



Sustainable Supply Chain Advisory Committee August Meeting Summary (July Meeting Rescheduled)

Date: August 6th | 11 am – 3 pm

Location: In-person at Port of Los Angeles and via phone conference

Attendees: Attachment A

Meeting Agenda: Attachment B

Key Discussion Items (Action items in green)

1. **POLA & POLB Opening Remarks**
 - Chris Canon and Heather Tomley provided a brief overview of drayage truck technology demonstration projects that are in discussions and underway, which are crucial in the ongoing implementation of the CAAP. They discussed the need for port staff and other stakeholders to work with OEMs, technology providers and others to ensure they know how to effectively scale the deployments of new technologies. Of course, it was noted that funding support will also be critical, which is the focus of this meeting.
2. **Review May SSCAC Meeting Summary**
 - Meeting summary was approved. **See attachment C**
3. **Review & Finalize 2018 Mission & Vision**
 - The Committee approved the Mission and Vision document with one edit; add "to supplement private investment" in second bullet under priorities for 2018. **See attachment D**
4. **Review & Finalize System of Systems**
 - The Committee approved the Systems of Systems recommendation. **See attachment E**
5. **Legislative Update/Funding Prioritization**
 - As a follow up to the letter the Committee signed and sent to Sacramento advocating for GGRF funds to go towards port projects, David Libatique provided a brief update on the current discussions in Sacramento about GGRF allocations.
 - The group discussed the need to begin thinking through ways the Committee can support the ports when the 2020 budget is in discussion. The Committee discussed a few ideas and agreed that this would be an agenda item at the next Committee meeting.



6. Roundtable Guests Arrive

7. Update on 2017 CAAP/CTP

- Heather and Chris provided an update on the CAAP and CTP, including the implementation schedule, feasibility assessments, rate study, and related issues. **See attachment F**
- The group discussed the Port's use of CARB's forthcoming definition of low-NOx and zero emission as a mechanism to move forward with the CTP.

8. Overview of Upcoming Available Funding

- GNA provided a high-level summary of the currently and soon-to-be-available funding for drayage trucks. **See attachment G**
- The group discussed the need to streamline funding programs to get more old trucks off the road and cleaner ones on. The SCAQMD's recent \$400 million Carl Moyer Program was mentioned as being approximately 50% subscribed by truck applications, although it is too early to tell how many port drayage trucks were part of the applications vs non-port drayage trucks.

9. Roundtable Discussion

- Several meeting participants discussed the importance of the CTP rate as it will drive decision making for many fleets and independent drivers who are weighing whether or not to buy a new truck. It was noted that many drayage operators have commented that they will wait until they have a clearer vision of the rate and resulting business landscape before making any decisions about investing in new trucks.
- The Committee mentioned that the CTP rate is not the only fee that many cargo owners are looking at with warehouse ISR fees are being considered as well, which compounds the increasing cost of moving cargo through Southern California.
- The Committee discussed the changing nature of the port drayage business in context of various labor issues. Such issues will also impact the ability for licensed motor carriers (LMCs) to guarantee loans for their contracted drivers; thus, the model used in the first CTP will not be applicable going forward.
- While there are large incentive programs available in the market (Carl Moyer, VW, etc.), the group agreed that there are insufficient funds to incentivize the replacement of all trucks operating in the San Pedro Bay Ports. Further, the requirements of many of these traditional funding programs make them a difficult fit for the port drayage market. Therefore, other new funding programs would be needed.
- Market certainty and early action were also noted by the group as key issues to consider.
- Ultimately, the group generally agreed that the "sweet spot" for a monthly truck payment for an operator in the San Pedro Bay Port drayage business is in the \$1,000 per month range.
- The group also agreed that it is critical to include some kind of maintenance plan for new clean trucks to ensure their continued successful operation.
- Financing new advanced technology trucks for port drayage operators has proven to be challenging for a number of reasons, including: high capital costs of the trucks; credit worthiness of the operators; maintenance requirements of new trucks; and residual value and



remarkability of the trucks. The Cal Cap Program has proven to be an effective tool to lenders in this market, although the program is still limited in its capacity.

- The group generally agreed to work with the SSCAC and the Ports to evaluate the potential and potential effectiveness of an incentive program that targeted the following elements.
 - Each OEM would develop a basic truck spec or two (i.e. standard 3-axle day cab), similar to the first CTP where only a limited number of truck models were made available in the CTP.
 - A monthly payment in the \$,1250 range with a 10-year depreciation to \$0 (recognizing that there is likely no secondary market after service in the port drayage market). Payment includes the capital cost of the truck, and a maintenance plan. Both financing and lease models are eligible
 - Some kind of risk pool would be established for lenders (similar to Cal Cap) in order to facilitate financing of advanced technology trucks to drayage operators.
 - Trade in of old truck.
 - A limited pool of funds would be available to motivate the market to respond.

To achieve such a program, it will be required to “back into” the incentive amount that would allow for these program goals to be achieved. The group agreed to work with the SSCAC and Ports to look more closely at these issues to determine if such a program is feasible.

- Action item: GNA to coordinate with trucking industry participants in the meeting to further evaluate the concept discussed.
- Using the above concept, it will likely still be necessary to motivate the market to replace existing older trucks with new near-zero or zero emission models. This mechanism would require further study.
- The tax on grants provided to drayage operators or leasing companies was noted as being a potentially significant issue. The use of a JPA was noted by the Committee as a potential innovative approach.
- It was also noted by the group that BCOs will hopefully want to hire those with near or near-zero emission trucks as there is a market value for using such clean equipment to move their freight.
- Additional funding and financing options were discussed that port staff and the committee are going to continue to flush out in subsequent meetings.



Attachment A

Meeting Attendees

SSCAC Committee Members	
Adrian Martinez	Earth Justice
Stella Ursua	GRID Alternatives
Jonathan Rosenthal	HPEC
Marnie Primer	FuturePorts
Cynthia Marvin	CARB
Barbara Van	CARB
Matt Miyasato	SCAQMD
Michele Grubbs	PMSA
Joe Lyou	CCA and SCAQMD Governing Board
Louis Dominguez	San Pedro Neighborhood Council
Steve Cadden (by phone)	CRT
Los Angeles Port & City Staff	
Chris Cannon	Port of Los Angeles
David Libatique	Port of Los Angeles
Erick Martell	Port of Los Angeles
Michael Samulon	City of LA, Mayors Office
Long Beach Port & City Staff	
Heather Tomley	Port of Long Beach
Meeting Facilitation Staff	
Erik Neandross	GNA
Lexi Wiley	GNA
Patrick Couch	GNA
Brianna Lawrence	GNA
Meeting Guests	
Vincent Pellecchia	BYD
Greg Roche	Clean Energy
Nidia Ramirez	Clean Energy
Roy Rivera	Inland Kenworth
Matt Smith	Navistar
Andrew Keane	PACCAR Finance
Oswaldo Merino	Pacific Enterprise Bank
Drew Cullen	Penske Truck Leasing
Mike Lewis	Penske Area Sales Manager for Southwest Region



Alison Cochran	Peterbilt Product Planning
Lacy V. Buckingham	Rush Peterbilt
Dale Snowden	Rush Peterbilt - Grants
Ann Holder	Rush Peterbilt
Julie C. Johnson	Ryder
Gina Goodhill	Tesla
Howard Shiebler	VVG/Crossroads
Matt Schrap	VVG/Crossroads



Attachment B

Meeting Agenda

1. POLA / POLB Opening Remarks
2. Review & Finalize May Meeting Summary
3. Review & Finalize 2018 Mission & Vision
4. Review & Finalize System of Systems Recommendation
5. Legislative Update/Funding Prioritization
6. Lunch & Roundtable Guests Arrive
7. Update on 2017 CAAP/CTP
8. Overview of Upcoming Available Funding
9. Discussion
10. Conclusion & Next Steps

Next Meeting:

- a. Recommendation on Fueling Infrastructure for Zero Emission Trucks & CHE
- b. Recommendation on Marine Emission Reduction Strategies



Attachment C

Sustainable Supply Chain Advisory Committee

May Meeting Summary

Date: May 30th | 11 am – 3 pm

Location: In-person at Port of Long Beach and via phone conference

Attendees: Attachment A

Meeting Agenda: Attachment B

Key Discussion Items

(Action items in green)

2. POLA & POLB Opening Remarks

- Mario Cordero opened up the meeting by discussing the collaboration between POLB and marine terminal operators in deploying clean equipment. POLB has also moved forward with the GE Portal pilot project, which provides opportunity for maritime stakeholders to share information. Finding ways to continuously improve freight efficiency through this and other means, such as truck appointment systems, will be an ongoing priority for all stakeholders.
- Mike DiBernardo provided an update on the recent CAAP implementation stakeholder meeting that took place on March 29th. Mike also discussed recent developments with fuel cell technology for off-road equipment.

3. Review March Meeting Summary

- Meeting summary was approved (see Attachment C)

4. Review & Finalize 2018 Mission & Vision

- The group discussed edits to the introduction of the mission and vision document and agreed further revisions would be made and reviewed in advance of the next meeting.
 - Action item: GNA to coordinate edits and recirculate before July meeting.

5. Review Draft System of Systems Recommendation

- The group discussed the draft of the System of Systems document that had been developed and circulated in advance of the meeting. There was general agreement on the overall document and concepts, except for the ability to develop a simple analytical tool to measure efficiency improvements. Given time constraints, it was agreed the group would continue



discussing and revising the document until the next meeting where it can be represented to finalize.

- Action item: GNA to coordinate edits and recirculate before July meeting.

6. SCAQMD Summary of May Board Meeting

- Sarah Rees from the SCAQMD provided a short summary of the May AQMD board meeting related to reducing emissions via facility-based measures from freight facilities, including airports, seaports, railyards, warehouses and development projects, as well as the timelines for future activities and reporting by staff back to the AQMD Governing Board.

7. Discussion on Funding Prioritization

- The group discussed the need to line up funding priorities with State emission reduction goals.
- With many major buckets of funding available include VW Settlement funds, PUC, CEC, and others, the group discussed the need for more stakeholders to come together to illustrate the regional need for funding to be prioritized in and around the ports. The group discussed developing a letter to send to Sacramento signed by all of the committee members (except for CARB), advocating for an increased focus of funds for zero and near-zero equipment in the upcoming budget.
 - Action item: GNA to work with the Committee to draft a letter and send it out over the next couple of weeks.
- The group discussed pathways to transition the San Pedro Bay Port drayage truck fleet to near-zero or better, which is approximately 12,500 vehicles. With programs like Prop 1B, which has replaced 7,000 trucks already, members of the group agreed that 12,500 is not unattainable. Other funding measures are being studied by the AQMD and other stakeholders. Funding for zero emission infrastructure is another large aspect of the plan, as are challenging issues with scrappage and stranded assets.

8. 100 Zero-Emission Truck Project Update & Discussion

- POLA staff provided an update that they are meeting with trucking companies who are interested in running a 10+/- vehicle demonstration of electric trucks to test the typical duty cycle. This approach of having several trucking companies run a handful of trucks each is a likely scenario, rather than finding one company to run 100 vehicles. However, they will need to have an infrastructure plan and operate the vehicles for at least one year.
- The group discussed a need to hold workshops with drayage trucking companies, technology providers, port staff and the utilities to talk through of the issues and variables.
- One of the key issues is still funding the demonstration. The VW Settlement funds could be a good pot of money to fund the vehicles for this project and the recent approval of the SCE filing with the PUC could provide an opportunity for infrastructure funding.
- The group discussed if there is a clear picture of the project costs at this stage to ask for funding, or if there needs to be some additional upfront scoping time to better define the



project budget. It was recommended that an RFI be issued by the Ports to better gather such information from the market.

9. Recommendation on Fueling Infrastructure for Zero Emission Trucks & CHE

- Currently there is little to no infrastructure for heavy-duty electric vehicle charging and hydrogen fueling. While there is a good amount of funding becoming available from the CEC and SCE (as approved by the CPUC), there is no clarity on which type of zero emission fueling infrastructure should be pursued: hydrogen or electric recharging. Both types of infrastructure are tremendously expensive, thus driving the need to ensure that investment decisions are well thought through and will not result in stranded assets. The group discussed and agreed that there needs to be more collaboration among all stakeholders to better understand what kind of investment is needed to support the transition to zero emission trucks and CHE.
- Due to time constraints, there was not a full discussion on this agenda item and it will be revisited at the next meeting.

10. Recommendation on Marine Emission Reduction Strategies

- Due to time constraints, this agenda item will be moved to the next meeting.



Attachment D

San Pedro Bay Ports Sustainable Supply Chain Advisory Committee

Mission & Vision

PURPOSE

The Committee's purpose is to evaluate technologies and make advisory recommendations to both ports' executive directors for moving cargo more efficiently and with zero emission technology everywhere feasible, and near-zero emission technology powered by renewable fuels everywhere else. Using innovation, market transformation, and other tools, the Committee will also be tasked to help the San Pedro Bay Ports achieve and exceed the goals set forth in the State's Sustainable Freight Action Plan while addressing economic and commercial needs.

GOALS

The State's **Sustainable Freight Action Plan** goals of note for the Committee include:

- Improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030
- Deploy more than 100,000 freight vehicles and equipment capable of zero emission operation and maximize near-zero emission freight vehicles and equipment powered by renewable energy by 2030
- Foster future economic growth within the freight and goods movement industry by promoting flexibility, efficiency, investment, and best business practices through State policies and programs that create a positive environment for growing freight volumes, while working with industry to lessen immediate potential negative economic impacts

The San Pedro Bay Ports **Clean Air Action Plan** goals of note for the Committee include:

- Reduce population-weighted residential cancer risk of Port-related DPM emissions by 85% by 2020, as compared with 2005 conditions.
- Reduce port-related emissions by 59 percent for NO_x, 93 percent for SO_x and 77 percent for DPM by 2023, as compared with 2005 conditions.
- Reduce GHGs from port-related sources to 40% below 1990 level by 2030 and 80% below 1990 levels by 2050.

VALUES AND GUIDELINES

As the Committee discusses possible recommendations, the following values and guidelines should be considered:

- Near-term pilots that are scalable, advance zero emissions targets, and help transform markets
- Focus on the largest sources of emissions with near-term and currently available technologies that meet economic and commercial needs
- Cost-effective investments with environmental, economic, and technological sustainability that also drive long-term market transformation



- Protecting human health, especially in port-adjacent communities, by accelerating the deployment of zero and near-zero emission technologies

PRIORITIES FOR 2018

The Committee has identified the following priorities for discussion and possible recommendations in 2018:

- Develop a one-page guiding document that identifies priorities to address and improve the “system of systems” nature of goods movement
- Advocate for local, state and federal funds to supplement private investment and accelerate the deployment of zero and near-zero emission technologies at the ports
- Accelerate technology & efficiency innovation, development and commercial deployments of:
 - On-road trucks (including a 100 zero emission truck demonstration)
 - Container handling equipment
 - Marine
 - Locomotive/rail
- Participate in the development of a multi-port clean tech RFI to accelerate the procurement and deployment of clean technology and vehicles
- Facilitate engagement with the beneficial cargo owners (BCOs) using the San Pedro Bay Ports to explore opportunities to accelerate the use of zero emission technology everywhere feasible, and near-zero emission technology powered by renewable fuels everywhere else.
- Collaborate with the port complex workforce to plan successfully for a zero and near-zero emission technology future



Attachment E

San Pedro Bay Ports Sustainable Supply Chain Advisory Committee

System of Systems Recommendation

The San Pedro Bay Ports SSCAC recognizes that the goods movement system is made up of a series of systems and ultimately, individual freight moves. Congestion and inefficiencies at any point throughout the supply chain will result in immediate incremental costs and emissions at the specific point of friction. Further, because of the connected nature of the goods movement system, each individual impact within the supply chain could potentially have an adverse impact on another part of the goods movement system, and thus result in cascading additional incremental costs and emissions.

The technologies and systems that make up the goods movement system are currently undergoing a radical transformation. New powertrain technologies, fuels, and processes by which to move freight are being developed, tested and deployed on an ongoing basis. The implementation of the San Pedro Bay Ports Clean Air Action Plan will further accelerate such change. While individual systems and goods movement technologies may offer local economic and/or environmental sustainability benefits, it is critical that these new systems and technologies do not have a negative impact on the efficiency of the overall goods movement system.

The SSCAC has a stated goal to work towards solutions and technologies that will "improve freight system efficiency 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030." To ensure progress towards such a goal, every member of the goods movement community must accept responsibility for ensuring that their proposed actions, technology deployments and/or other activities do not have an adverse efficiency impact on any other part of the goods movement system.

The SSCAC therefore recommends that as new fuels, technologies and/or system improvements are considered and proposed, analyses should be completed by the San Pedro Bay Ports and other project stakeholders to:

- a. Identify potential areas of benefit and risk to system efficiency from the proposed action, and identify mitigation measures to address the risks, and,
- b. Evaluate how the proposed action will help contribute to the stated goal of improving freight system efficiency by 25 percent by 2030.



Attachment F

SAN PEDRO BAY PORTS | CLEAN AIR ACTION PLAN

SAN PEDRO BAY PORTS
CLEAN AIR ACTION PLAN

UPDATE ON PROGRESS

Chris Cannon
Director of Environmental Management
Port of Los Angeles

Heather Tomley
Director of Environmental Planning
Port of Long Beach

Truck Accomplishments

-
- Tariff Changes for MY 2014 New Registration – Board approved, starts October 1
 - Truck Rate-Setting Study – underway
 - Other – rate collection mechanism and truck reservation system research underway
 - Early Deployments – partnerships underway to hasten near-term action

Feasibility Assessments



- Consultant team has been selected
- Data collection is underway
- Draft expected in fall

Technology Development



- Grant funded demonstrations of Zero Emission Terminal Equipment – *applications pending, awarded projects underway*
- 50-100 Truck Pilot Deployment – *planning underway*
- Harbor Craft RFP – *contract with vendor approved*
- Vessel At-Berth Technologies RFP – *proposal evaluation underway*
- TAP Call for Projects - *complete*



Attachment G

gna GLADSTEIN, NEANDROSS & ASSOCIATES
CLEAN TRANSPORTATION & ENERGY CONSULTANTS

FUNDING 360

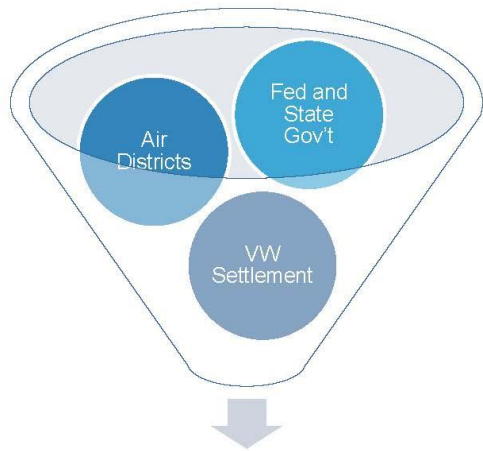
Incentive Opportunities to Support Zero and Near-Zero Emission Port Truck Deployments

Brianna Lawrence
Gladstein, Neandross & Associates

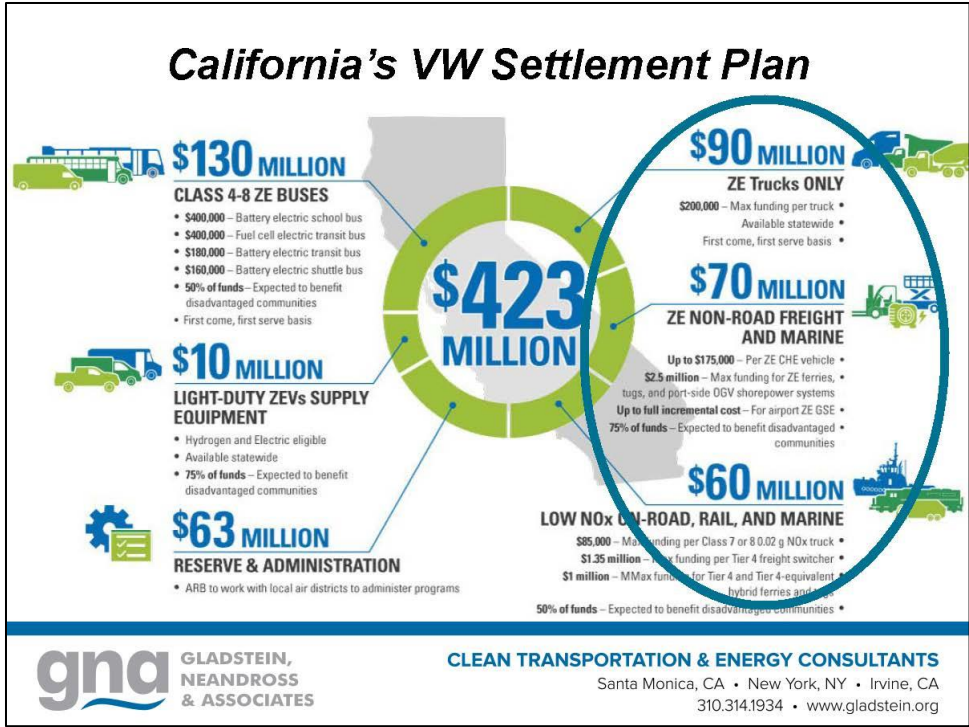
The Funding Landscape

Port truck fleets can avail themselves of funding from multiple sources:

- Federal: EPA's DERA and Targeted Air Shed Grant Programs
- State: HVIP and VW Settlement Programs
- Local: Carl Moyer and Utility Investments



\$1.5 billion in potential funding for port truck projects in next 3 years



Other Key Programs

<p>SCAQMD's Carl Moyer Program</p> <ul style="list-style-type: none"> • Opens annually in summer • Last solicitation: \$75 MM • Max. per vehicle incentive <ul style="list-style-type: none"> – ZE: \$200,000 – NZE: \$100,000 • Requires scrappage • Also funds refueling infrastructure 	<p>EPA's Targeted Air Shed Grant Program</p> <ul style="list-style-type: none"> • Opens annually in spring • Last solicitation: \$20 MM • Does not establish per vehicle incentives • Applicants must propose a comprehensive project, which is then ranked by cost-effectiveness of criteria pollutant reductions
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