPR system along with DMV data to identify trucks that frequently travel through the community that may be older and more polluting than

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<p>newer trucks, and contact the owner to provide information about incentive funding programs for truck replacement</p> <ul style="list-style-type: none"> • Conduct initial air measurements from mobile platforms to look at pollution in the areas of traffic concern for a review with traffic information 	
<p>Strategies:</p> <ul style="list-style-type: none"> • Traffic data collection • Air monitoring • Incentives • Public Information and Outreach • Collaboration 	
<p>Goals:</p> <ul style="list-style-type: none"> • Explore the possibility of using ALPR systems in this community and prioritize locations for deployment based on community input • Once ALPR systems have been deployed, work with City and County to provide information about the overall results • Conduct initial set of air measurements using mobile platforms • Provide quarterly or biannual updates to the CSC on progress made to collect and use data from these systems [<i>CARB – CSC, please provide input to CARB regarding what it would like CARB to do based on this data</i>] 	
<p>Estimated Timeline:</p> <ul style="list-style-type: none"> • 2020, work with CARB and community to prioritize locations for these systems • 2021, begin implementation of ALPR systems at priority community locations, compile data, and provide quarterly or biannual updates to the CSC • Once data is available, review data obtained and begin targeted outreach to owners with older, higher emitting trucks that frequently travel through this community to provide information on incentive programs 	
<p>Implementing Agency, Organization, Business or Other Entity:</p>	
Name:	Responsibilities:
South Coast AQMD	<ul style="list-style-type: none"> • Work with CSC to explore the feasibility of using ALPR systems and prioritize locations for implementation. Once data are received, provide incentives and targeted outreach to truck owners for incentive programs in this community • Provide updates to the CSC on implementation of the ALPR system
CARB	<ul style="list-style-type: none"> • Continue testing of ALPR systems to improve accuracy. Provide technical assistance to South Coast AQMD to implement these systems

City and County of Los Angeles, City of Commerce	<ul style="list-style-type: none"> • Work with South Coast AQMD to obtain necessary approvals to install cameras for ALPR system
CSC members	<ul style="list-style-type: none"> • Work with South Coast AQMD and CARB to prioritize locations for the ALPR systems
References:	
<p>For more information regarding the CARB ALPR system:</p> <ul style="list-style-type: none"> • Presentation: http://www.aqmd.gov/docs/default-source/ab-617-ab-134/steering-committees/east-la/meeting-presentation-may26-2019.pdf?sfvrsn=14 • CARB’s ALPR Privacy and Usage Policy is available at: https://www.arb.ca.gov/enf/arb_alpr_privacy_usage_policy_050317.pdf • Facebook Live presentation: https://www.facebook.com/southcoastaqmd/videos/1248687388632139/ 	

Action 4: Encourage Replacement of Older Polluting Vehicles with Cleaner Vehicles, including Zero-Emission Vehicles	
Course of Action:	
<ul style="list-style-type: none"> • Conduct targeted outreach through local organizations, businesses, utilities, and/or schools (e.g., colleges or universities) to provide information to the community about battery electric, fuel cell, and hybrid options and incentives available to encourage replacement of older polluting vehicles with cleaner vehicles, and to install chargers at homes and in the community • Work with partners to develop ideas for the best way to disseminate this information, such as through a community showcase, participation in community events, or other outreach venues • Work with partners to increase the availability of publicly accessible electric vehicle charging stations in the community 	
Strategies:	
<ul style="list-style-type: none"> • Incentives • Public Information and Outreach • Collaboration 	
Goals:	
<ul style="list-style-type: none"> • Organize <i>[insert number]</i> of incentive outreach events per year and provide biannual updates to the CSC 	
Estimated Timeline:	
<ul style="list-style-type: none"> • 2020, begin public outreach events and updates to the CSC 	
Implementing Agency, Organization, Business or Other Entity:	
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Name:	Responsibilities:
South Coast AQMD	Work with partners to conduct outreach to provide information and incentives for cleaner vehicles and EV charging stations
CARB	Provide information about the Clean Vehicle Rebate Program
City and County of Los Angeles, City of Commerce	Partner with South Coast AQMD to conduct outreach and identify potential locations for publicly accessible charging stations
CSC members	Partner with South Coast AQMD and identify additional partners to conduct outreach
References:	
<p>For more information regarding the Replace Your Ride program: http://www.aqmd.gov/home/programs/community/community-detail?title=ryr</p> <p>For more information regarding the Residential Electric Vehicle Charging Incentive Pilot Program: http://www.aqmd.gov/home/programs/community/community-detail?title=ev-charging-incentive</p> <p>For more information regarding the CARB Clean Vehicle Rebate Program: https://cleanvehiclerebate.org/eng</p> <p>For more information regarding electric charger incentives offered by the Los Angeles Department of Water and Power (LADWP) to its residential customers for qualifying chargers: https://www.ladwp.com/ladwp/faces/wcnav_externalId/r-sm-rp-ev?_adf.ctrl-state=8opyxht4e_4&_afLoop=466376315831170</p>	