

## Specific Questions on Technical Components of I-710 Clean Truck Program

### I. Milestones and Overall Phasing

A. So far Metro has only committed \$50 million of the \$200 million needed to implement the program, are there other transportation funding sources (such as CMAQ, grants, etc) that Metro is considering and pursuing?

The I-710 Clean Truck Program is part of the overall I-710 Project, which is included in the Financially-Constrained Plan element of the Adopted 2020 RTP under Project ID No. LA0B952. The estimated cost of the I-710 Clean Truck Program is accounted for in the overall \$5.941 billion cost of the I-710 Project.

Estimates produced for the RDEIR/SDEIS show that approximately \$100 million is “needed” to fund the Clean Truck Program. The Program Steering Committee will utilize a full suite of tools such as incentives, engine replacement, and joint funding opportunities to provide for 4,000 ZE/NZE trucks in the corridor. At this stage, the ultimate cost of the Program to fund 4,000 ZE/NZE trucks is not fully known as future incentive costs to turn over diesel trucks to ZE/NZE trucks will continue to shift based on the relative commercial availability of ZE/NZE trucks and based on market penetration of these technologies. To alleviate any doubt about the intent of Metro to implement the Program, the Metro Board raised the target level of the full Program to \$200 million and will work with the Steering Committee and stakeholders to secure the funds. It is important to note that the \$200 million target may not be needed due to commercial bulk pricing, engine costs, new technology and other factors. But to be clear, the current \$50 million represents a significant investment in the Program and underscores Metro’s and Caltrans’s commitment to ensuring the Program’s success.

Metro will continue to consider and pursue additional funding sources for the I-710 Clean Truck Program. It is hoped that the \$50 million will make the I-710 Program more competitive for these funding sources as it offers local matching funds to attract additional regional, state, and federal funding to the I-710 Corridor, including TCEP funds, Prop 1B, CMAQ, and potentially state Cap and Trade funding.

Please note that we anticipate that the Steering Committee will consist of representatives from:

- LA Metro
- Caltrans
- SCAQMD
- CARB
- EPA
- SCAG
- Gateway Cities COG
- Ports of LA and LB

## Key I-710 Corridor Stakeholders

These entities will work together to seek and utilize funding to implement the Program and will collaborate with other programs in the region to create a more informed and comprehensive approach to ZE/NZE deployment in the region.

B. Has Metro or Caltrans set any implementation or funding milestones? (e.g. \$ 100 million by 2027) What actions would be triggered if the milestones are not met? Will there be an annual report showing funding sources?

Under the guidance of the Steering Committee, Metro and Caltrans will be setting forth a plan to deploy the 4,000 trucks prior to 2035, and major milestones can be set for this purpose. Metro has secured \$50 million to date and thus is in a position to offer more detail for what would be the Initial Phase(s) of ZE/NZE truck deployment. This initial phase would be implemented in advance of or parallel to the freeway Early Action Project(s) once those initial stages of freeway construction have been prioritized and selected by the Metro Board. A target plan can also be developed for the mid- and out-years of the Program, outlining key features that will be qualified according to factors such as: commercial availability of zero emission vehicle technologies, future relative price points to own and operate ZE trucks versus NZE trucks, emerging or new vehicle technologies, pace of I-710 freeway construction and project funding, and future regional/state mobile source truck requirements, among others.

The Steering Committee will meet regularly to monitor the implementation process, review technical issues and data, identify and seek funding, collaborate on similar programs/projects and to ensure that the Program remains on track. It is envisioned that a website, hosted by Metro, will be devoted to the Program that will include a database of number of trucks deployed, funding sources, funding expenditures, and ZE/NZE VMT data within the I-710 Corridor. Further, regular reports will be made to the Metro Board. Major milestones for the deployment of ZE/NZE trucks on I-710 in the plan may be adjusted depending upon the pace and level of actual freeway construction. Metro and Caltrans can commit to a plan that requires showing reasonable progress for the major milestones, with a range of corrective actions that may be applied to keep the Program on track such as offering new or modified incentives for the Program, different restrictions or penalties, and additional funding for ZE/NZE trucks.

Metro commits to regular reporting of Program funding and expenditures to the Steering Committee and to the Metro Board.

C. In terms of commitment, could Metro obtain binding commitments from truck/fleet owners to replace [x] trucks based near I-710 on a given schedule, contingent on Metro's construction of infrastructure and available of adequate incentives? For example, replace 200 trucks in 2021-2023, replace 500 trucks in years 2024-2026, replace, 500 trucks in years 2027-2030, etc.?

No, not as a condition of participation in the Program. It is important to keep barriers to Program entry to a minimum to ensure Program success. Binding commitments to lock individual owner-operators or even fleet owners to future ZE/NZE truck replacement actions or submitting future I-710 Clean Truck Program applications are not practical or reasonable. Individual truck owner operators and fleet owners must be able to make future business decisions in tune with their operations, independent of future freeway construction on I-710, and are free to submit applications as needed for one, two or ten trucks. Optimizing ZE/NZE truck deployment for the Program, in aggregate, which is needed to meet major milestones, will be the responsibility of Metro and the Steering Committee. If the Program is undersubscribed for each deployment and freeway construction phase, then more or higher incentives may need to be offered. If the Program is over-subscribed, then additional restrictions or eligibility requirements may be applied.

D. Would Metro commit to a % of ZE trucks to be used as replacements in this program?

Not at this time. The I-710 Clean Truck Program will seek to deliver as many ZE/NZE trucks to the I-710 Corridor as soon as feasible. Because of the relative price points of ZE versus NZE trucks and due to the lack of commercial availability of zero emission trucks, it is likely that the initial phases of the I-710 Clean Truck Program will lean more heavily to NZE trucks. [Also, please see Response to II.H below.] As ZE trucks achieve greater market penetration, as these ZE trucks become more proven in commercial service, and as the prices of ZE trucks drop, the Steering Committee will track this issue to encourage the transition to ZE trucks in the mid- and out-years of the Program.

It is important to note that a fixed percentage of ZE trucks (or any percentage of ZE trucks) is not necessary for the Program in order to reduce diesel trips in the I-710 Corridor as the deployment of NZE trucks satisfies this requirement. However, increasing the number of ZE trucks in the I-710 Corridor will continue to remain an important goal for the Program.

E. Would Metro also commit to funding or co-funding one or more specific EV charging infrastructure projects within first ~3-5 years, and additional projects over time?

The funding of EV charging projects (along with hydrogen refueling stations) within the I-710 Corridor is part of the Program. The main purpose of the power infrastructure features of the Program is to encourage the future development and deployment of zero emissions trucks through the provision of seed funding of selected charging/hydrogen refueling projects within the I-710 Corridor. Near zero emissions trucks (e.g., LNG, CNG) do not utilize electrical charging or hydrogen refueling stations. As described in Response I.D. above, it is likely that the initial phases of the I-710 Clean Truck Program will lean more heavily to NZE trucks. At this stage, the electrical charging and hydrogen refueling features of the Program are not essential to meeting the ZE/NZE truck deployment objectives within the I-710 Corridor, which is the first priority for the Program.

At the same time, it is highly desirable to facilitate the development of EV charging capacity within the Corridor as soon as feasible and Metro is already taking steps to work with partners such as Caltrans and SCE to secure funding for this purpose. Metro and the Steering Committee are tasked with the development of the ZE charging/fueling aspect of the funding Program, in partnership with utility companies and the I-710 Corridor cities, to achieve these objectives by 2035.

## II. Identification of Target Vehicles and Owners for Incentive Funds

### A. Would truck owners go through an application process?

Yes, this would be a competitive award program. The process would be similar to current SCAQMD, CARB and/or Port truck programs.

### B. Would the trucks need to show a minimum VMT on the I-710 corridor consistent with the assumptions in Caltrans' technical analysis? (e.g. 43 miles per day)

Yes. There would be a minimum VMT travel commitment on the I-710 Corridor for trucks receiving Program funds, which would be specified in a contractual agreement with each funding recipient. The minimum commitment will be structured to reach the VMT estimates in the EIR/EIS analysis, which are based on VMT Program averages per truck. As the Program matures, the Steering Committee may include provisions in the Program to allow for variations or tiering in individual truck VMT requirements for future applicants to optimize ZE/NZE travel in the I-710 Corridor in aggregate. In other words, some trucks may receive more Program dollars for higher VMT travel requirements and others less, just as long as the Program I-710 ZE/NZE VMT totals are consistent with Caltrans' technical analysis and meet or exceed targets established for each ZE/NZE truck deployment phase. [Also, please refer to Responses II.G. and III.C.]

### C. What documentation would truck owners need to provide? How far back (historically) would they need to document travel on I-710 at the minimum VMT?

In order to determine compliance with Program criteria, the truck owners would need to report travel on I-710. It is currently envisioned that the VMT data would be collected via Automated Vehicle Locator (AVL), a GIS monitoring device, based on geofencing within the I-710 Corridor, which would be certified annually. In addition, the AVL data will be gathered and reported to allow for six-month check ins, so that the Steering Committee can monitor VMT compliance for recipient trucks. It is anticipated this information would be made available online (with adequate privacy protections in place) to individual truck owner-operators and to the Program Administrator (Metro or Metro Contractor). As this is a prospective program, there is no requirement for historical VMT data for Program eligibility. However, historical travel information may be gathered and utilized in the application process to evaluate the strength of the application and/or used in the ranking of awards if the Program is over-subscribed.

D. Would the trucks need to be a minimum or maximum age?

At this stage, it is envisioned that all Program trucks would be new ZE/NZE trucks or new ZE/NZE engines. There is no age requirement for those I-710 diesel trucks that will be displaced by the I-710 ZE/NZE Program trucks. However, information on the age and type of diesel truck may be collected during the application process to evaluate the strength of the application and/or used in the ranking of awards if the Program is over-subscribed. In addition, even though most of the I-710 heavy duty trucks are MY2010+, there is an underlying economic advantage for truck operators/fleet owners to turn over their oldest trucks in favor of new ZE/NZE trucks. As the I-710 Clean Truck Program evolves, additional requirements may be added in keeping with future CARB rule-making and the future commercial availability of ZE trucks.

E. What happens with the original trucks that are replaced? Are they scrapped? Are they barred from usage on I-710? How would that be accomplished?

The purpose of the I-710 Clean Truck Program is to reduce the number of diesel truck trips on I-710 to improve conditions for those who live, work, play, and attend school in close proximity to the I-710 freeway. The deployment of ZE/NZE trucks to take up the freight trips occurring on the I-710 will displace diesel trucks currently making those same I-710 goods movement trips. In other words, the power technology of the truck does not increase/change total truck trip making on the I-710 Corridor. Rather those trips are governed by goods movement origins and destinations combined with the travel time convenience of using I-710 relative to other routes. Once the ZE/NZE trucks take over those I-710 trips, the diesel trucks no longer need to make them. [Please note that the Program is not designed to replace all diesel truck trips taking place on I-710, which is a public, interstate freeway. However, the I-710 Clean Truck Program would turnover a large share of the current and future diesel truck trips projected to occur on the I-710 Corridor.]

It is acknowledged that scrappage would provide a more immediate regional benefit, even though most of the displaced I-710 diesel truck trips would be MY2010+. However, for individual owner operators, they may wish to sell the diesel truck, and (if sold) that diesel truck could very well operate elsewhere within the region or within the state. Or, a fleet operator may turnover a portion of their fleet to ZE/NZE for exclusive operation on I-710 and elect to utilize their current diesel trucks elsewhere. While the Steering Committee's primary charge is the reduction of diesel truck trips in the I-710 Corridor in order to deliver air quality and health benefits to I-710 Corridor communities, the Steering Committee will also consider opportunities to provide regional air quality benefits. The concern that will need to be reconciled is a scrappage requirement that is not absolutely necessary will provide an additional disincentive or barrier to Program entry by potential applicants. Program funds will not go as far. Fewer ZE/NZE trucks will be incentivized. However, if the I-710 Clean Truck Program is oversubscribed, then that presents an opportunity where the Steering Committee may elect to

add additional requirements such as scrappage or barring the displaced trucks from operating on I-710 altogether to achieve both I-710 and regional goals.

F. How would applicants be ranked?

This has yet to be determined by the Steering Committee, however applicants would most likely be ranked based on projected number of miles on the 710 Corridor in order to provide the greatest benefit per Program dollar. The Steering Committee may also set aside a portion of Program funds or provide additional incentive funding for individual owner-operator applicants that are SBE/DBE or that reside (and license their truck) within the disadvantaged communities that line the I-710 Corridor.

G. Would there be higher incentives for trucks that drive more on I-710?

At the initial stages of the Program, we envision that there will be a set, minimum VMT requirement and Program applicants could get higher ranking in the competition for Program funding for agreeing to add additional VMT on I-710. As the Program matures and as the elasticity of demand for Program funds and Program ZE/NZE VMT is better understood, the Steering Committee may consider higher funding incentives, as well as other types of incentives, to optimize ZE/NZE travel on I-710 in aggregate. For example, the Steering Committee may include provisions in the Program to allow for variations or tiering in individual truck VMT requirements for future applicants to optimize ZE/NZE travel in the I-710 Corridor in aggregate (i.e., some trucks may receive more Program dollars for higher VMT travel requirements and others less, just as long as the Program I-710 ZE/NZE VMT totals meet or exceed targets established for each ZE/NZE truck deployment phase.)

H. Is \$25,000 expected to be enough for applicants in the near future and for all years of the program? How much do NZE trucks cost now? What are the cost estimates for NZE and ZE in 10 years? Would Metro adjust that estimate, as needed, for different years of the program and adjust the total funding needed to replace 4,000 trucks over time?

It is anticipated that the initial deployment of the I-710 Clean Truck Program may lean more heavily towards NZE trucks given the current lack of commercial availability of ZE trucks. I-710 Clean Truck Program unit cost estimates are based on the differential between owning and operating ZE and NZE trucks relative to diesel trucks. A recent feasibility study (San Petro Bay Ports, 2018 Feasibility Assessment for Drayage Trucks) prepared by the Ports of LA/LB as part of their Clear Air Action Plan places the differential of owning and operating an NZE truck (CNG) relative to a new diesel truck at about \$26,800 per truck over the 12-year life of a drayage heavy-heavy duty truck. As a point of comparison, CARB's HVIP Program currently offers \$45,000 for a Low NOX (.02 g/bhp-hr) 11.9 Liter replacement engine per heavy-heavy duty truck. While the estimate of \$25,000 per ZE/NZE truck (on average) assuming future deployment up to 2035 was provided to the project team by SCAQMD for the analysis in the EIR/EIS, it is likely that these future unit cost estimates will continue to evolve based on future market penetration of NZE and ZE trucks. In short, the answer is "yes," Metro will likely need to

adjust the incentives based on the recommendations of the Steering Committee provided for each truck / truck type for different years of the Program to reach the targets established for each deployment phase of the I-710 Clean Truck Program up to 4,000 ZE/NZE trucks over time.

### III. Tracking and Verification of Compliance

#### A. How would that information on truck VMT be reported?

Through the use of Automated Vehicle Locators (AVLs), which have been successfully used since 2002 starting with the Gateway Cities Council of Governments (GCCOG) Fleet Modernization Program. AVLs have also been used in the San Pedro Bay Ports Clean Truck Program and some Carl Moyer programs (e.g., locomotives.). All trucks receiving funding will be required to have AVLs and make certified annual reports. Program-specific AVL data collection and regular reporting would be established by the Steering Committee as eligibility requirements for awardees. For example, the AVL data would be gathered and tracked to allow for six-month check ins, so that the Steering Committee can monitor VMT compliance for recipient trucks. [See Response to III.B. below.]

#### B. How would Metro ensure that the fleet that operates on the I-710 continues to be clean over time, and fleets turn over? What type of binding commitments from fleet owners would be developed?

Based on the analysis conducted in the I-710 EIR/EIS, the deployment of 4,000 ZE/NZE trucks through the I-710 Clean Truck Program would result in a portion of the heavy duty truck travel on I-710 converting over to ZE/NZE. The rest would be gasoline, diesel, and clean diesel.

Those ZE/NZE trucks that receive funding through the I-710 Clean Truck Program must meet VMT travel thresholds for travel on I-710 for a period of ten years. If a recipient truck does not meet the annual VMT requirement, the recipient would be required to reimburse one-fifth of the Program funding, or potentially up to the full Program funding. If the recipient truck fails to meet the annual VMT requirement for two years, all Program funding would have to be reimbursed. So that the Steering Committee can monitor VMT compliance for recipient trucks, AVL data will be gathered and reported to allow for six-month check ins. Ideally, this information would be made available online (with adequate privacy protections in place) to individual truck owner-operators and to the Program Administrator (Metro or Metro Contractor) to provide early warning indicators so that corrective action can be taken by recipients to get back on track before penalties are invoked.

Upon project award, truck recipients will be required to enter into a contractual agreement, which will include a provision that addresses the requirement that the ZE/NZE trucks operate on I-710 for the full ten-year period. Once the Program is underway, the Steering Committee will monitor compliance and will have the authority to implement additional restrictions, penalties, incentives, or measures that may be included in the contractual agreement for future

applicants to ensure that the Program continues to meet its ZE/NZE VMT and ZE/NZE truck goals.

C. If funded trucks travel fewer than the assumed two round trips per day, will additional trucks be funded?

The metric that will be utilized to monitor travel on I-710 will be vehicle miles traveled (VMT). Some ZE/NZE trucks may make fewer trips but travel for longer distances on the Corridor. Yet other ZE/NZE trucks may make more turns (say three round trips per day), for shorter distances on the Corridor. The objective of the Program is to produce 42.5 VMT per ZE/NZE truck per weekday for the Program, in aggregate, on average, for each deployment phase up to 4,000 ZE/NZE trucks, which will be reported annually. The Steering Committee will monitor and report Program compliance via an annual report and the Metro Board has the authority to fund additional ZE/NZE trucks (or offer other incentives) to ensure that the Program continues to meet its ZE/NZE VMT goals.

D. What happens with the original trucks that are replaced? Will they be scrapped? How will that be verified?

Please see Response to Question II.E.

E. It appears that Metro requires VMT compliance for 10 years. If some upgraded trucks may have a shorter life, how will that be addressed? Will additional incentives be offered?

While ZE trucks have yet to be tested in proven commercial service and NZE trucks have not been in operation long enough to develop a comprehensive track record, there is currently no reason to believe that the average life of a maintained ZE/NZE truck is significantly less than 12 years for an average drayage heavy-heavy duty truck. The I-710 Clean Truck Program does have a 10-year VMT compliance requirement. During the ten-year period after funding is provided, if a recipient truck does not meet the annual VMT requirement, the recipient would be required to reimburse one-fifth of the Program funding, or potentially up to the full Program funding. If the recipient truck fails to meet the annual VMT requirement for two years, all Program funding would have to be reimbursed. In these cases where full compliance is not achieved, then the reimbursed funds would be folded back into the Program for reallocation to a new (or the next) ZE/NZE truck applicant for travel on I-710. The Steering Committee may elect to change the specifics of these terms to optimize compliance and/or to maximize participation in the Program.

F. Will the program be audited to ensure stated results are accurate?

The Steering Committee will develop guidance for any auditing requirements. Further, the Metro Board will receive regular reports.

#### G. Would the board reports be submitted to EPA or FHWA?

If this is requested, then absolutely. We are also hopeful that EPA and FHWA will choose to participate in the Steering Committee, which will help shape the development and implementation of the Program on an on-going basis.

#### H. Would there be minimum maintenance requirements?

Based on the similar requirements in Port and Carl Moyer-type project award contracts, minimum maintenance requirements could be developed specific to manufacturer recommendations for NZE/ZE trucks. For example, the awardee would be required to adhere to the guidelines and schedules for maintenance established by the manufacturers including, but not limited to, regularly scheduled maintenance items as listed in each truck owner's / maintenance manual (e.g., oil changes, brake inspections / changes, filter replacements, lubrications, fluid checks and top offs) and the proper use and upkeep of the emissions control system(s) on each truck. An example of a Port-required maintenance plan can be found at [https://kentico.portoflosangeles.org/getmedia/0b703c1f-5adc-4603-be76-035bfa7bfb66/CTP\\_Maintenance\\_Plan](https://kentico.portoflosangeles.org/getmedia/0b703c1f-5adc-4603-be76-035bfa7bfb66/CTP_Maintenance_Plan). The Steering Committee would establish minimum maintenance requirements for NZE/ZE trucks that receive project funds. It should also be noted that trucks would have to comply with all CARB truck operational requirements.

#### I. What is minimum warranty requirement?

To be eligible for an award, the truck must either have a certified 0.02 g NO<sub>x</sub>/bhp-hr engine or be a CARB-defined ZE truck as well as meet all other CARB truck/engine standards. As noted in III.H above, the awardee would be required to meet the manufacturer's maintenance requirements, including those needed to maintain the truck's warranty.