I-710 SOUTH CORRIDOR PROJECT

Zero Emission Truck Working Group Meeting #10 Meeting Summary

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I-710 SOUTH CORRIDOR PROJECT

Zero-Emission Truck Working Group Meeting #10 Summary

September 20, 2022

Metro

Caltrans

arellano associates

ATTENDEES

TASK FORCE MEMBERS

Transportation Agencies

Alison Linder, Sustainability and Transportation Planning, Southern California Association of Governments (SCAG)
Michael Leue, Chief Executive Officer, Alameda Corridor (ACTA)

Community-Based Organizations and Advocacy Groups

Laura Cortez, Community Organizer / Co-Director, East Yard Communities for Environmental Justice (EYCEJ)

Freight and Logistics Industry

Sharon Weissman, Vice President of the Long Beach Board of Harbor Commissioners, Port of Long Beach (POLB)
Christina Skacan, Research and Protocol Analyst, Port of Long Beach (POLB)
Leela Rao, Environmental Specialist, Port of Long Beach (POLB)
Tim DeMoss, Port of Los Angeles (POLA)
Amber Coluso, Environmental Management, Port of Los Angeles (POLA)
Thomas Jelenić, Vice President, Pacific Merchant Shipping Association (PMSA)

Environmental Organizations

Christopher Chavez, Deputy Policy Director, Coalition for Clean Air
Fernando Gaytan, Senior Attorney, Earthjustice
Natalia Ospina, Project Attorney of Environmental Justice, Natural Resources Defense Council (NRDC)
Najah Louis, Natural Resources Defense Council (NRDC)

Academic / Research / Policy / Foundations

Sue Dexter, METRANS Researcher, USC
Niki Okuk, Deputy Director, Calstart

Ex-Officio

Andrew Zellinger, Environmental Reviewer, U.S. Environmental Protection Agency, Region 9
Karen Heit, Gateway Cities Council of Governments (GCCOG)
Nancy Pfeffer, Executive Director/VP, Finance and Budget, Gateway Cities Council of Governments (GCCOG)
Norman Emerson, Gateway Cities Council of Governments (GCCOG)

CLC

Natalie Diaz Rubio, Bell Gardens
Kathleen Barajas, East LA
Tiesha Davis, San Pedro
Manuel Arellano, Wilmington

ZETWG

Yvette Kirrin, Gateway Cities Council of Government (GCCOG)
Lynda Bybee, Consultant, Gateway Cities Council of Governments (GCCOG)
Jack Symington, Project Manager, Los Angeles Cleantech Incubator (LACI)
Steven Tilk, Manager of Commercial and Industrial Segment, Southern California Edison (SCE)

Project Team

Michael Cano, Executive Officer of Countywide Planning & Development, Metro
Lilian De Loza-Gutierrez, Director of Community Relations, Metro
Akiko Yamagami, Transportation Manager of Countrywide Planning & Development, Metro
Maria Hsin, Transportation Planner, Metro
Quintin Sumabat, Deputy Executive Officer – Vehicle Engineering and Acquisitions, Metro
Paul Marquez, Deputy District Director of Planning, Caltrans District 7
James Shankel, Senior Environmental Planner, Caltrans District 7
Robert Calix, Cal Strategic Management
Susan DeSantis, Senior Project Manager, Arellano Associates
Nora Casillas, Senior Project Coordinator, Arellano Associates
Thomas Grogan, Project Coordinator, Arellano Associates
Xochitl Medrano, Project Coordinator, Arellano Associates
Adrian Farran, Project Coordinator, Arellano Associates
Eric Davidian, Assistant Project Coordinator, Arellano Associates

Introduction

The Los Angeles County Metropolitan Transportation Authority (Metro) and the California Department of Transportation (Caltrans) District 7 initiated the I-710 South Corridor Task Force (710 Task Force) to develop a community-supported, regionally significant, multimodal approach to addressing major mobility, safety, air quality, and equity needs for moving people and goods through the I-710 South Corridor between the Ports of Los Angeles and Long Beach and State Route 60. The 710 Task Force will review and assess the purpose and need for investment in the I-710 corridor, develop multi-modal improvement strategies, identify programs and projects to advance these strategies, create an investment and implementation plan, and provide recommendations to the Metro Board in 2023.

The 710 Zero-Emission Truck Working Group Meeting #10 was held virtually on September, September 20, 2022. The intent of this meeting was to:

(1) Receive presentations and engage in discussion on the following topics:
   - Applying Best Practices of Getting to ZERO to the 710 South Corridor Infrastructure
   - Regional EV Charging Study to Accelerate Electrification
   - "Is the Electric Grid Ready?"

- 2019 Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets
- EV Charging Infrastructure for Southern California Warehouses

(2) Engage in a discussion on the next steps in developing the ZET Program.

Spanish interpretation was provided simultaneously for this meeting. Prior to the meeting, the 710 Zero-Emission Truck Working Group received the agenda ***(Appendix A),*** meeting materials ***(Appendix B),*** and presentation ***(Appendix C)****.*

710 Zero-Emission Truck Working Group #10 Virtual Meeting

1. **Welcome, Introductions, Agenda Review, and Purpose of the Zero-Emission Truck Working Group**
   > Nora Casillas, Meeting Facilitator, opened the meeting and reminded attendees that all project information can be found on the Metro website at

2. **Agenda Item #1: Metro Update**

   ZET Metro Board Direction
   > Michael Cano, Executive Officer of Countywide Planning & Development, Metro provided an update on the Metro Board Direction of the ZET Program as well as the program timeline.

3. **Agenda Item #2: I-710 South Corridor Zero-Emission Truck Program Principles**
   Proposed Principles Recap
   > Mr. Cano reviewed the 7 program principles and highlighted proposed edits based on the previous meeting input from the Working Group.
   > An 8th Principle, *Expeditious Deployment of Resources,* was also introduced at this meeting to help expand the reach of the ZET Program and leverage its resources by 2027-2028.
   > Mr. Cano also gave an overview of the next steps and said that over the next couple of weeks, the CLC, Equity Working Group, and the Task Force will provide input on the ZET Principles in preparation for presenting them to the Metro Board in November.

4. **Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero**
   > Mr. Cano introduced Bill Van Amburg, Global Strategic Advisor Zero Emissions Commercial Vehicles, Energy and Sustainability, to give his presentation.
   > Mr. Van Amburg provided a brief presentation about Medium-Duty and Heavy-Duty (MHDV) Infrastructure and the Drive to Zero project plan including:

- Drive to Zero and Policy Maker Engagement
- MHDV ZE Infrastructure Guidance
- Demand Forecasting for ZE Trucks
- Remaining Gaps and The Road Ahead for ZE Trucks

> Mr. Van Amburg provided a plan for the next steps to the group that entailed:

- Full implementation of battery electric and fuel cell electric systems
- Road mapping and anticipating demand for Zero Emission MHDV infrastructure
- Partnering with the utility on short, medium, and long term electrification plans
- Build priority freight corridors by 2030 and secure national networks in place by 2035.

> This presentation can be found in ***Appendix C*** on slides 20-36.

5. Agenda Item #4: Regional Roadmap for Zero-Emission Vehicle Infrastructure

> Michael Cano introduced Alison Linder Phd, Senior Regional Planner for the Southern California Association of Governments, to give her presentation.

> Dr. Linder provided a brief presentation about the Regional Roadmap for Zero-Emission Vehicle Infrastructure. She discussed the following:

- The Clean Technology Vision for ZE Trucks
- Explaining the public outreach engagement plan to support infrastructure for Medium and Heavy-Duty ZE Trucks
- Collaboration with Metro and Regional Stakeholders
- Timeline and Next Steps for this project

> Dr. Linder provided the next steps to the group that entailed:

- Conducting public outreach and stakeholder surveys
- Confirming 10 key sites and configuring sites to minimize impact to surrounding communities
- Finalizing a data collection plan to conduct forecasting for truck networks

Collaborating with Metro to finalize a regionally vetted action plan for ZE MHDV infrastructure.

> This presentation can be found in ***Appendix C*** on slides 38-48.

6. Agenda Item #5: If EV's are the Future, is the Grid Ready?

> Akiko Yamagami, introduced Michael Wofford, *Energy Commission Specialist, California Energy Commission,* as the moderator of the panel discussion for this agenda item that included the following speakers:

- Sean Wilder, Team Lead, EV Charging Strategy, Energy and Environmental Services, LA County Internal Services Department

- Salim Youssefzadeh, CEO, Watt EV
- Quintin Sumabat, Deputy Executive Officer, ZEB Infrastructure, LA Metro

> Highlights of the panel discussion include:
- Medium/Heavy-duty vehicle population
- Drayage truck technology mix
- Needs and cost assessments of different drayage trucks
- Understanding grid capacity constraints
- Finding solutions to infrastructure issues and building new alternatives to solve grid reliability issues
- Be close to the customers (whether logistics HD trucks or public fleets) to serve their operational needs
- Maintain frequent communications with your customers, stakeholders, and utility providers

> This presentation can be found in ***Appendix C*** on slides 49-50.

7. Agenda Item #6: 2019 Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets

> Mr. Cano introduced Patrick Crouch, Senior Vice President, Technical Services & Partner Gladstein, Neandross, and Associates, to give his presentation.

> Mr. Crouch provided a brief presentation about the Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets. He discussed the following:
- Electrification Challenges Facing Fleets
- The EV Charging Guidebook's Goal and Purpose
- Estimating EV Charging Loads for the future
- Electricity Costs for EV's

> Mr. Crouch provided a next steps plan to the group that entailed:
- Identify entities for project design, permitting, and construction of EV's
- Create flexible electricity cost alternatives for EV users
- Introduce strategic solutions to the energy storage shortage

> This presentation can be found in ***Appendix C*** on slides 51-64.

8. Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report

> Mr. Cano introduced Carlo Bertani, Environmental, Sustainability and Decarbonization MAERSK North America, to give his presentation.

> Mr. Bertani provided a brief presentation about Electric Vehicle Charging Infrastructure for Southern California Warehouses and an update on the MAERSK Performance Team Report.

> Mr. Bertani provided a next steps plan to the group that entailed:
    - Truck expansion rollouts around ports in many states across the country based on upon the need for ZE Trucks
    - Developing partnerships with other companies to share charging infrastructure
    - Working with regulatory agencies to address sustainability goals and best practices going forward.
> This presentation can be found in ***Appendix C*** on slides 65-69.

9. Closing Remarks, Upcoming Meetings & Next Steps

> Ms. Casillas reviewed the upcoming Task Force meeting information and other key dates.
> Ms. Casillas encouraged Task Force members and members of the public to contact Michael Cano should they have any questions or concerns.
> The meeting adjourned at 3:12 pm.

Meeting Format Logistics

- Meeting Format: Meeting
- Participants: Task Force, Working Group, and CLC

710 Task Force

Zero-Emission Working Group Meeting #10

Date and Time: Tuesday, September 20, 1-3pm
Location: Held Virtually via Zoom
Meeting Link: https://tinyurl.com/ZE-Truck-WG-10
Meeting ID: 880 0728 7733
Passcode: 5851

Meeting Objectives and Agenda

Objectives

- ✓ Receive presentations and engage in discussion on the following topics
  - Medium-Duty and Heavy-Duty Infrastructure
  - Applying Best Practices of Getting to ZERO to the 710 South Corridor Infrastructure
  - Regional EV Charging Study to Accelerate Electrification
  - If EV's are the Future, is the Grid Ready?
  - 2019 Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets
- ✓ Engage in a discussion on the next steps in developing the ZET Program.

Agenda Overview (120 minutes)

Time	Agenda Item
1:00–1:05pm (5 mins)	**Welcome, Introductions, Agenda Review, and Purpose of the Zero–Emission Truck Working Group**
1:05-1:10pm (5 mins)	**Agenda Item #1: Metro Update** 1.1 ZE Truck Program – Metro Board Direction
1:10-1:15pm (5 mins)	**Agenda Item #2: I-710 South Corridor Zero-Emission Truck Program Proposed Principles** 2.1 Recap and Next Steps
1:15-1:40pm (25 mins)	**Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero** *Presentation by Bill Van Amburg, Global Strategic Advisor Zero Emission Commercial Vehicles, Energy and Sustainability (15 minutes)* Facilitated Discussion (10 minutes)

1:40-1:55pm (15 mins)	**Agenda Item #4: Regional Roadmap for Zero-Emission Vehicle Infrastructure** *Overview by Alison Linder, Senior Regional Planner, Southern California Association of Governments (10 minutes)* Question and Answer (5 minutes)
1:55-2:25pm (30 min)	**Agenda Item #5: If EV's are the Future, is the Grid Ready? (30 minutes)** *Moderator: Micah Wofford, Energy Commission Specialist, California Energy Commission* **Panel Discussion** • Sean Wilder, Energy and Environmental Services, LA County Internal Services Department • Salim Youssefzadah, CEO, WattEV • Quintin Sumabat, Deputy Executive Officer, Vehicle Engineering and Acquisitions, LA Metro
2:25-2:45pm (20 min)	**Agenda Item #6: 2019 Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets** (10 minutes) *Presentation by Patrick Couch, SVP & Partner, Gladstein, Neandross, and Associates* Question and Answer (5 minutes)
2:45-2:55pm (10 min)	**Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report** *Report by Carlo Bertani, MAERSK (10 minutes)* Question and Answer (5 minutes)
2:55pm-3:00pm (5 min)	**Closing Remarks and Next Steps**

Pre-Work: Meeting Materials and Handouts

To prepare for this working meeting, Working Group Members should read and review the following materials and, time permitting, independently research topics related to the meeting objectives and agenda (*above*). The materials are available here.

ZET Working Group Meeting #10
Tuesday, September 20, 2022| 1:00-3:00pm
COMMENTS & QUESTIONS

NAME	QUESTION/COMMENT	AGENDA SECTION
Michah Wofford (CEC)	Do you have another link you can share for this file? The link you shared doesn't work for me for some reason	Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero
Nancy Pfeffer, GCCCOG	I assume youre familiar with the Jetcy project, and I am wondering if you could comment on where it fits in within the deployment of this project.	Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero 3.1 Facilitated Discussion
Sue Dexter, USC/Metrans	I am excited about the maps that were presented and I was wondering where the information is coming from that you displayed in your presentation	Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero 3.1 Facilitated Discussion
Sue Dexter, USC/Metrans	I was also wondering if there is any information on the deliver schedules on these areas and I want to know if you know.	Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero 3.1 Facilitated Discussion
Fernando Gaytan	Careful planning is something I took as a major takeaway from your presentation and its crucial that we plan to make sure these fast charging stands are in the works. What advice do you have for policy makers to indicate locations and lock down areas to ensure these charging stations are secured	Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero 3.1 Facilitated Discussion
Michah Wofford (CEC)	To what extent have you been considering the energy demand for the vehicles while also considering the truck demand at the same time?	Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero 3.1 Facilitated Discussion

Yvette Kirrin	In terms of the truck demand, how is it that you are quantifying how much land is necessary and where spatially it will be placed? How does it all fit in with the 710 guiding principles?	Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero 3.1 Facilitated Discussion
Michael Cano (Metro)	Are there efficiencies and things our Task Force should do to address all the regions not just the 710 in order for us to synergies our practices with SCAG to make sure we do things the right way	Agenda Item #4: Regional Roadmap for Zero-Emission Vehicle Infrastructure 4.1 Question and Answer
Sue Dexter, USC/Metrans	I missed Dr. Linder's email. Could you post? (Not on slides you posted)	Agenda Item #4: Regional Roadmap for Zero-Emission Vehicle Infrastructure
Bill Van Amburg (Calstart Advisor)	Hey Sean, what are your thoughts about publicly available charging on your site, perhaps provided "outside the fence" of where your fleets are charging inside the fence?	Agenda Item #5: If EV's are the Future, is the Grid Ready?
Sue Dexter, USC/Metrans	I am excited about the amount of EV in the pipeline, you spoke about requesting utility infastructure immediately and if we knew the timeline that would be great. Is there a possibility on having more dialogue about what would that process be going forward	Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report
Sue Dexter, USC/Metrans	Of all trucks you have purchased, what percentage of your vehicles are you getting incentive funding?	Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report
Karen Heit	One of the obstacles of charging sites is the problems that it causes to city streets, is there any alternatives and progress we have found to creating lighter vehicles?	Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report
Akiko Yamagami (Metro)	A question for Carlo, since Maersk is an asset light company I wanted to ask what message you think a regulatory agency needs to state about the huge surge of battery electric vehicles?	Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report

Bill Van Amburg (Calstart Advisor)	Trucks continue to have to meet overall weight restrictions; so while batteries are heavier it means loads have to be smaller. CA has a 2000 lb weight waiver for ZEVs	Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report
Quintin Sumbat (Metro)	At 100% State of Charge, what is the range you are realizing with heavy duty trucks for normal services?	Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report

Welcome!

We will begin in a few moments.

710 Task Force

Zero-Emission Truck Working Group

Meeting #10

September 20, 2022

Metro

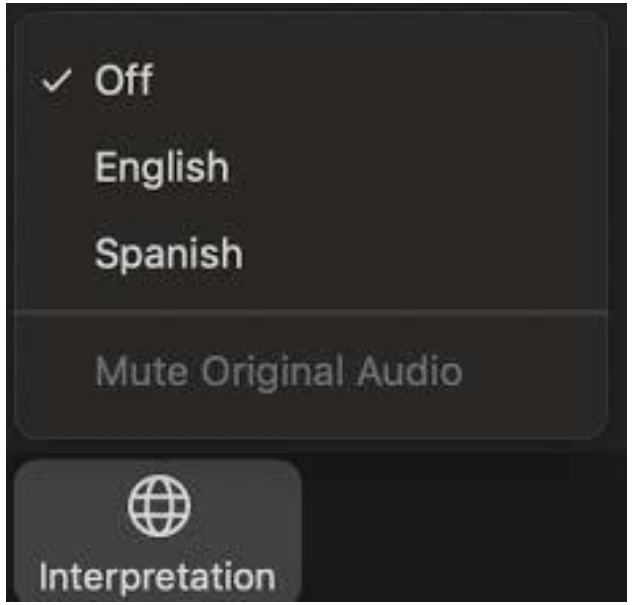
We’re developing a new vision for the 710 corridor.

710 Task Force

Metro

Interpretation/ *Interpretación*

- Click the **Interpretation** icon in your meeting controls to enter the Spanish room
- (Optional) To hear the interpreted language only, click **Mute Original Audio**

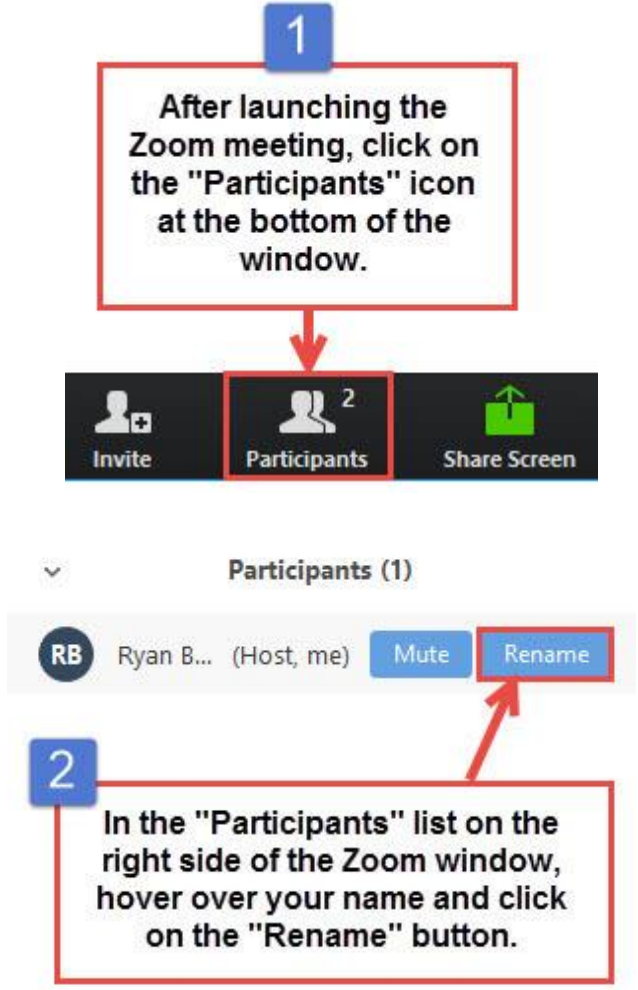


- *Haga clic en el ícono de **Interpretación** en los controles de su reunión para ingresar la sala en español*
- *(Opcional) Para escuchar solo el idioma interpretado, haga clic en "**Mute Original Audio**" o "**Silenciar audio original**"*

Metro

Task Force Member, CLC Member, and Participant Identification

Please change your Zoom screen name to include: Name and Organization Name (and if you are a Task Force Member, CLC Member)

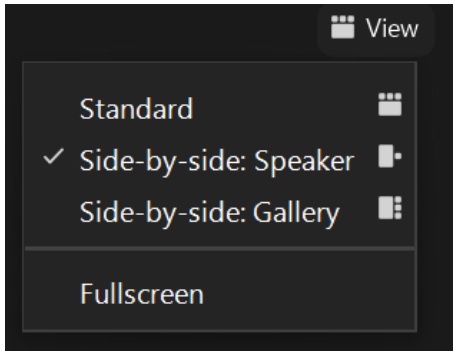


Metro

Turn on Camera / *Prende la cámara*

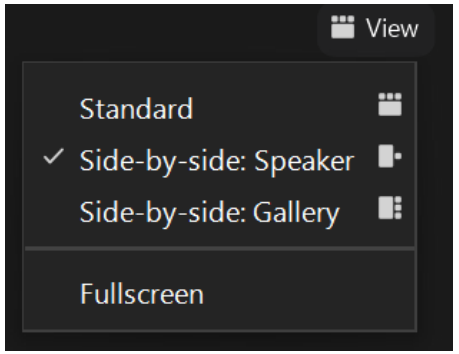
- To **start** and **stop** your video, click the camera icon at the bottom left of your control panel

- To switch between views during the meeting click or tap on **Standard**, **Side-by-side Speaker View**, and **Side-by-side Gallery View** at the top right corner of your zoom screen



- *Para **iniciar** y **detener** su video, haga clic en el ícono de la cámara en la parte inferior izquierda de su panel de control*

- *Para cambiar entre vistas durante la reunión, haga clic o toque **Estándar**, **Vista de orador en paralelo** y **Vista de Galería en Paralelo** en la esquina superior derecha de la pantalla de zoom*



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Zoom Protocols

- Click **Raise Hand** in your meeting controls or
- **Press*9** on the phone line.
- To lower your hand, click **Raise Hand** in your meeting controls.
- Comments & questions can also be provided in writing by using the **Chat** function.
- The **Chat** button is located on the control panel at the bottom of your screen.

Metro

Welcome!

710 Task Force

Zero-Emission Truck Working Group

Meeting #10

September 20, 2022

Metro

Welcome, Agenda Review, and Purpose of the I-710 South Corridor Zero-Emission Truck (ZET) Working Group

Metro

Meeting Objectives

- ✓ Receive presentations and engage in discussion on the following topics:
  - Applying Best Practices of Getting to ZERO to the 710 South Corridor Infrastructure
  - Regional EV Charging Study to Accelerate Electrification
  - Is the Electric Grid Ready?
  - 2019 Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets
  - EV Charging Infrastructure for Southern California Warehouses

- ✓ Engage in a discussion on the next steps in developing the ZET Program.

Metro

Detailed Agenda

1:00pm **Welcome, Agenda Review, and Purpose of the Zero-Emission Truck Working Group** (5 minutes)

1:05pm **Agenda Item #1: Metro Update** (5 min)
ZET Program – Metro Board Direction

1:10pm **Agenda Item #2: I-710 South Corridor Zero-Emission Truck Program Proposed Principles** (5 minutes)

1:15pm **Agenda Item #3: Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero**
Presentation by Bill Van Amburg, Global Strategic Advisor Zero Emission Commercial Vehicles, Energy and Sustainability (15 minutes)
Facilitated Discussion (10 minutes)

1:40pm **Agenda Item #4: Regional Roadmap for Zero-Emission Vehicle Infrastructure**
Overview by Alison Linder, Senior Regional Planner, Southern California Association of Governments (10 minutes)
Question and Answer (5 minutes)

1:55pm **Agenda Item #5: If EV's are the Future, is the Grid Ready?** (30 minutes)
Moderator: Micah Wofford, Energy Commission Specialist, California Energy Commission
Panel Discussion

- Sean Wilder, Energy and Environmental Services, LA County Internal Services Department
- Salim Youssefzadah, CEO, WattEV
- Quintin Sumabat, Deputy Executive Officer, Vehicle Engineering and Acquisitions, LA Metro

2:25pm **Agenda Item #6: 2019 Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets (10 minutes)**
Presentation by Patrick Couch, SVP, Gladstein, Neandross, and Associates
Question and Answer (5 minutes)

2:45pm **Agenda Item #7: Electric Vehicle Charging Infrastructure for Southern California Warehouses – MAERSK Performance Team Report**
Report by Carlo Bertani, MAERSK (10 minutes)
Question and Answer (5 minutes)

3:00pm **Closing Remarks and Next Steps**

Metro

Agenda Item #1.1:
Metro Board Update

Metro

Metro Board Update

> **Metro Staff to report to Board on the following:**

Board approved Motion #9 (Directors Hahn, Solis, Mitchell, & Dutra) that provided direction for the development of the I-710 South Corridor Investment Plan. Motion #9 also asked for the following items to return to the Board for consideration:

- Vision Statement / Guiding Principles / Goals
- Pre-Investment Plan Opportunity
- Re-naming the I-710 South Corridor Project This Board report provides recommendations for all items requested.

September 2022 710 Task Force Report to the Metro Board of Directors

ZET Program Recap – Metro Board Direction

> **Metro Board Direction and desired outcomes**
  - $200 million minimum funding target
  - Leverage $50 million local matches with private, regional, state, and federal funding
  - Accelerated ZE deployment in the I-710 South Corridor
  - Collaboration with regional stakeholders
  - Independent, accelerated process from overall 710 Task Force Investment Plan process

> **Strategies to accomplish outcomes**
  - Identify discretionary grant opportunities
  - Convene and collaborate with community and regional stakeholders
  - Develop a scope of work for the ZET Program
  - Identify regional funding partners
  - Identify near and long-term opportunities
  - Identify policy and legislative barriers to implementation

Metro

Agenda Item #2:
I-710 South Corridor ZET Program
Proposed Principles

Metro

ZET Program Principles – Introduction and Overview

> Metro Board Action in October 2021 (Motion 16) committed $50 million as seed funding for an I-710 South Zero Emission (ZE) Truck program to support the deployment of zero-emission trucks and supporting zero-emission truck infrastructure.

> The ZET Program Framework and Principles incorporate these fundamental elements and seek to leverage and amplify that $50 million seed funding.

> The Program Framework and Principles for the Zero-Emission Truck Program were developed through collaboration with the 710 Zero-Emission Truck Working Group. Five major themes were brought forward through discussions with the Working Group for consideration:

- Community Engagement
- Strategic partnerships and funding opportunities
- Legislative and policy initiatives
- Truck subsidies
- Environmental impacts and equitable outcomes

Metro

ZET Program Principles – Introduction and Overview

Principle 1	Maximize leverage of seed funding by collaborating with regional partners and agencies.
Principle 2	Employ a transparent community engagement framework that centers corridor residents and stakeholders throughout the development process and ensures community benefits are uplifted when considering investments.
Principle 3	Ensure and create corridor community benefits delivered through the ZE Truck Program.
Principle 4	Coordinate ZE Truck Infrastructure Deployment and ZE Truck Strategies with planning, funding, and strategy developed by regional and community partners, state and federal agencies, funding partners, and other key stakeholders.
Principle 5	Work with regional and community partners to prioritize workforce development efforts that ensure community benefits in support of ZE truck and infrastructure deployment.
Principle 6	Develop performance metrics and evaluate outcomes of the ZE Truck Program that ensure community and corridor benefits.
Principle 7	Develop a comprehensive legislative platform for board consideration that comprises initiatives and policies designed to support the accelerated, equitable deployment of ZE Class 8 Truck and Infrastructure deployment in the I-710 South Corridor and region.
Principle 8	The ZE Truck Program will expedite investment in ZE Infrastructure and vehicle deployment within the corridor with the goal of leveraging and expending all ZET Program leveraged resources by FY 2027-28.

Metro

ZET Proposed Principles

Next Steps

> **Community Leadership Committee** (CLC) to provide input on Thursday, September 22nd.

> **Equity Working Group** (EWG) to provide equity-focused input on Thursday, September 29th.

> At the October 18th **ZET Working Group Meeting**, the ZET Working Group:
- Review input CLC and EWG
- make final refinements to the ZET Proposed Principles

> Review recommendations to the **Task Force** on November 14th.

> Metro Project Team to present the ZET Principles with the **Metro Board of Directors** at its November 2022 Meeting.

Metro

Agenda Item #3:

Medium-Duty and Heavy-Duty Infrastructure, Global Commercial Vehicle Drive to Zero

Presentation by Bill Van Amburg,

Global Strategic Advisor Zero Emission Commercial Vehicles, Energy and Sustainability

(15 minutes)

Facilitated Discussion (15 minutes)

Metro

Speaker

Bill Van Amburg

Global Strategic Advisor Zero Emission Commercial Vehicles, Energy and Sustainability

GLOBAL COMMERCIAL VEHICLE DRIVE TO ZERO | A PROGRAM OF CALSTART

Metro

GLOBAL COMMERCIAL VEHICLE DRIVE TO ZERO

A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

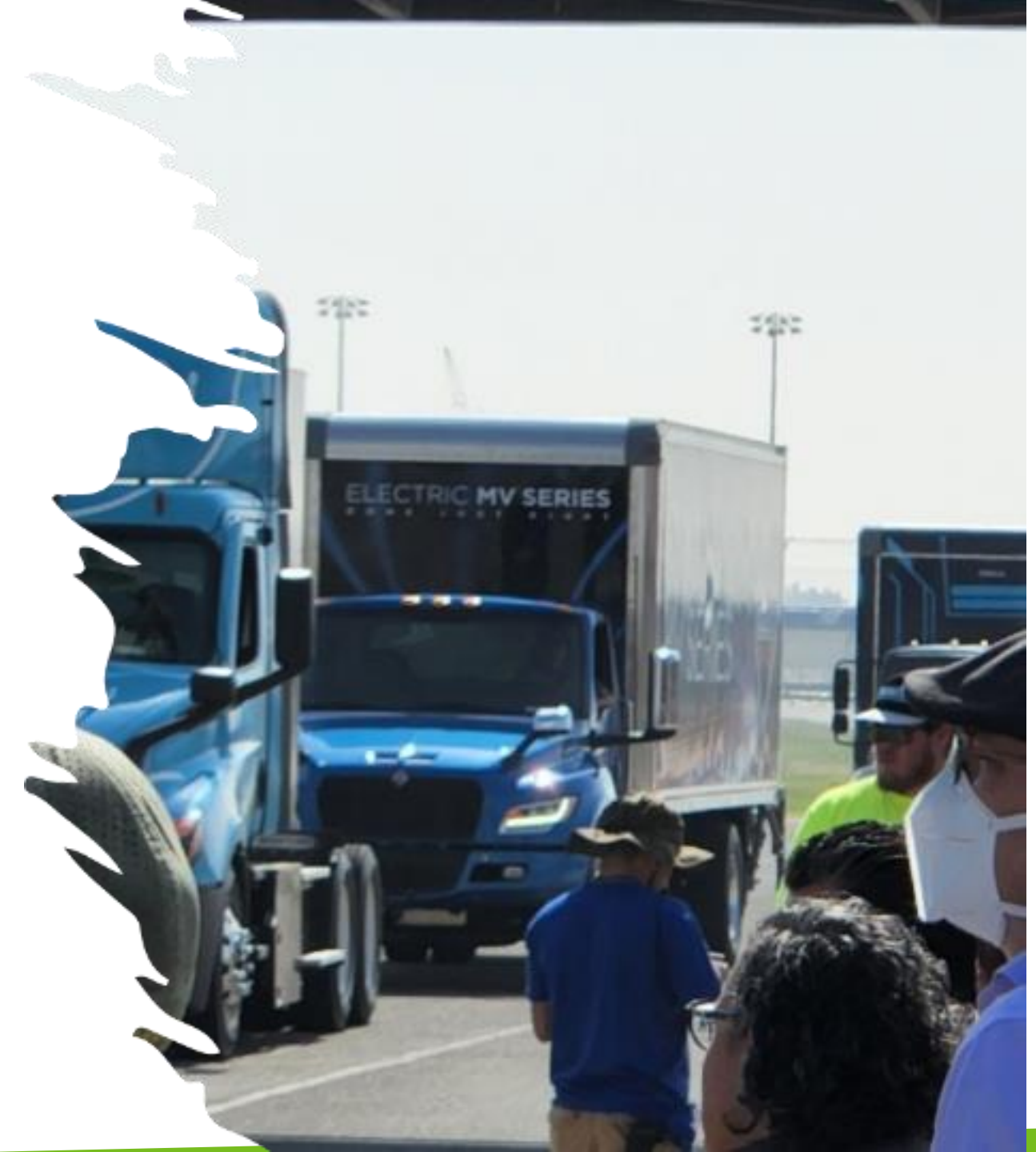
CALSTART

MHDV Infrastructure – Policy Maker Guidance

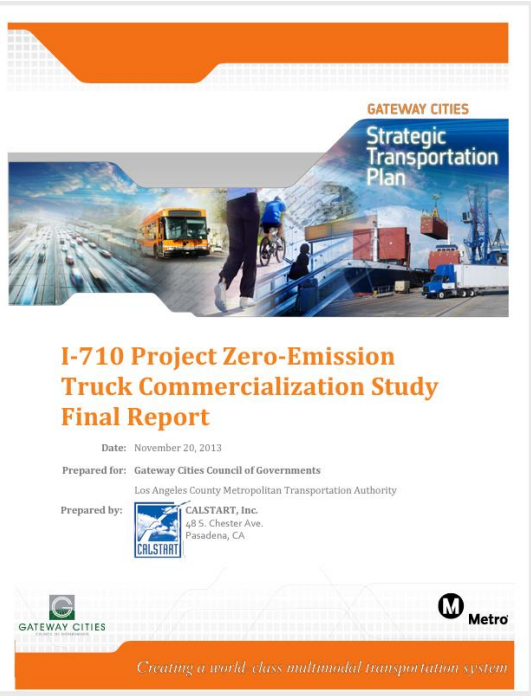
For Metro I-710 Task Force
September 20, 2022

Agenda

- Context – Pace of Change
- Drive to Zero and Policy Maker Engagement
- MHDV ZE Infrastructure Guidance
- Demand Forecasting
- Remaining Gaps



I-710 Zero-Emission Drayage Truck Commercialization & Phase-In Process



Tech Validate & Demonstrate → Pre-production Deploy & Assessments → Early Production Deployments →

Expand Tech Capability; Infrastructure Framework; Build Supporting Markets; Business Model

Stage1

Pre-Production ZE Drayage Trucks; Deploy Infrastructure; Expand Supporting Markets

Stage 2

Assess Pre-Production ZET; Expand Infrastructure

Stage 3

ZE Drayage Truck Production & Ramp-Up

Stage 4

Targeted ZE Drayage Demos

Enabling tech

Develop Infrastructure Plan

Business Case Refinement

Support Additional ZE Markets

OEM Council

ZE Yard hostlers

ZET Pre-Production

Assess & Validate vehicles

Install pilot infrastructure

Expand ZE vocational deployments

Regulations or Requirements Established

ZET Pre-Production

Broader Infrastructure deployment

User Incentives

Assess

Early Production Wave 1

Fleet, maintenance training

Final infrastructure deployment

ZE Truck Incentives, Operational Requirements Phase in

Production Ramp-up – Phase-In

2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025

https://calstart.org/libraries-i-710_project-i-710_project_zero-emission_truck_commercialization_study_final_report-sflb-ashx/

ZEROING IN ON:

ZERO-EMISSION TRUCKS

SHOWCASE + RIDE AND DRIVE

38 products available now

500+ attendees

www.calstart.org/cctupdate

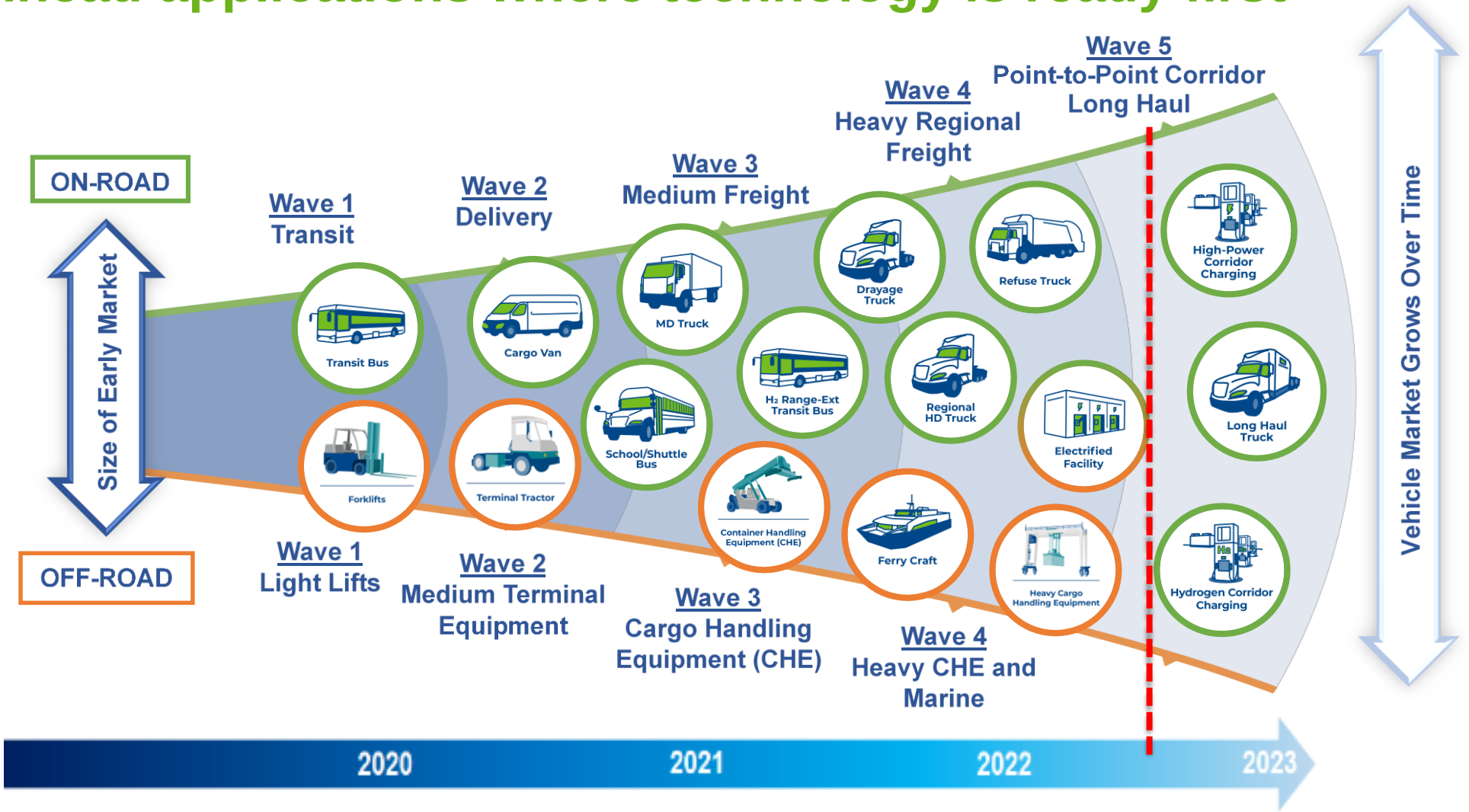
CCTU

CLEAN COMMERCIAL TRANSPORTATION UPDATE

JUNE 28TH, 2022

11:00 AM	PACIFIC
1:00 PM	CENTRAL
2:00 PM	EASTERN
8:00 PM	CENTRAL EUROPEAN

Zero-emission vehicles are coming in waves, taking foothold in beachhead applications where technology is ready first



Global MOU – the first international agreement on zero-emissions trucks and buses

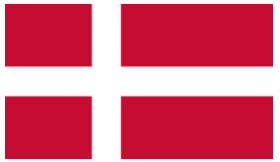
Share of new MHDVs that are zero emissions

- 100% by 2040
- 30% by 2030


Austria


Canada


Chile


Denmark


Finland


Portugal


Uruguay


Switzerland


Luxembourg


Netherlands


New Zealand


Norway


Scotland


Wales


United Kingdom


Turkey

Global MOU goes beyond (non-binding) targets, and establishes a forum supporting countries to develop action plans to meet the targets, and monitoring progress through robust, consistent, and transparent data reporting

Action Plan

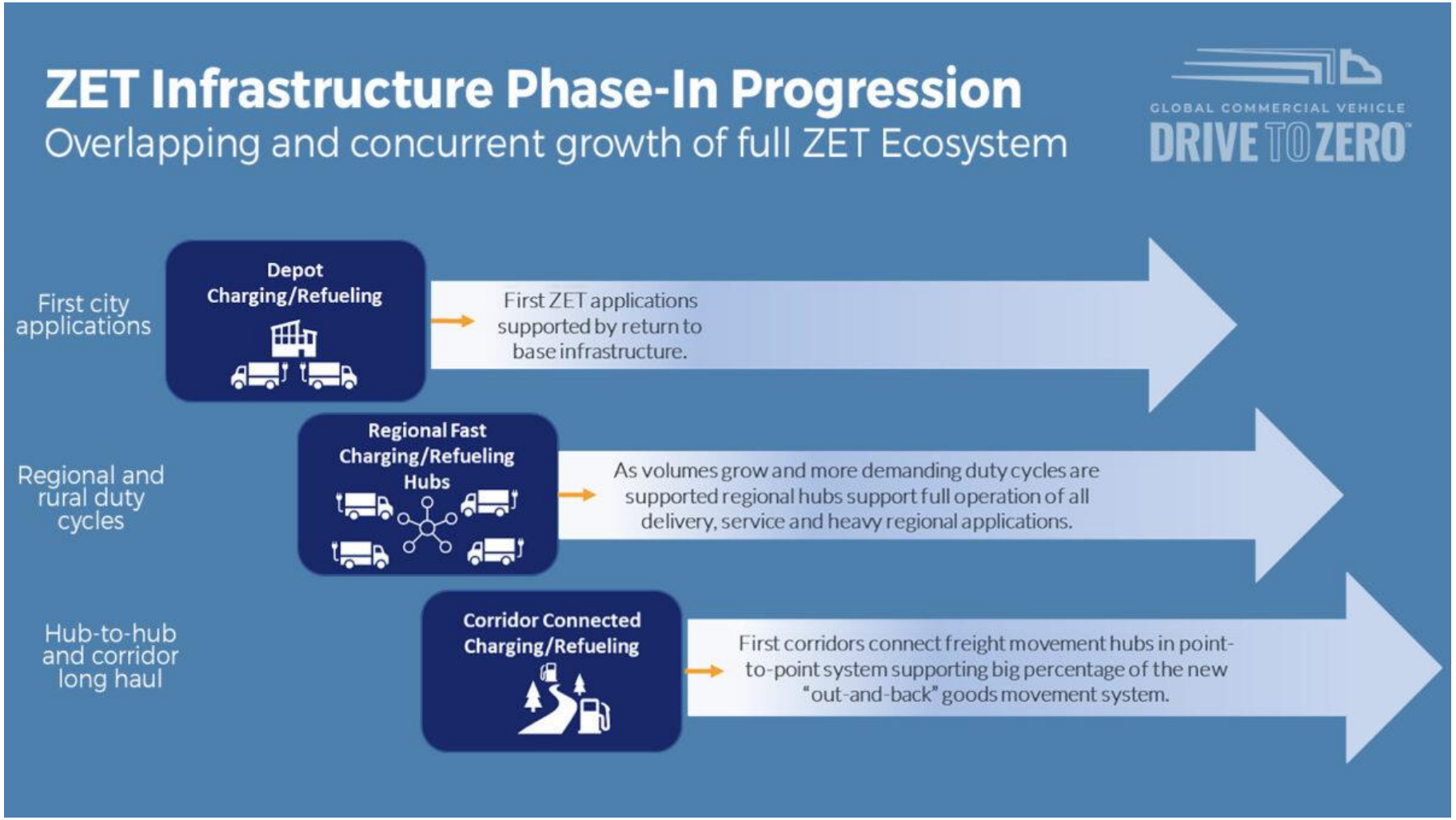
Data Reporting and Progress Dashboard

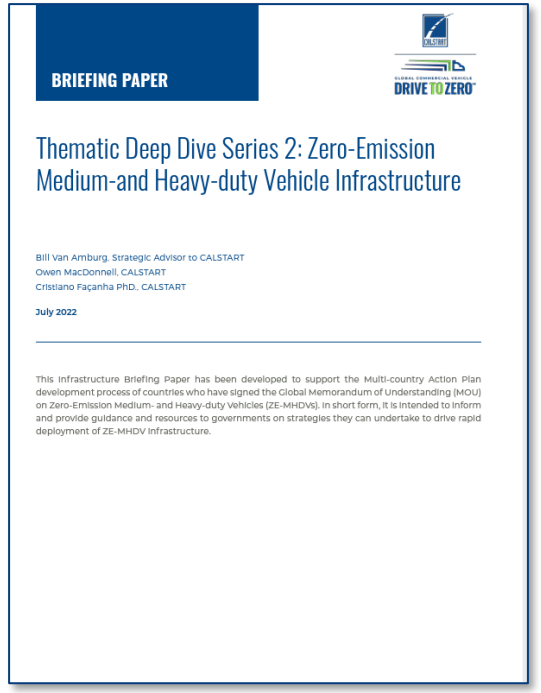
Forum to report progress and exchang lessons

Policy ecosystem
- Regulations
- Incentives
- Investments

Non-binding Targets

Context for Infrastructure – Guidance to Policy Makers




BRIEFING PAPER

Thematic Deep Dive Series 2: Zero-Emission Medium-and Heavy-duty Vehicle Infrastructure

Bill Van Amburg, Strategic Advisor to CALSTART
Owen MacDonnell, CALSTART
Cristiano Façanha PhD., CALSTART

July 2022

This Infrastructure Briefing Paper has been developed to support the Multi-country Action Plan development process of countries who have signed the Global Memorandum of Understanding (MOU) on Zero-Emission Medium- and Heavy-duty Vehicles (ZE-MHDVs). In short form, it is intended to inform and provide guidance and resources to governments on strategies they can undertake to drive rapid deployment of ZE-MHDV infrastructure.

https://globaldrivetozero.org/publication/tdd2_infrastructure/

Core Guidance to Global Policy Makers

- **Zero-Emission MHDVs are ready for greatly expanded deployments** in all regional applications and emerging longer range routes.
- **Infrastructure is a critical enabling capability** and potential limiter that must keep pace with and anticipate the rapid growth of ZE-MHDVs or risk slowing the market.
- **Do not delay policy adoption and vehicle implementation because of either/or technology choices**; battery electric and fuel cell electric systems are complementary.

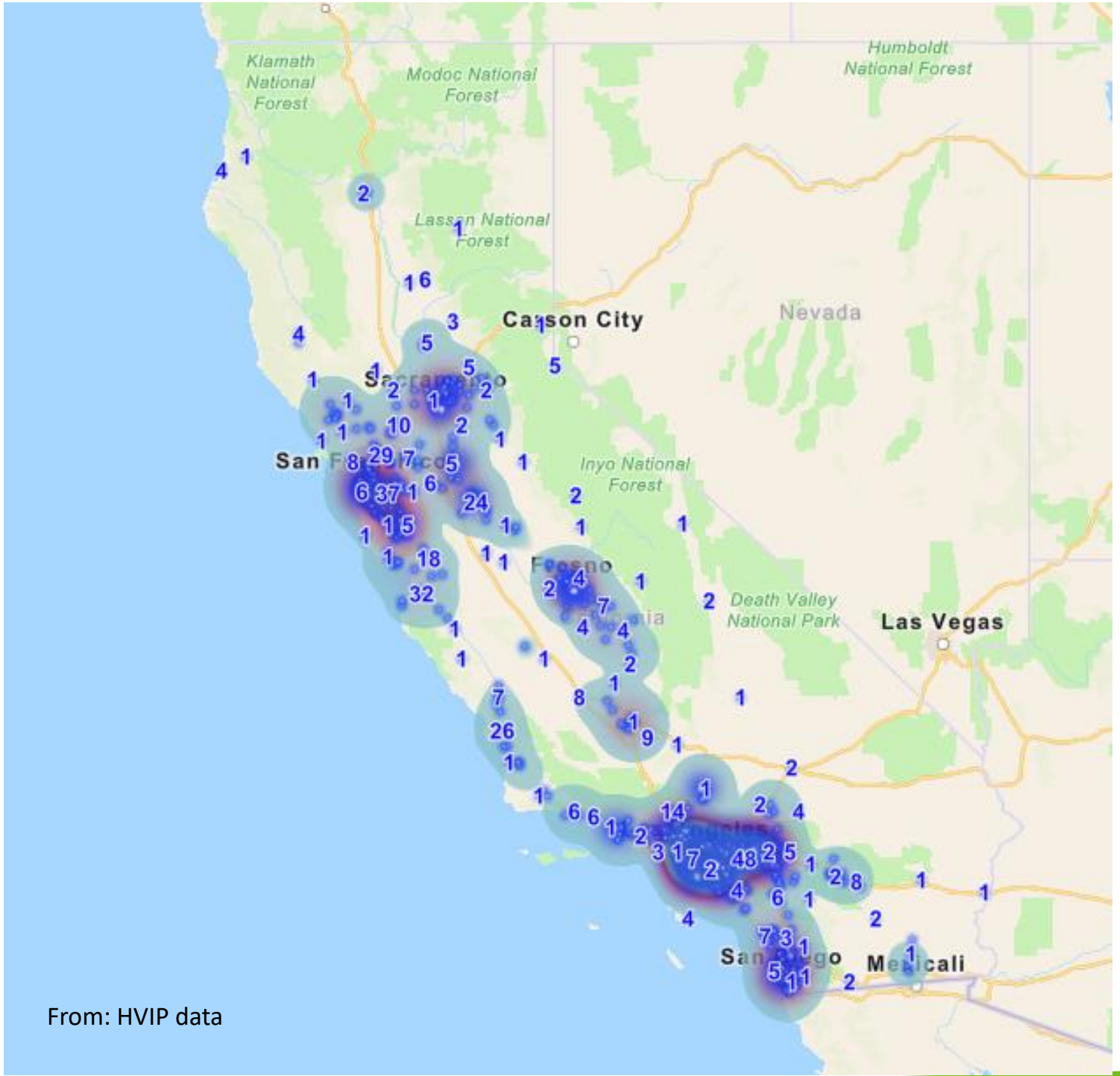
Infrastructure Guidance – Key Actions for Government

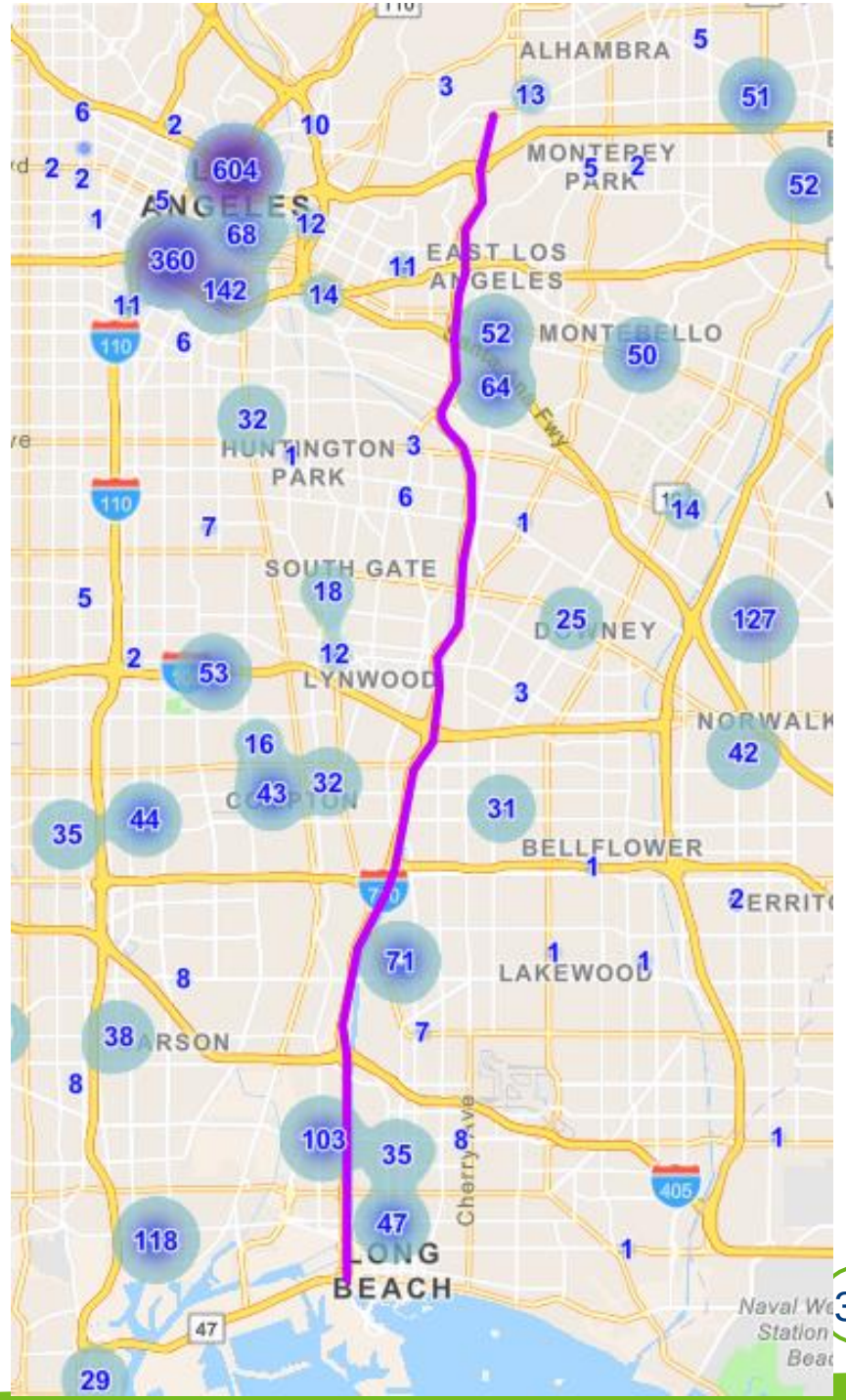
- **Utility investment regulatory framework** - Plan for, invest in and take an active role in installing ZE-MHDV infrastructure at the pace required to meet rapid market growth.

- **Utility rate structure** – Encourage and require utilities and power providers to design competitive and conducive rate structures to users of zero emission commercial vehicles. Addressing electrical rate cost, time of day considerations, demand charges and other utility rate design structures and refining them for commercial vehicle success is critical.

- **Roadmapping and anticipating demand** – Establish strong ZE-MHDV market demand roadmaps to assist utilities, transport ministries, municipalities and industry in preparing for and anticipating demand for charging and refueling assets needed to accommodate the rapid growth of ZECVs. An overlay of utility distribution grid capacity showing stronger and weaker zones for energy delivery, will highlight areas that can accommodate immediate demand and those needing capacity expansion investments.

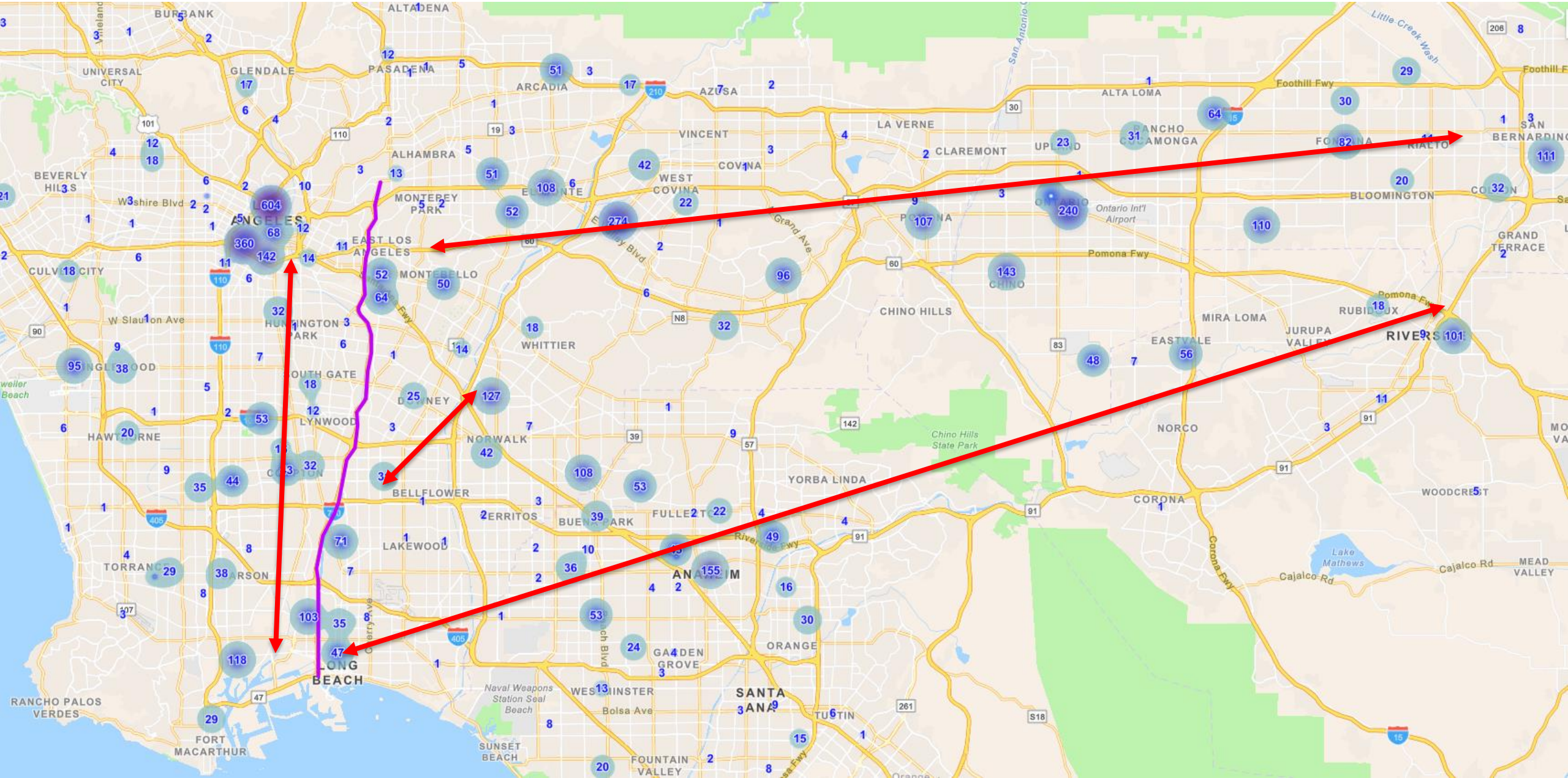
- **Spurring Early Markets and Investments** – Support the initial market for ZE-MHDV infrastructure and in establishing attractive conditions for private investment and capital to quickly scale these markets and assume their primary role in funding this expansion.





From: HVIP data

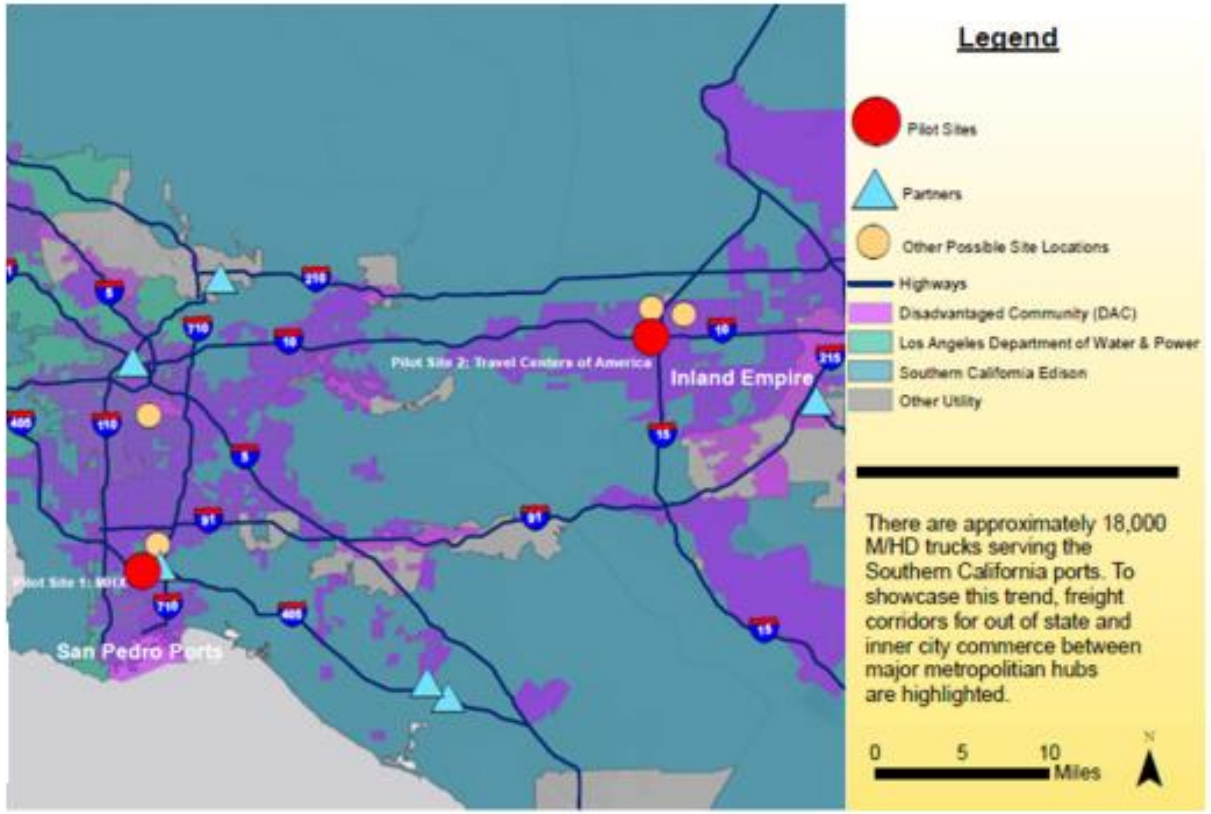
Regional Approaches Support Better Local Decisions



eTRUC - RHETTA

Community-Empowered Corridors for Electric Trucks

FUNDING PROVIDED BY THE CALIFORNIA ENERGY COMMISSION



STATE OF CALIFORNIA ENERGY COMMISSION

SCAG · gna · BERKELEY LAB · EPRI ELECTRIC POWER RESEARCH INSTITUTE · CALSTART · MHX · TA TravelCenters of America · MOMENTUM · CAMBRIDGE SYSTEMATICS · UC RIVERSIDE · SOUTHERN CALIFORNIA EDISON · GRID ALTERNATIVES · CHARIN · NREL · eTRUC Partnership · Paul International, Inc. · BURNS McDONNELL · RI.SE Research Institutes of Sweden

STEPS TO GET STARTED

CALIFORNIA HVIP

1 CONSIDERATION OF ELECTRIC TRUCK DEPLOYMENT

- Decide if fleet electrification will require electrical upgrades to your facility
- Engage your utility and identify needed technical support.
- Confirm charging requirements, needs and costs from vehicle manufacturer and EVSE supplier.
- Identify energy requirements for various truck types
- Determine fleet scaling potential.

BASELINE PATHWAY (1-5 TRUCKS)

ADDITIONAL CONSIDERATIONS FOR BUILDING TO SCALE

These additional considerations are aimed to help fleets that plan on deploying more than 5 trucks initially or in the future. Following these additional considerations will help your depot be built to scale for fleets larger than 5 trucks.

2 FLEET ELECTRIFICATION

- Plan for phasing and timeline for deployment.
- Understand truck duty cycles and how to integrate new vehicle into rotation.
- Understand Projected energy needs (daily kWh, charging times, and speed).

3 DEPOT YARD ANALYSIS

- Evaluate site infrastructure and utility grid infrastructure needs.
- Identify space availability.
- Consider charging placement and electrical upgrades that allow for addition of electric trucks in the future.

ADDITIONAL CONSIDERATIONS FOR BUILDING TO SCALE

Evaluate renewable energy options.

Evaluate energy storage options.

4 DECIDE CHARGING SPECIFICATIONS

- Identify charger type (AC or DC/Level 2 or 3).
- Develop charging schedule (best window for charging).
- Drawing of EVSE location.

ADDITIONAL CONSIDERATIONS FOR BUILDING TO SCALE

If power needs are significant, discuss electrical rates with your utility.

5 DEVELOPMENT OF ELECTRIC SERVICE PLAN

- Detail requested service voltage and load schedule.
- Identify service drop and transformer locations.
- Develop conceptual electric single line diagram.
- Determine costs for infrastructure requirements & development.

6 BEGIN INSTALLATION PROCESS

Engage Utilities

- Evaluate existing infrastructure incentive programs.
- Determine EV rate structure.
- Plan charging times.
- Evaluate load sharing options.
- Understand utility application requirements.

Technical Support

- ID Electric Engineer (Internal or External).
- Evaluate options for contractor support.
- Build partnership between OEM, EVSE supplier, utility, engineer and fleet and operational staff.

Deployment Timeline

It is important that you factor in the time it will take to plan, develop and deploy your electric charging infrastructure. Full deployment can take up to 1–4 years based on fleet size and needed upgrades. The timeline below is based on deployment best practices.

PLANNING:
Steps 1- 5
3 – 12 Months

DEVELOPMENT:
Electric Upgrades & Construction
6 – 48 Months

DEPLOYMENT:
Integrating Electric Trucks
1 - 3 Months

https://www.californiahvip.org/infrastructure/

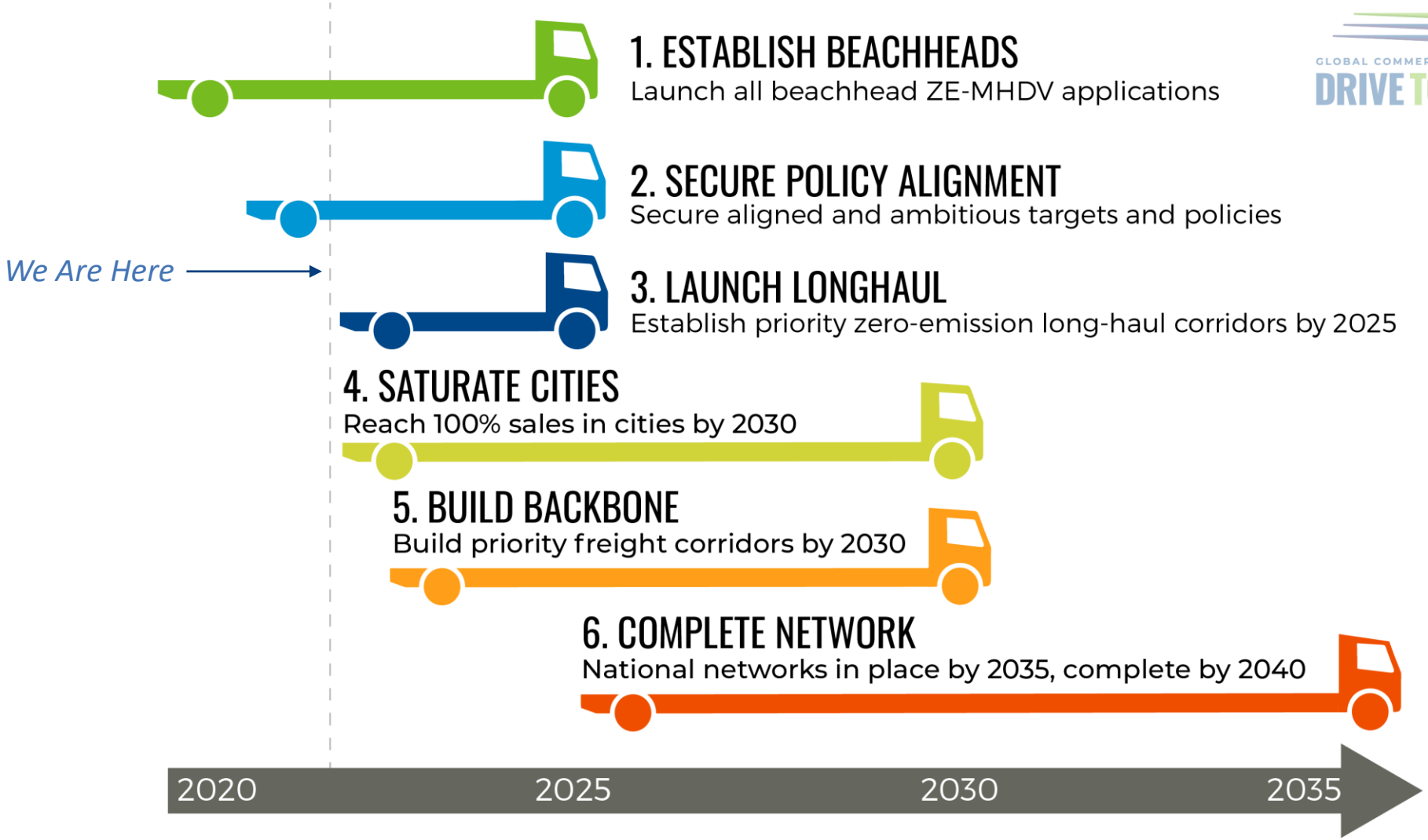
Engage With the Utility Early in The Planning Process

- Partner with the utility and inform them of your short, medium and long term electrification plans
- Utility can plan distribution upgrades in parallel with EV fleet expansion
- Where possible, install a dedicated service feed for the EV equipment allowing for more attractive TE rates and increased resiliency
- Size equipment based on immediate and anticipated needs
- Perform minor and major upgrades concurrently

SOUTHERN CALIFORNIA EDISON

The Road Ahead

6-STAGE STRATEGY TO ENABLE 100% ZE-MHDVS BY 2040 (AND 30% BY 2030)



GLOBAL COMMERCIAL VEHICLE DRIVE TO ZERO™

Thank you!

Bill Van Amburg
Strategic Advisor to CALSTART/Drive to Zero
bvanamburg@calstart.org

Alycia Gilde
Vice President, Clean Fuels and Infrastructure, CALSTART
agilde@calstart.org

Cristiano Façanha
Global Director, CALSTART/Drive to Zero
cfacanha@calstart.org

For more information:
www.calstart.org;
www.globaldrivetozero.org

@TeamDriveToZero

Agenda Item #4:
Regional Roadmap for Zero-Emission Vehicle Infrastructure

Overview by Alison Linder, Senior Regional Planner,
Southern California Association of Governments (10 minutes)

Question and Answer (5 minutes)

Metro

Speaker

Alison Linder, Phd

Accelerated Electrification Team and Clean Technology Program

Southern California Association of Governments

Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks

Metro ZE Truck Working Group
September 2022

Alison Linder, PhD
linder@scag.ca.gov

The SCAG Region

191
CITIES

6
COUNTIES

19.1M
RESIDENTS

36,618
SQUARE MILES

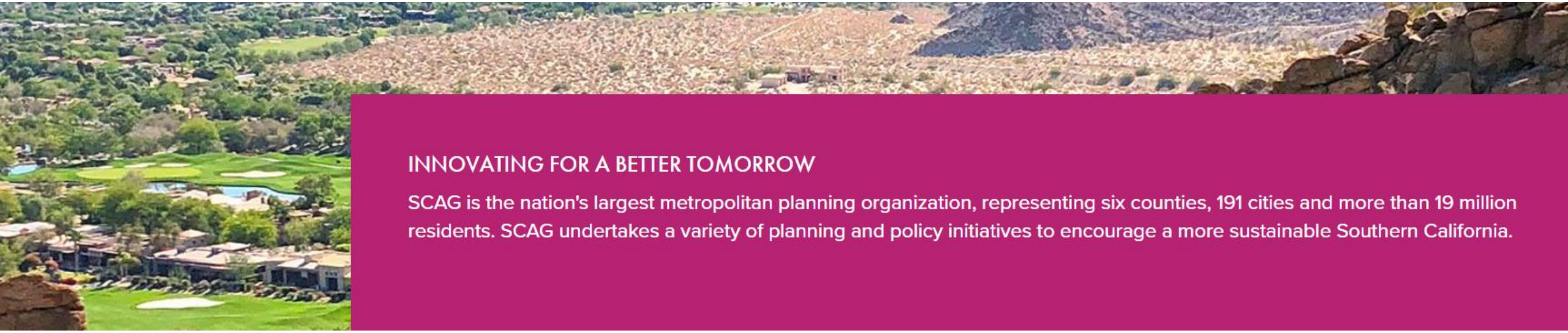
$1.2T
REGIONAL GDP

15TH
LARGEST ECONOMY WORLDWIDE

48.1%
OF STATE POPULATION

Clean Technology Vision

- Connect SoCal 2020 included the *Accelerated Electrification Key Connection,* creating a holistic and coordinated approach to de-carbonizing or electrifying passenger, transit and goods movement vehicles and a *vision* for a zero-emission transportation system or using cleaner mobility options where zero emission options are not feasible.



Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks

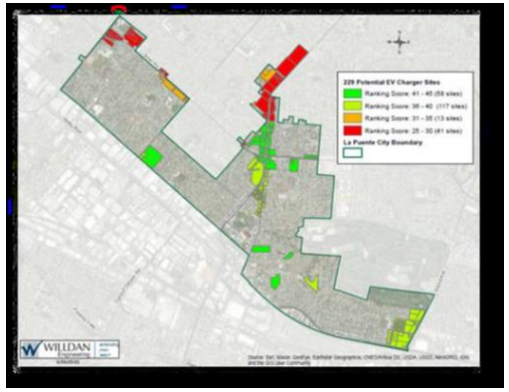
Goals and Objectives

- Plan for Zero Emission Supporting Infrastructure focused on both Battery Electric and Hydrogen Fuel Cell trucks
- Understand and address stakeholder concerns and needs
- Understand site level needs for station development
- Create a Regionally Supported Roadmap for MD/HD ZE Fueling Infrastructure

Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks

Expected Tasks and Deliverables

- Refined understanding of truck markets, travel patterns, and relevant operational characteristics
- Define demand of Charging Network by Market
- Assessing the potential supply of land for stations
- Distribution of Charging network; based on
  - Travel demand
  - Existing stations
  - Power and fueling supply
  - Potential Impacts to Surrounding Communities
  - other TBD



Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks – Expected Outreach

- TAC
- What are the characteristics of the drive?
  - Shift lengths, drive times, stop times, load size
- What are current and future plans for infrastructure provision?
- Stakeholder Surveys and Interviews
  - Fleet operators
  - Warehouse operators
  - Industry associations
  - Truck drivers
  - Terminal operators
  - Intermodal facilities
  - Truck stop owners/operators
  - DCFC network providers

Supporting Infrastructure for Medium and Heavy Duty Zero Emission Trucks

Expected Tasks and Deliverables (Continued)

- Stakeholder Engagement and Outreach
  - Fleet Survey
  - Interviews
  - TAC
- Assessment of 10 key sites
- A regionally vetted action plan

Collaboration with Metro and Regional Stakeholders

- Overlap with Metro Task 1
- Our plan covers key routes and locations in 6 counties

Preliminary Tasks

Task 1: Identify physical infrastructure needs to support the full deployment of ZE heavy-duty trucks along I-710 South Corridor.

1.1 Estimate the number of charging and fueling stations to support the number of ZE drayage trucks over the next 10 years, both regional and small in scope.

1.2 Develop an energy supply plan to ensure that sufficient energy will be provided without compromising other energy uses along the corridor.

1.3 Develop a methodology and evaluation criteria in collaboration with the Task Force, CLC, Equity Working Group and other representatives living in the corridor for ZE infrastructure location and types of infrastructure being deployed.

1.4 Identify existing legislative and regulatory barriers that hinder the deployment of physical support infrastructure

1.5 Collaborate with regional partners to chart a regional path for ZE infrastructure development

Timeline and Next Steps

- Kick-off
- Convene Project TAC
- Determine Data Plan to Define Truck Network
- Anticipate 24 month project
- Initial findings in 2024 Connect So Cal
- (Potentially) Supplemental work on Power Supply

THANK YOU!

For more information, please visit:

https://scag.ca.gov/alternative-fuels-vehicles

Everything *you buy*
touches a **truck** *at some point!*

Agenda Item 5:

If EV's are the Future, Is the Grid Ready?

Moderator: Micah Wofford, Energy Commission Specialist, California Energy Commission

Panel Discussion

- Sean Wilder, Energy and Environmental Services, LA County Internal Services Department
- Salim Youssefzadah, CEO, Watt EV
- Quintin Sumabat, Deputy Executive Officer, Vehicle Engineering and Acquisitions, LA Metro

Metro

Moderator and Panelists

Micah Wofford *(Moderator)*
Energy Commission Specialist
California Energy Commission

Sean Wilder *(Panelist)*
Energy and Environmental Services
Los Angeles County Internal Services Department

Salim Youssefzadah *(Panelist)*
Chief Executive Officer
WattEV

Quintin Sumabat *(Panelist)*
Deputy Executive Officer
Vehicle Engineering and Acquisitions
LA Metro

Agenda Item #6:
2019 Electric Vehicle Charging Guidebook for Medium-Duty and Heavy-Duty Commercial Fleets

Presentation by Patrick Couch, SVP, Gladstein, Neandross, and Associates

Metro

Speaker

Patrick Couch

Senior Vice President, Technical Services, & Partner

Gladstein, Neandross, and Associates

Metro

MD/HD Fleet Charging Guidebook Overview

Patrick Couch, Senior Vice President

I-710 ZET Working Group
September 20th, 2022

GNA Introduction & History

North America's leading full-service clean transportation consulting firm.

Nearly 30 years of experience in:

- Medium and heavy-duty transportation
- Ports and goods movement
- EV, hydrogen, natural gas, propane, biofuels, renewable fuels
- Infrastructure and corridor development
- Grant funding
- Stakeholder education

Over the past 29+ years

Managed the design and development of more **clean fleet deployment projects** than any other firm in North America

Overseen the development of some of the largest **alternative fuel stations and corridors** in the world

Secured more than **$1 billion in grant funding** for our clients with a +90% application success rate

Supported hundreds of clients in expanding brand reach, **building market share**, and achieving outreach goals

GNA's Best In Class Client Roster: Leading Fleets, OEMs, Energy Companies, and Other Stakeholders

Some Electrification Challenges Facing Fleets

Diesel fueling deals in relatable units and fueling times are consistent.

The terminology for EVs is new to fleet managers/buyers.

Fleets understand diesel fuel and infrastructure design.

But they are “learning by doing” EV infrastructure.

Fleets are built around diesel fueling, where price is independent of fueling time and speed.

When, where, and how fast electricity is delivered affects price significantly.

Fleets are not static. Customers and requirements change over time.

Flexible infrastructure solutions are key for large scale fleet adoption.

To make EV infrastructure work, fleets need education, flexibility, and price stability

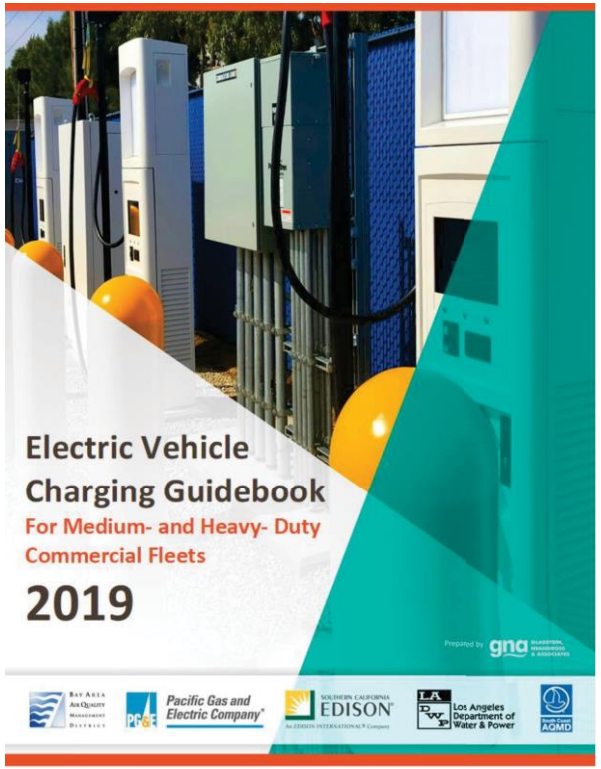
EV Charging Guidebook

Purpose

- Charging 101 for fleet operators
- Focus on MD/HD Commercial fleets, but applicable to many MD/HD fleet applications

Goal

- Estimate fleet's energy needs and charging time requirements.
- Identify the charging equipment options.
- Evaluate charging station configurations that work with existing space, support current and future operations, maximize equipment lifecycles, and control costs.
- Identify which entities to engage for project design, permitting, and construction.
- Discuss important details of the fleet's electric service and electricity price bands with your utility.

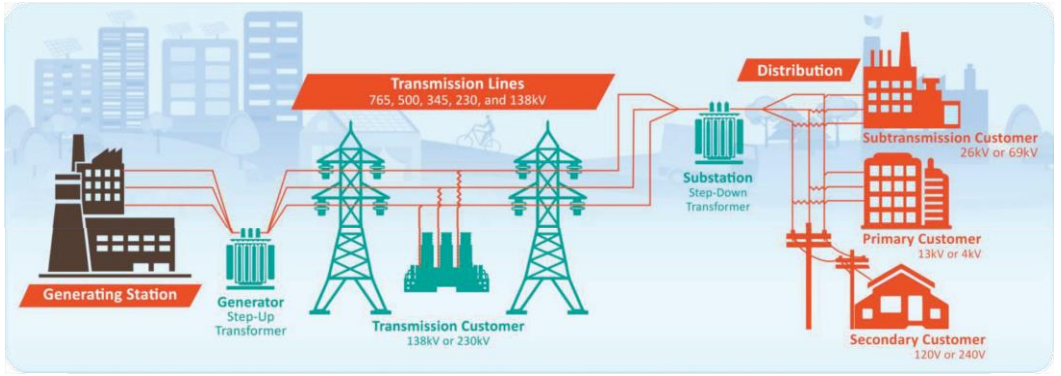


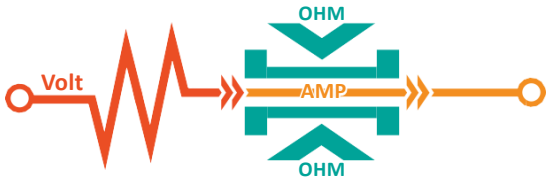
http://www.gladstein.org/research

EV Charging Guidebook

Terminology and Definitions

- Basic terminology and definitions related to EVSE and charging
- Overview of electrical grid structure and major market participants (CA-focused)





KEY TERMS

Average Power: The amount of power that your fleet requires while charging, averaged over the charging window.

Charge Rate: The rate at which a BEV is charged, measured in kilowatts (kW).

Charging Window: The period of time in your fleet's duty cycle when vehicles can charge.

kWh: Kilowatt-hour, a unit of measure for electrical energy. 1 kWh is the energy delivered by 1 kW of power for 1 hour.

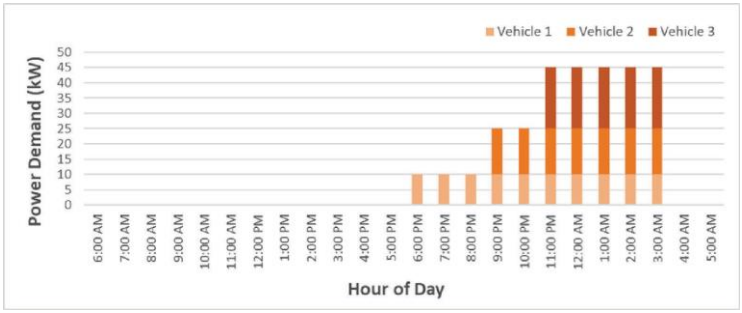
Load profile: A graph showing the amount(s) of power that your fleet requires over the course of a day.

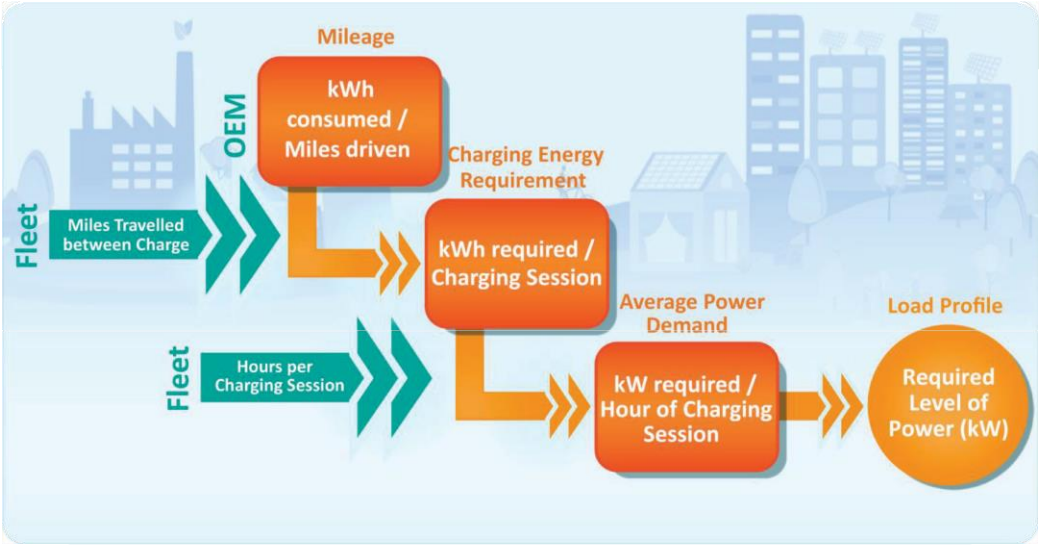
Watt: A unit defining the speed at which electrical energy is consumed (energy per second).

EV Charging Guidebook

Estimating EV Charging Loads

- Process for estimating EV energy use based on vehicle type and “fuel” efficiency.
- Worked examples translating energy use to power demand



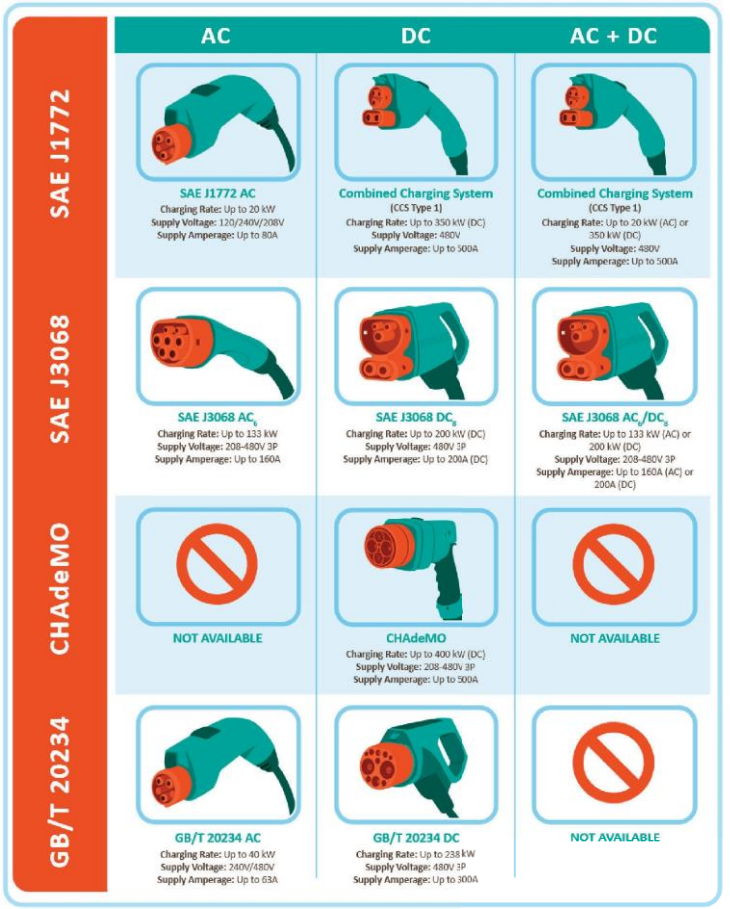


EV Charging Guidebook

Understanding EVSE Options

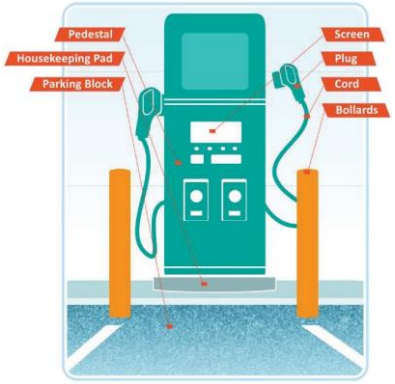
- Overview of EVSE interface types and capabilities
- Worked examples translating load profiles into EVSE selections
- Example equipment costs

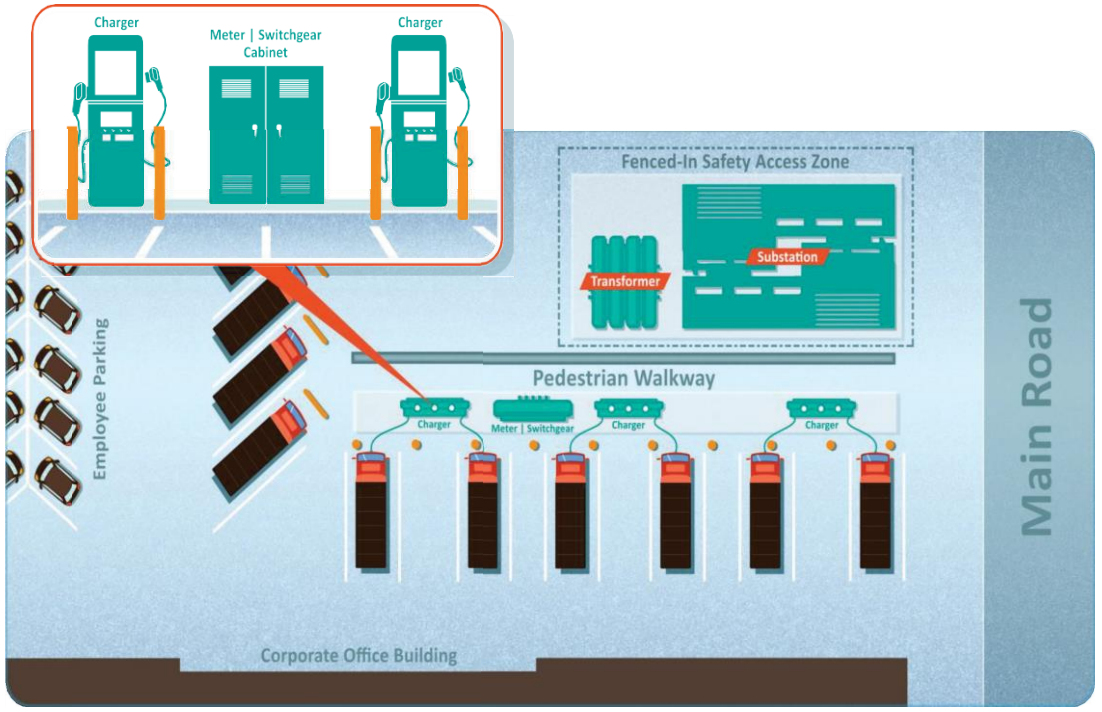
Charging Type	Power Level	Networkable	Price Range ($)
Level 1 AC	<2 kW	No	500-1,000
Level 2 AC	<8 kW	No	500-1,000
Level 2 AC	10-20 kW	No	700-1,500
Level 2 AC	<8 kW	Yes	500-1,000
Level 2 AC	10-20 kW	Yes	3,000-6,500
Level 3 DCFC	20-30 kW	Yes	10,000-40,000
Level 3 DCFC	50-150 kW	Yes	50,000-100,000
Level 3 DCFC	>150 kW	Yes	150,000+



EV Charging Guidebook
Siting and Permitting EVSE

- Anatomy of an EVSE
- Considerations for siting EVSE equipment
- Basic permitting process and timeline expectations

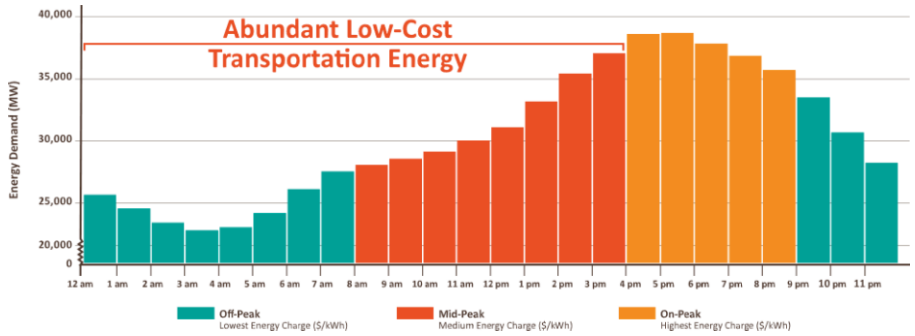




EV Charging Guidebook

Electricity Costs

- Basic utility billing terms and concepts
- Worked examples of EV charging cost calculations and impacts of charging behavior



Flat Rate: A rate structure under which you are billed at a single price per kilowatt-hour consumed regardless of time, season or application.

Time-of-Use (TOU): A rate structure under which you are billed different prices for power you consume according to the time and season when it is consumed.

Fixed Charge: A fee covering the regulator-approved costs that the utility pays to supply your power such as distribution and transmission ($/month).

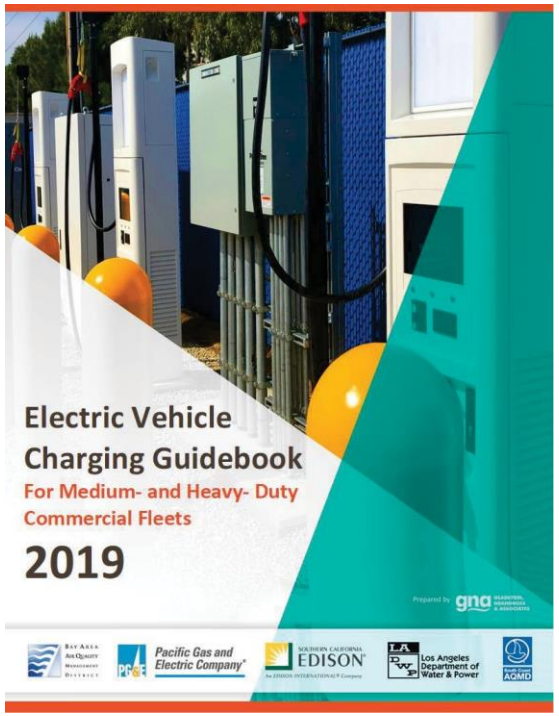
Energy Charge: Your baseline price of electricity, charged based on the amount of energy you consume ($/kWh).

Demand Charge: A fee applied to your greatest power draw during peak periods, on top of the rate that you pay for the energy ($/kW).

Seasonal Rates: Additional distribution fees covering the costs of addressing weather stressors on the electric grid during winter or summer.

Power Factor Adjustment: An adjustment to your demand charge according to how efficiently your facility consumes power.

Summary



http://www.gladstein.org/research

+

In theory there is no difference between theory and practice. In practice, there is.
~Yogi Berra

THANK YOU!

Patrick Couch

Sr. Vice President, Technical Services

(310) 279-9150

patrick.couch@gladstein.org

GLADSTEIN, NEANDROSS & ASSOCIATES

Agenda Item #7:
Electric Vehicle Charging Infrastructure for Southern California

Report by Carlo Bertani, MAERSK

Metro

Speaker

Carlo Bertani

Environment, Sustainability and Decarbonization

MAERSK North America

MAERSK

Metro

PERFORMANCE TEAM
A Maersk Company

Maersk Transportation Decarbonization

Carlo Bertani, Maersk, Inland Decarbonization Lead

MAERSK

Our decarbonization focus within **Transportation**

Current Class 8 BEV and Infrastructure

- ✓ **16 BEV's operational in Southern California (SFS → Port → SFS)**
- ✓ **8 Dual port chargers constructed in Santa Fe Springs, CA**
- ✓ **11 Dual port chargers under construction in Commerce, CA**

Future Roadmap

- ✓ **Future expansion rollout in SoCal ,Chicago, New Jersey (+others)**
- ✓ **420 additional Class 8 BEV on order (2023-2025)**
- ✓ **18 Terminal Tractors starting Q4 2023**
- ✓ **Leveraging Partnerships for shared charging infrastructure**

Carlo Bertani, Maersk, Inland Decarbonization Lead

MAERSK

Challenges & Complications

Lead times and delays for infrastructure

Grid reliability

Inspector knowledge

Cost disparity vs. diesel

Lack of off-site charging infrastructure for HD trucks

Obtaining landlord approval for infrastructure builds

Solutions

Plan ahead – choose facilities wisely

Work with your utility provider upfront

Participate in regulatory workshops

Develop partnerships with other industry players

Work with landlord and determine if there is overlap with their sustainability goals

Carlo Bertani, Maersk, Inland Decarbonization Lead

MAERSK

Closing Remarks and Next Steps

Metro

710 Task Force Information Hub

http://www.metro.net/710-hub

- Extension of the current Metro.net website
- User-friendly site for additional content
- Graphics, meeting materials, calendar of meetings, maps, future surveys, and interactive tools

710 Task Force Information Hub

Welcome to the 710 Task Force information hub! Here you can review project information, explore an interactive map, view project resources and past meetings' videos/materials. Get involved in the planning process by attending upcoming Task Force and Public Meetings.

Process and Goals

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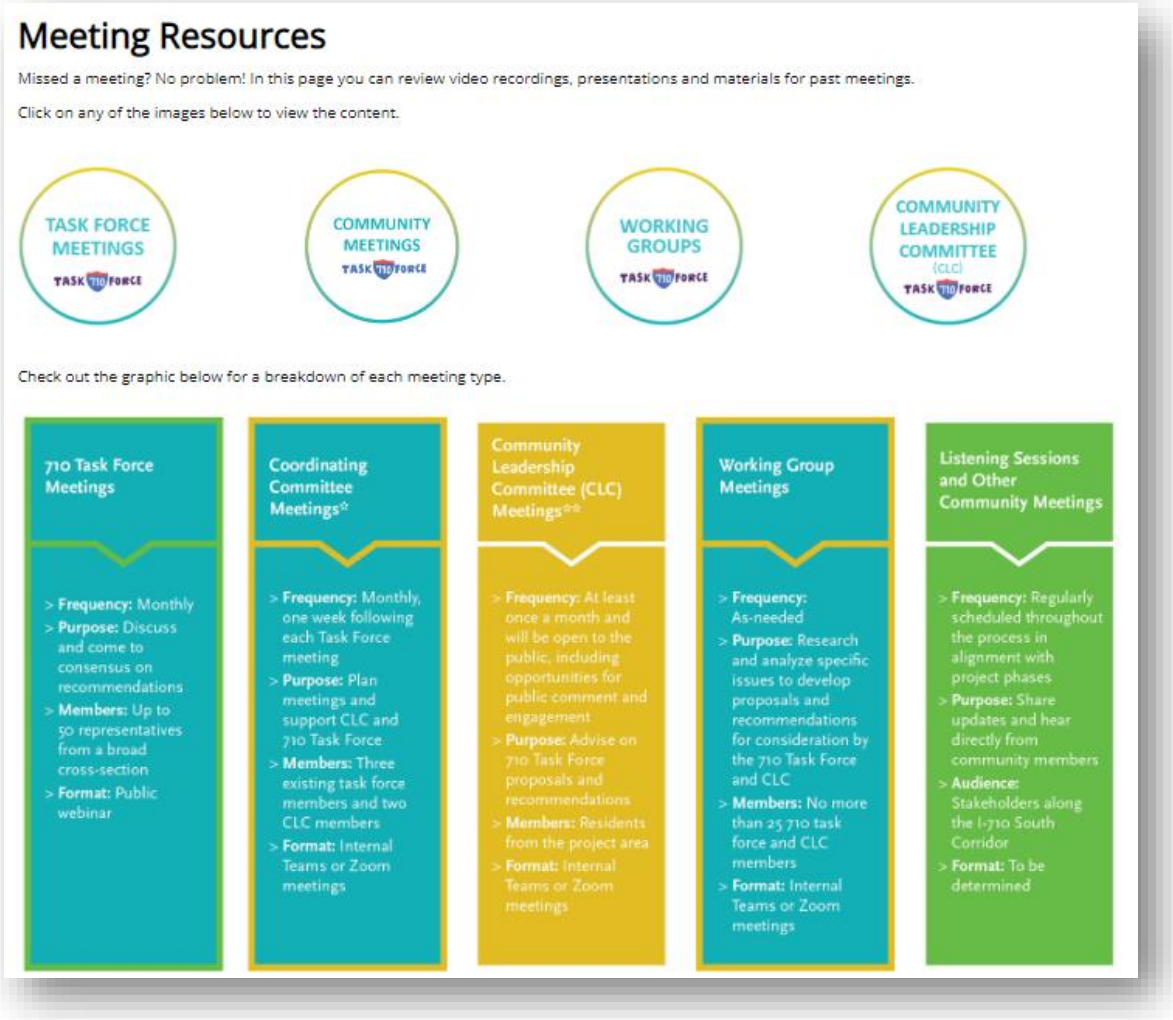
710 Task Force Information Hub

Tool Features:

- **Infographics on TF process** and decision-making process
- **Meeting Materials**
  - Task force meetings, Community meetings, Working groups & CLC meetings
- **StoryMap**
  - Demographics, transit and environmental info
- **Online Surveys** (launching soon)
  - Project Naming Poll
  - Interactive Mapping & Survey Tool
- **Contact form**
- **Calendar of Events**



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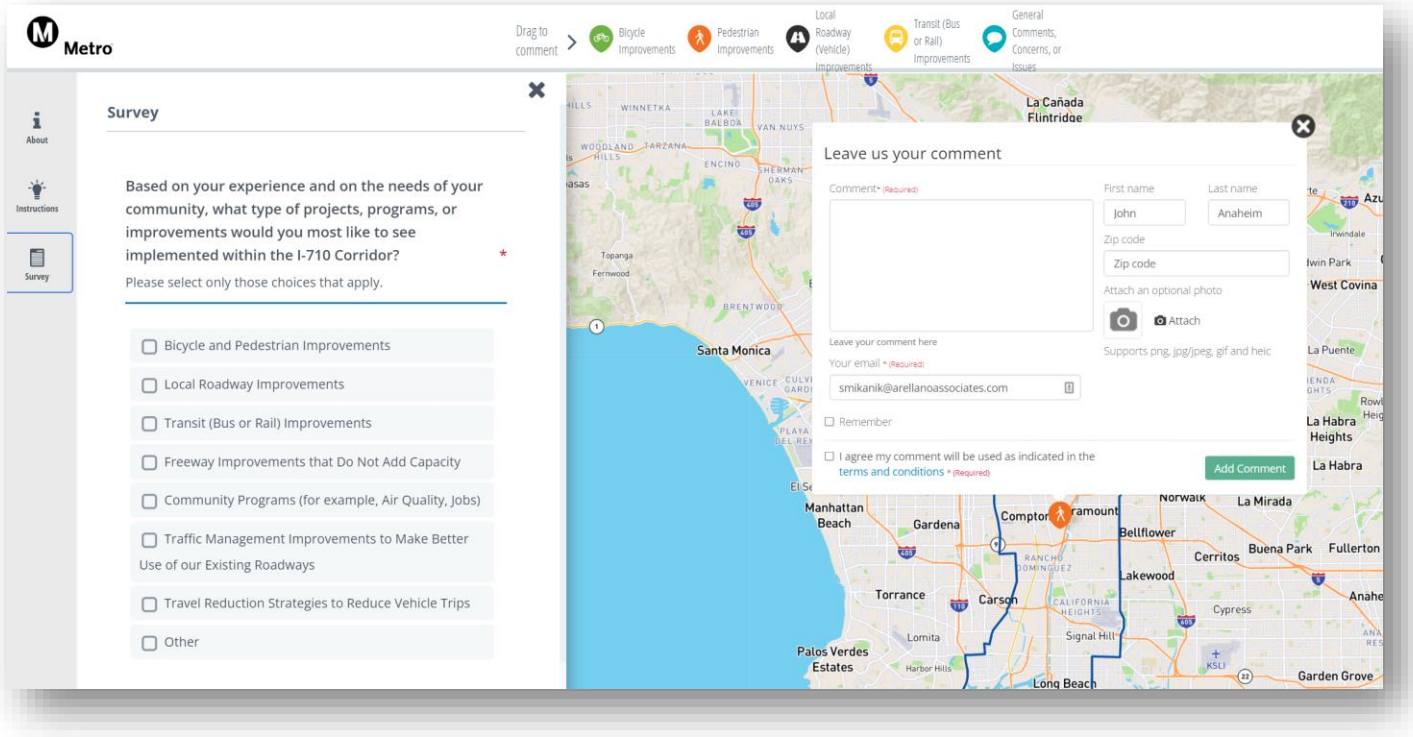
Interactive Mapping Tool and Survey

- **Beta test**: July 18 available for input from CES and Coordinating Committee
- **Full launch**: August 2
- **Close survey**: October 15

Tool Objectives

- **Engage the public** in the decision-making process
- **Gather public input** on projects and programs
- **Gather geo-coded data** (location-centric) comments on project map



English

Español

Key Dates

Working Group Meetings

> Equity Working Group #7
Thursday, September 29, 5-7pm

> Zero-Emissions Truck Working Group #9
Tuesday, October 18, 1-3pm

Task Force Meeting

> Task Force Meeting #13
Tuesday, October 11, 5-7:30pm

Community Leadership Committee Meeting

> Meeting #7
Thursday, September 22, 5-7pm

Coordinating Committee Meeting

> *Wednesday, September 28, 3-5pm*

Metro I-710 South Corridor Mapping Tool and Survey

> Metro I-710 South Corridor Mapping Tool and Survey

Open until Saturday, October 15th

For the most updated list of meeting dates, visit
http://www.metro.net/710-hub

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Can’t attend the meeting? Reach out to us!

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Thank you!

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