



San Pedro Bay Ports Sustainable Supply Chain Advisory Committee *November Meeting Summary*

Date: November 17th, 2021 | 11:00 am – 3:00 pm

Location: Via phone conference

Attachments: Attachment A - Attendees
Attachment B - Meeting Agenda
Attachment C - Presentation - Committee Meeting

Meeting Summary

1. POLA / POLB Opening Remarks
 - a. Pointing to the ongoing supply chain crisis, the ports reported that a total of 107 ships are at anchor, including 84 containers, 8 tankers, 14 general bulk vessels and 1 cruise ship. This population is approximately four times (4x) the population of vessels at berth during normal periods.
 - i. PMSA added that the industry is pursuing a new queuing process to manage ship arrival times in the San Pedro Bay. More details on this program will be available in January 2022.
 - b. The ports noted that the emissions from these vessels and associated land-based operations are expected to be as high or higher than the emissions reported in December 2020 based on port activity levels, and that this is a significant cause of concern. They reported that they are discussing options to measure and mitigate these emissions with the South Coast AQMD.
 - i. EarthJustice expressed concern that the reports and estimates of high fine particulate matter emissions may worsen through the smog season of 2022. Noting the ports' confidence in the expected high marine vessel emissions, the member asked whether a strategy to address these and mitigate the continued effect has been identified.
 - ii. The ports clarified that proposed measures are intended to move cargo off-dock more quickly, and limit the time that cargo spends waiting at anchor, in order to reduce the time that vessels and vehicles spend in the air basin and in idle mode.
 - c. The Port of Long Beach added that the clean truck rate of \$10/TEU proposed for the joint ports' Clean Truck Program (CTP) has been approved and will go into effect in April 2022.
 - d. Referring to the recent passage of the Biden Administration's infrastructure bill, which allocates \$17Bn for diverse projects in various states, POLB emphasized that the ports are aligned on numerous projects that support their shared zero emission (ZE) goals and are working with local agencies to coordinate on strategies to access their fair share of the federal funding, including engaging with state legislators. The ports added that the



bill allows for projects inside and outside of the port complex which will support the Clean Air Action Plan (CAAP).

- i. Responding to a question about a previously-discussed \$5MM loan program for truck and rail projects, the ports clarified that these funds are being used to support re-financing on previously-existing projects. Their application to truck and rail projects is currently under consideration.
 - ii. The Committee members and representatives from the Office of Mayor Garcetti requested that the full array of available funds be presented in such a way that the Committee could support the ports in identifying a strategy to capture the most available resources at the state and federal level.
 - iii. The ports agreed that a deep dive in January 2022 on available funds, strategies to secure them, and opportunities for joint advocacy would be valuable. Mayor Garcetti's office urged the ports to work with GNA to come prepared with specific actions and materials for member review to facilitate prompt action by the group. *GNA and the ports agreed to incorporate this request into preparations for the next meeting's agenda.*
 - iv. The Committee observed that responsiveness at the port and state level to previous recommendations on infrastructure, including funding, has been minimal. Mayor Garcetti's office observed that Letters of Support - a mechanism that the Committee has used to communicate priorities and needs with the State legislature - have limited reach, and, that the relevance of the Committee's work has never been more obvious. The Mayor's office recommended that key decision makers be invited to a series of meetings in 2022 in order to promote the Committee's visibility. *GNA took this note to identify potential guests to engage in 2022.*
2. Review & Approve September Meeting Summary
 - a. Two typos were corrected and the meeting minutes were approved.
3. Presentation of SPBP 2020 Emissions Inventory (POLA/POLB)
 - a. POLA staff presented a summary of the 2020 emissions inventory for the SPBP complex (**Attachment C**). The growing size of container ships and improvements in port operating efficiency that occurred in the 2005 - 2020 period were discussed as reasons for the simultaneous 22% increase in TEUs and 31% decrease in containership arrivals during that time frame. The joint ports have beat their 2023 emission reduction goals for DPM, NOx and SOx, but have not yet achieved their target reduction in GHG emissions. The largest decrease for NOx since 2005 was recorded in 2005 (down 63%); meanwhile, GHGs are down 11% since 2005. Compared to 2018, NOx reductions were 6%; SOx reductions were 3%; DPM reductions were 5%; and GHG emissions increased 3%. During this same period, TEU volumes increased 2%. The group discussed the general trend of a significant pause in total port activity in the first half of 2020 due to the global COVID-19 pandemic, and the impact of a later spike in activity in 2020 which has turned out to be the new standard level of activity through 2021 and into 2022. The ports added that December 2020 is currently considered as a reasonable proxy for the monthly emissions in 2021, although actual data won't be available until late Q1 or Q2 of 2022.



- i. Responding to a question about the source of the GHG emissions increase, the Ports shared that fuel consumption rates by heavy duty CHE and trucks during this time period suggest that these equipment categories were significant, but not exclusive, contributors.
- b. The ports noted that in addition to ongoing compliance with CARB regulations and implementation of clean technology programs under the TAP and including the ship incentive and clean truck programs, they are finalizing the 2021 update to their Technology Feasibility Assessment. The draft report will be published for public comment by the end of 2021.
- c. CCA asked for further clarification on the actual period of data collection, and whether the reported reductions can be attributed to specific measures under the CAAP. CCA observed that the ports at Oakland and Hueneme, in California, recently reported reductions similar to the SPBP, suggesting that the ports' CAAP may be inappropriately credited for the reductions. The ports explained that the emissions inventories are based on actual data collected from January 1st to December 31st in a given calendar year, and that it is not possible to attribute emission reductions to any specific measure and that all programs work in concert to achieve collective gains. The ports added that many programs initiated in the CAAP's early stages led to regulatory actions which now affect other ports in the state; the SPBP terminals also saw a faster transition to 2010 or newer models of drayage trucks as a result of these programs. Finally, the regulations provide legal justification to activities that the ports are doing under the CAAP, reducing the risk of "early adopter" status.
 - i. POLB staff added that the ports do push back on state programs that don't add value to activities that they are already doing.
 - ii. PMSA emphasized that the CAAP has been instrumental in raising the standard of environmental proactivity and compliance standards.
- d. EarthJustice pointed to a [November 9, 2021 letter from the joint ports to CARB](#) regarding the proposed amendments to the Commercial Harbor Craft regulation, which includes a request to extend the compliance schedule due to poor alignment with the harbor craft vessel lifespans, funding resources and schedules, and industry operations. Noting the confidence that the December 2020 emissions are indicative of all months in 2021, EarthJustice observed that the proposed vessel speed reduction (VSR) program modifications are insufficient and asked whether other measures can be introduced now. POLA acknowledged the concern and reiterated that measures are being considered with the support of legislators in Washington, D.C. POLB emphasized that clearing the backlog is key, and the ports are dedicating resources to focus on this challenge to remove excess emission sources. CCA responded that these are valuable measures, but more is needed to handle backlog as well as the near- and long- term environmental impact of this congestion period. Additionally, the adopted measures need to be examined for their own potential environmental impacts.
- e. Noting the lack of effort to replace the approximately 6,500 MY2007-2009 trucks with ultra low NOx trucks over the last 5 years, CCA noted that these trucks will now be replaced with used diesel trucks, and as a result a significant opportunity for emission reductions will be missed and replaced with assured future emissions from these diesel trucks. CCA asked whether the amount of lost emission reductions associated with this market shift has been calculated. The Ports acknowledged that the point is valuable,



noted current market problems within the truck supply chain, and specified that they do not have data on the emissions impact.

- f. Pointing to some mixed signals from port staff, CCA requested an update on the ports' discussions with the South Coast AQMD about an MOU. The Ports advised that they are still on a six-month track to develop this MOU and that the prescribed four-month evaluation will be taking place in December 2021. A Marine Committee meeting will be held on November 19th for those would like a more detailed update, as well.
 - g. ILWU asked whether emissions data was available by geographic area in the SPBP and South Coast air basin, citing research that indicates that some of the poor air quality currently reported in this area is from the significant manufacturing activity in China, and the transporting behavior of the westerly winds over the Pacific. ILWU noted that this is not the primary cause of the current problematic conditions, but that it may be a factor to acknowledge.
4. Update on CARB Low NOx Omnibus rulemaking
- a. CARB staff reported that this regulation has been submitted to the Office of Administrative Law (OAL) and that the agency expects that its final review will be complete by the end of 2021. A proposal for a similar rule at the federal level is concurrently being drafted and will soon be submitted to the federal Office of Management and Budget (OMB), although the process has been slow thus far and the Notice of Proposed Rulemaking (NOPR) has yet to be formally issued. Ongoing discussion between CARB and the federal Environmental Protection Agency (EPA) aim to get EPA to harmonize with California's low NOx standards. CARB noted that federal rulemaking lead times indicate that MY2027 would be the earliest effective date of a federal low NOx rule.
 - b. CARB added that the proposed Heavy Duty Inspection and Maintenance Program is being reviewed by the Board on December 9, 2021. The program will consist of two phases, and take several years to implement. Under Phase 1, remote sensors (aka the "PEAKS Network") will identify high emitting trucks, allowing CARB to request data to demonstrate that the truck meets state emissions and maintenance standards on a case-by-case basis. Under Phase 2, a statewide database will be used to track and enforce compliance of in-state and out-of-state trucks with the inspection and maintenance standard. Measures include maintaining compliance certifications in order to operate, and tasking facilities - such as terminals and warehouses receive trucking services - as enforcement agents.
 - i. The Committee advised that the database be integrated with the Port Drayage Truck Registry (PDTR), and that the system not be introduced until such a database is seamlessly integrated into all appropriate systems in the state including the DMV. Members noted that if this can't be accomplished, and facilities are required to use separate systems to track compliance, then the effect on goods movement will be chaotic. CARB recognized these comments and noted that it is actively working with ports and other stakeholders to blend the new system with existing vetting processes and platforms. The periodic reporting requirement would not go into effect before January 2024, and that the agency is treating IT system readiness as a prerequisite to implementation.



of maintenance facilities. Waste Management and UPS – both of which are Teamster operations – were noted as two of the largest users of heavy-duty natural gas trucks, with more than 20,000 in operation between the two companies, which are supported by more than 200 fueling stations across North America. The Teamsters declined to provide material describing experiences and best practices to support the Deep Dive.

ii. CHE

- The workforce operating CHE is more clearly defined compared to the drayage trucking workforce, due to the use of ILWU members in these off-road applications. This creates a more defined foundation for identifying and meeting training needs.
- ILWU updated the Committee that it has been working closely with partner Pacific Maritime Association (PMA) to develop a dedicated training facility and program to upskill maintenance and repair personnel for service with new and electrified technology. Observing that premier ports globally have dedicated training facilities, ILWU stated that the partnership is working to identify a site of approximately 30 acres to host member trainings; the site may be rented out to other organizations when not in use.
- ILWU noted that the cost of building out and equipping this facility is high and requested the Committee's support to access funds. [GNA noted this request for consideration in 2022.](#)

c. Next Generation of Labor Force

i. Port Programming (**Attachment C**)

- POLB presented on its past and present experience partnering with local educational organizations including community colleges to create direct-to-industry pipelines for local youth as they approach their careers. One in five jobs in Long Beach are port-connected, and a recently-announced partnership with Jordan High School, called the Academy of Advance Manufacturing, Construction and Engineering (ACE Academy), will offer scholarships and other resources to support internships, high school and college educational programs that focus on port careers including in replacement for a traditional four-year college program. ACE Academy is also expanding educational programs in the STEM area to best meet the local demand for engineering education and job placement.

ii. Green Workforce Coalition (**Attachment C**)

- Grid Alternatives presented on its history working with local community and educational programs, and highlighted its latest initiative, the Green Workforce Coalition for All. This initiative has the goal of assessing existing workforce development programs for green jobs, identifying gaps, and creating bridges between the local upcoming workforce and the industry. The initiative also identifies funding sources for individual and organizational needs.



- The initiative attends to workforce development in a larger arena than port jobs by defining its focus as “city resilience”. Accordingly, the initiative connects workforce to demand for residential and commercial solar installation, residential EV charging, as well as larger community transformation projects.
- Grid Alternatives noted that the immediate need to expand EV charging infrastructure represents an opportunity for expanded on-the-job training, and that the initiative is leveraging this to develop a learn-by-doing model. The initiative also connect pre-apprenticeship programs for labor unions in an effort to create a scalable, sustainable green utility worker training program.
- As the Green Workforce Coalition moves forward in 2022, it will be leveraging the workforce programs from signing coalition members. Committee members were invited to reach out to Grid Alternatives for more information about supporting this work.

d. Funding Workforce Development

i. IDEAL ZEV Program (California Energy Commission (CEC)) (**Attachment C**)

- Larry Rillera provided context on the CEC’s Advanced Transportation & Logistics program, focusing on the upcoming funding opportunities for commercial and freight workforce training on ZE equipment. The CEC is supporting two programs for this targeted audience:
 - a. The CA Sustainable Freight Workforce pilot is a research-based partnership with CA State University - Long Beach (CSULB).
 - b. The ZE Drayage Truck & Infrastructure project is jointly funded with CARB and aims to connect deployments funded by state programs such as HVIP with labor training resources. The project is supported by approximately \$7MM and will be managed under the CEC’s Fuels and Transportation Division. Project awards will be made in amounts up to \$500K for projects tailored to battery and fuel cell electric technologies. Applications for this program are due in early December 2021, and awards are expected in Q1 2022.

e. Upcoming Research (2022-2024)

i. AB 639 (CA Workforce Development Board (CWDB))

- Shrayas Jatkar updated the Committee on the status of research initiatives legislated in 2020 by AB 639, which are currently awaiting final funding approval. This research, conducted in partnership with UCLA, will examine the impact of automation at seaports on local workforce and will recommend mitigating measures that can be deployed to support a transition to ZE operations. In parallel, an industry panel will be formed by the CA Labor Secretary to examine these relationships and the research results. The panel will include two representatives from the ports and overseen by UCLA Labor Center. The panel will first convene in January, and research will be conducted in coordination with CARB to ensure alignment with relevant projects. The final report from UCLA is due out in 2023.



- a. ILWU noted that the one terminal that has automated in the SPBP complex can only stack two containers high, slowing operations. ILWU hoped that a deep dive on impacts like this can be done in the report, and that consideration can be given to the issues that workers are trying to address.
 - ii. CSULB
 - Tyler Reeb from CSULB addressed the Committee about its partnership with CITT and CARB to study the reasons why marine terminals automate. The research will consider multiple levels of automation and will not assume that partial automation is not by definition a predictor of full automation.
 - The study leaders are currently reviewing research questions and defining ranking systems that will allow a quantitative approach to the most inputs. The group is also convening a team of economists to inform a review of automation's impacts on efficiency and economic competitiveness among Southern California ports.
 - Tyler emphasized that steps are being taken to ensure that the research is conducted in a disciplined manner and that all relevant stakeholder groups provide input. Preliminary results are expected to be ready for public discussion in 2022. Responding to a question, Tyler specified that the advisory board will be made up of port directors, labor representatives and terminal operators.
 - a. ILWU noted that a little automation can enhance production, sometimes more successfully than a lot of automation. An example was provided from the London Gateway project, which found that the automated straddle carriers could not be programmed to make decisions as quickly as human drivers.
 - b. Tyler noted that subsequent workforce development is an important area of study, and that there may be an efficiency opportunity in reducing the frequency of labor negotiations by introducing more secure and stable employment and operating environment with the help of technology. He hopes that disciplined research, like the upcoming study, can support discussions among labor stakeholders that achieve long-term agreements.
 - c. HTA recommended that if the study examines the drayage trucking industry, it should not include developers of autonomous technology as advisors on the role that this technology can play in marine terminal environment. HTA added that vehicle OEMs should be engaged in research processes like this one, and the CEC's IDEAL ZEV program.
- f. Discussion
 - i. GNA pointed to the role that workforce training played in the difficult introduction of the 9L natural gas engine several years earlier with the first round of the Clean Truck Program, and asked what training solutions could be provided at the port level to avoid the same issues with ZE technology.



- The group discussed that OEMs are currently providing direct-to-customer training but that this is traditionally only available to large customers for whom OEMs dedicate personnel. This approach will be difficult to implement within the port for a number of reasons, not the least of which is that delivering such training to drayage truck fleets and operators is challenging given the typically very small business models represented in the ports' drayage market. Unlike large companies like WM or UPS which employ trainers that can be trained by OEMs before replicating the training internally with other company personnel, many drayage operators do not have such business models and human resources. Dealerships, however, are one meaningful conduit to those smaller businesses. The group noted that training for dealerships is necessary for establishing a support network for the smaller fleets and independent owner/operators.
- ii. Tyler Reeb asked if there are expectations of one ZE technology – battery electric or fuel cell – becoming more available, or being adopted more widely, than the other.
 - HTA advised that its members believe that this is a moving target, with each technology offering different trade-offs. The regulatory environment also creates significant uncertainty for those trying to make a sound business decision as battery technologies are more readily available in the near term, but less appropriate for long term operational needs. Fuel cell technology is expected to be more commercially viable but less readily available in the near term including during the period when several ZE-promoting regulations come into effect.
 - South Coast AQMD added that its experience demonstrating fuel cell vehicles to date suggests that this technology is approximately five years away from full commercialization. Additionally, the opportunities for costs to drop are not direct matches between the two technologies. For example, the price of a carbon fiber hydrogen storage tank is not subject to significant market forces, while the price of batteries is likely to fall with time. In the meantime, there is an opportunity to work on the fueling infrastructure gap.
 - The Committee observed that the 2023 ZE standard for the PDTR complicates fleet decisions during these intervening five years.
 - ILWU added that increasing congestion at the port docks, even in a business-as-usual scenario, introduces more expensive risks to drayage trucks.

7. Conclusion & Next Steps

a. SSCAC Priority Focus Areas in 2022

- i. GNA presented a summary list of topics that the members had recommended for the 2022 agenda (**Attachment C**). The group reiterated its previously expressed hope that the port directors and mayors would be able to engage more directly with the Committee in 2022, citing the numerous requests to this



effect that have been made since 2019. The group also considered that harbor commissioners may provide valuable input in future meetings.

- ii. GNA also shared some suggested steps for the Committee to improve its effectiveness going forward (**Attachment C**). The group agreed to review this material and provide comments as needed. *GNA agreed to work with the ports to develop an initial agenda to share at the next meeting.*
- b. 2022 Proposed Meeting Schedule: Jan. 26th; Mar. 16th; May 18th; July 20th; Sept. 21st; Nov. 16th
- i. *GNA invited members to send any calendar conflicts by email so that it can confirm the schedule for 2022. GNA will develop this schedule by the end of the year.*
 - ii. HTA requested that the CEC, CARB and Ports offer an update on their Project 800 program at the January meeting. *GNA will follow up with these groups in January.*



Attachment A
List of Meeting Participants

SSCAC Committee Members	
Erin Gardner	FuturePorts
Michele Grubbs	PMSA
Thomas Jelenic	PMSA
Matt Miyasato	South Coast AQMD
Richard Boyd	CARB
Chris Chavez	CCA
Stella Ursua	Grid Alternatives
Ray Familathe	ILWU-13
Adrian Martinez	EarthJustice
Louis Dominguez	San Pedro Neighborhood Association
Matt Schrap	Harbor Trucking Association
Los Angeles Port & City Staff	
Christine Batikian	Port of Los Angeles
Chris Cannon	Port of Los Angeles
Tim DeMoss	Port of Los Angeles
Erick Martell	Port of Los Angeles
Lauren Faber O'Connor	Mayor Eric Garcetti's Office
Teresa Pisano	Port of Los Angeles
Long Beach Port & City Staff	
Heather Tomley	Port of Long Beach
Rick Cameron	Port of Long Beach
Wei Chi	Port of Long Beach
Morgan Caswell	Port of Long Beach
Alejandra Guitron	Port of Long Beach
Meeting Facilitation Staff	
Erik Neandross	GNA
Eleanor Johnstone	GNA
Patrick Couch	GNA
Christopher Davis	GNA
Other Stakeholders	
Adewale OgunBadejo	Grid Alternatives
Kim Heroy-Rogalski	CARB
Larry Rilliera	CA Energy Commission
Michelle Vater	CA Energy Commission



Shrayas Jatkar	California Workforce Development Board
Tyler Reeb	CSU Long Beach



Attachment B

Meeting Agenda

1. Port Opening Remarks
2. Review & Approve September Meeting Summary
3. Presentation of SPBP 2020 Emissions Inventory (POLA/POLB)
4. Update on CARB Low NOx Omnibus rulemaking
5. Review & Approve Draft Recommendations
 - a. CHE Infrastructure Funding
 - b. Drayage Truck Infrastructure Standards
 - c. Utility Use of LCFS Holdback Funds
 - d. AHJ Permitting Efficiency & Responsiveness
6. Deep Dive - Workforce Development
 - a. Existing Labor Force
 - i. Trucks
 - ii. CHE
 - b. Next Generation of Labor Force
 - i. Port Programming
 - ii. Green Workforce Coalition
 - c. Funding Workforce Development
 - i. IDEAL ZEV Program (CEC)
 - d. Upcoming Research (2022-2024)
 - i. AB 639
 - ii. CSULB
 - e. Discussion
7. Conclusion & Next Steps
 - a. SSCAC Priority Focus Areas in 2022
 - b. 2022 Proposed Meeting Schedule: Jan. 26th; Mar. 16th; May 18th; July 20th; Sept. 21st; Nov. 16th



Attachment C
Presentation - Committee Meeting

San Pedro Bay Ports

Sustainable Supply Chain Advisory
Committee Meeting

November 17th, 2021



Agenda

1. Port Opening Remarks
2. Review & Approve September Meeting Summary
3. Presentation of SPBP 2020 Emissions Inventory (POLA/POLB)
4. Update on CARB Low NOx Omnibus Rulemaking
5. Review & Approve Draft Recommendations
 1. CHE Infrastructure Funding
 2. Drayage Truck Infrastructure Standards
 3. Utility Use of LCFS Holdback Funds
 4. AHJ Permitting Efficiency & Responsiveness
6. Deep Dive – Workforce Development
 1. Existing Labor Force
 - i. Trucks
 1. CHE
 2. Next Generation of Labor Force
 - i. Port Programming
 - ii. Green Workforce Coalition
 3. Funding Workforce Development
 - i. IDEAL ZEV Program (CEC)
 4. Upcoming Research (2022-2024)
 - i. AB 639: CA Workforce Development Board
 - ii. CA State University – Long Beach
 5. Discussion
7. Conclusion & Next Steps
 1. SSCAC Priority Focus Areas in 2022
 2. 2022 Proposed Meeting Schedule: Jan. 26th ; Mar. 16th; May 18th; July 20th; Sept. 21st; Nov. 16th

1. Port Opening Remarks



2. Review & Approve September Meeting Summary

2. Presentation of SPBP 2020 Emissions Inventory

The background of the slide is a wide-angle photograph of a busy port terminal. In the foreground and middle ground, there are numerous stacks of colorful shipping containers in shades of blue, red, yellow, and green. Several large blue gantry cranes are visible, used for moving containers. In the background, a large bridge spans across the water, and the city skyline is visible under a clear sky.

SAN PEDRO BAY PORTS
CLEAN AIR ACTION PLAN

**2020 San Pedro Bay Ports
Air Emissions Inventory Results**

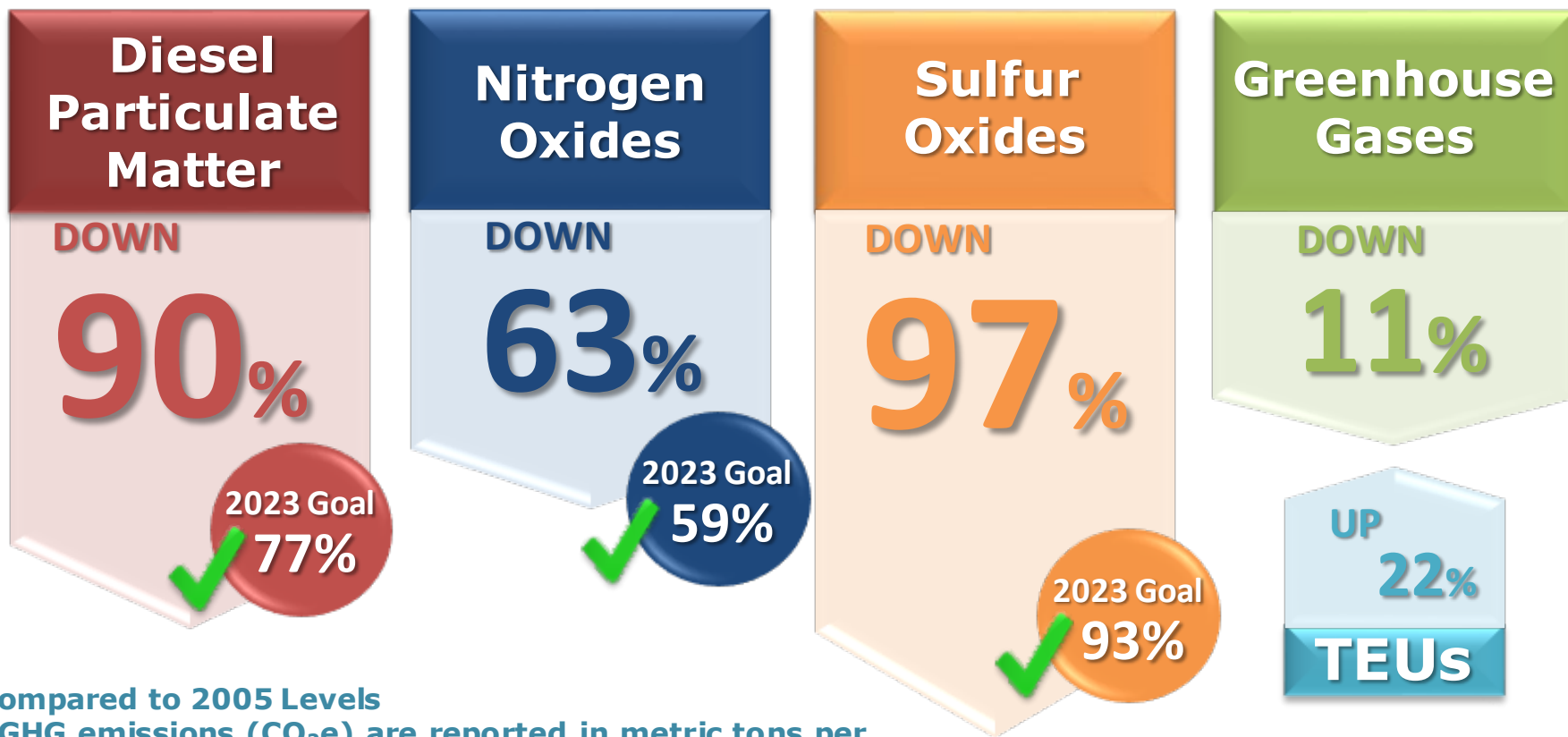


Container Throughput & Vessel Call Comparison

	2005 vs. 2020	2019 vs. 2020
Container Throughput (TEUs)	↑ 22%	↑ 2%
Containers (TEUs) per call	↑ 76%	↑ 2%
Containership Arrivals	↓ 31%	No change



SPBP 2020 Air Emissions Reductions

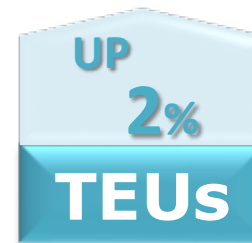
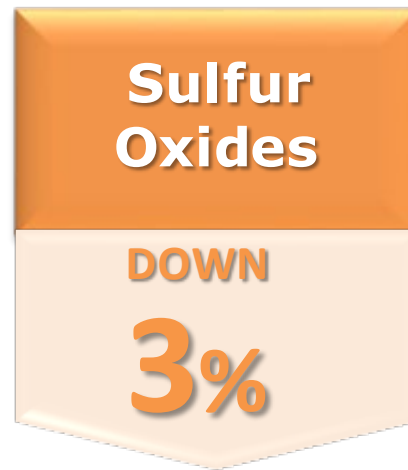
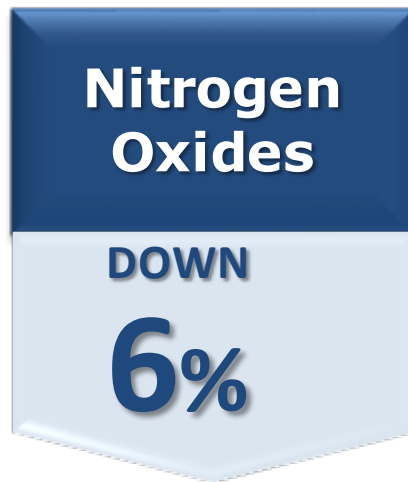
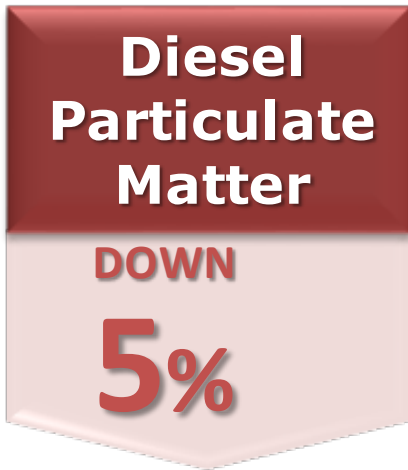


*Compared to 2005 Levels

**GHG emissions (CO₂e) are reported in metric tons per year; all other pollutants are shown in tons per year.



SPBP 2020 Air Emissions Reductions vs. 2019



*Compared to 2018 Levels

**GHG emissions (CO₂e) are reported in metric tons per year; all other pollutants are shown in tons per year.

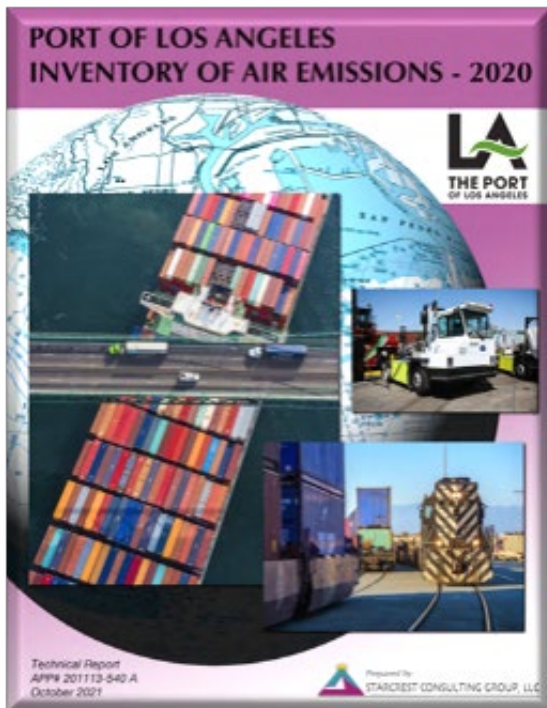


Moving Forward

- State and Federal Regulations
- Feasibility Assessments
- Technology Advancement
- Ship Incentive Programs
- Clean Truck Fund Rate



2020 Air Emissions Inventories



<https://www.portoflosangeles.org/environment/air-quality/air-emissions-inventory>



<https://www.polb.com/environment/air/#emissions-inventory>

An aerial photograph of a large port and city area. The image shows a complex network of waterways, docks, and industrial facilities. In the foreground, there is a large marina filled with numerous boats. The city extends into the background, with a dense urban landscape. The sky is blue with some clouds. A semi-transparent teal banner is overlaid across the center of the image, containing the text "Thank you!".

Thank you!

4. Update on CARB Low NOx Omnibus Rulemaking

5. Review & Approve Draft Recommendations

1. CHE Infrastructure Funding
2. Drayage Truck Infrastructure Standards
3. Utility Use of LCFS Holdback Funds
4. AHJ Permitting Efficiency & Responsiveness

6. Deep Dive – Workforce Development

1. Existing Labor Force
 - i. Trucks
 - ii. CHE

2. Next Generation of Labor Force
 - i. Port Programming
 - ii. Green Workforce Coalition

3. Funding Workforce Development
 - i. IDEAL ZEV Program (CEC)

4. Upcoming Research (2022-2024)
 - i. AB 639: CA Workforce Development Board
 - ii. CA State University – Long Beach

5. Discussion



Port of
LONG BEACH
THE PORT OF CHOICE

ACE Academy

Alejandra Guitron

SR. PORT COMMUNICATIONS SPECIALIST

November 17, 2021

POLB Strategic Plan Objectives

- Expand community access to current and future job opportunities by building on our education and workforce development initiatives
- Explore opportunities to enhance equity, access and diversity in education and workforce development through enhanced scholarship and internship support

LONG BEACH COLLEGE PROMISE



PORT-CONNECTED JOBS

51,000 JOBS – 1 IN 5 IN LONG BEACH

575,000 JOBS IN 5-COUNTY REGION

705,000 IN CALIFORNIA

2.6 MILLION IN U.S.

A group of approximately 15 workers, mostly women, are on the deck of a ship. They are wearing orange safety vests, blue backpacks, and hard hats in various colors (white, green, yellow). They are walking and talking in a line across the deck. In the background, there is a large orange lifeboat, a white crane, and several white shipping containers. The ship's name 'Matson' is visible on the railing. The sky is blue with some clouds. The text 'WORKFORCE IS CHANGING' is overlaid in white on a semi-transparent dark grey background.

WORKFORCE IS CHANGING



TRAINING TOMORROW'S WORKFORCE

ACADEMY OF GLOBAL LOGISTICS



A photograph of a university sign. The sign is a long, low, light-colored rectangular block with the text "CALIFORNIA STATE UNIVERSITY" on the top line and "LONG BEACH" on the bottom line. The sign is set in a grassy area with some small purple and yellow flowers. In the background, there are several tall palm trees and a large blue building with a triangular roof. The sky is blue with some light clouds. A semi-transparent dark blue banner is overlaid across the middle of the image, containing the text "CENTER FOR INTERNATIONAL TRADE AND TRANSPORTATION" in white, bold, sans-serif capital letters.

CENTER FOR INTERNATIONAL
TRADE AND TRANSPORTATION

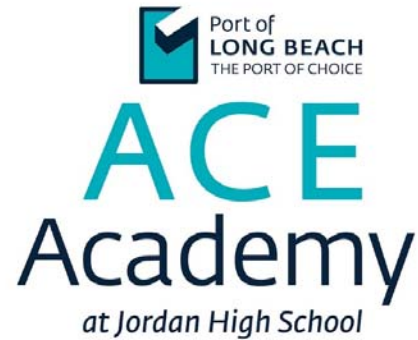
CALIFORNIA STATE UNIVERSITY
LONG BEACH

MARITIME CENTER OF EXCELLENCE

- Partnership with Long Beach City College
- Industry-recognized certifications
- Short-term courses led by industry professionals
- Classes are offered at the Pacific Coast campus



- ACADEMY OF ADVANCED MANUFACTURING, CONSTRUCTION, AND ENGINEERING, LAUNCHED THIS ACADEMIC YEAR
- EXPANSION OF EDUCATION PROGRAMS TO A STEM PATHWAY
- SERVICES NORTH LONG BEACH WITH OVER 470 STUDENTS



PROJECT LEAD THE WAY

9TH GRADE - INTRODUCTION TO DESIGN

10TH GRADE - COMPUTER INTEGRATED MANUFACTURING

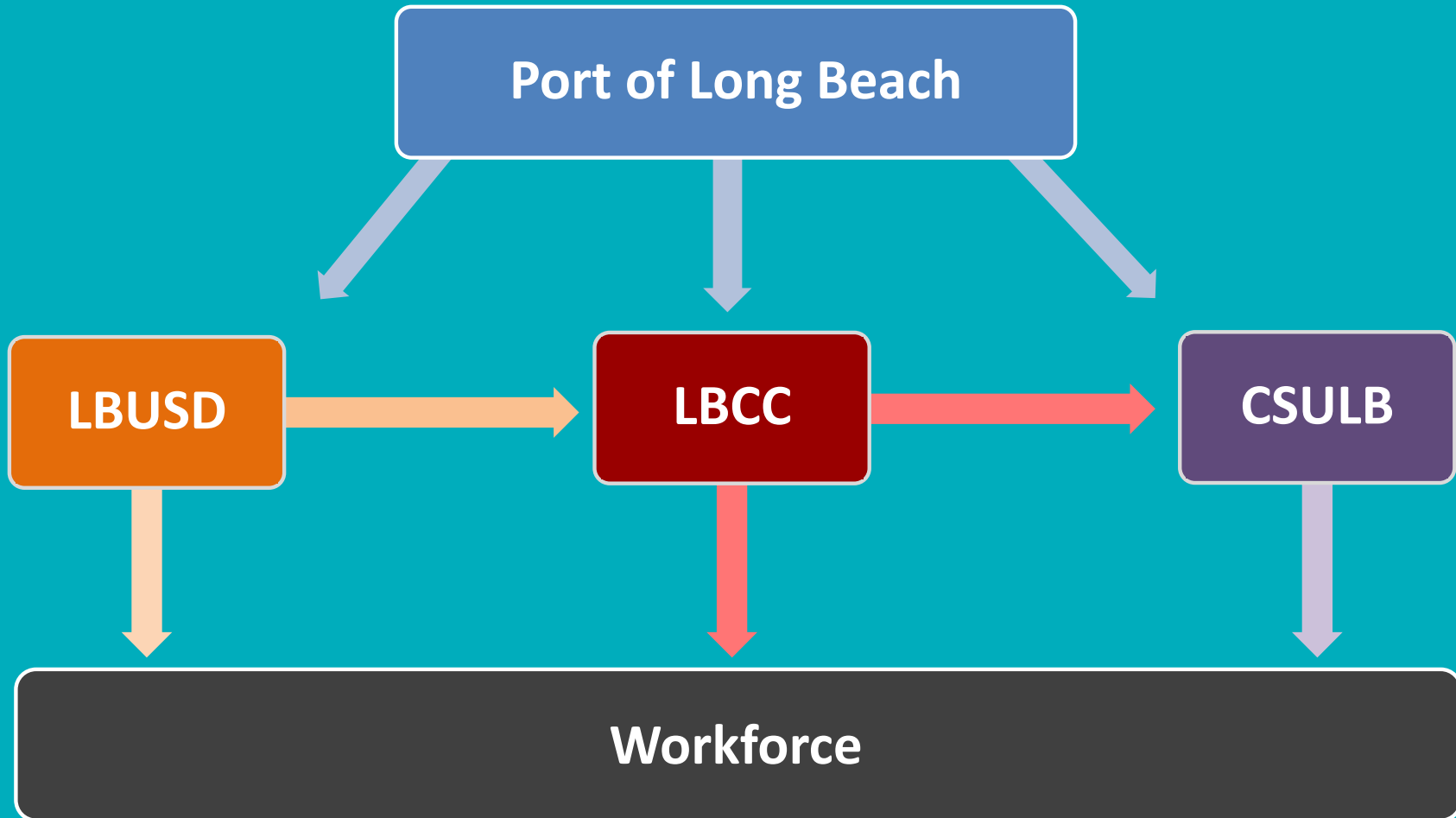
11TH GRADE - CIVIL ENGINEERING AND ARCHITECTURE (CEA) OR
PRINCIPLES OF ENGINEERING

12TH GRADE - ENGINEERING DESIGN AND DEVELOPMENT



ACE SCHOLARSHIP, ADVISORY BOARD SUPPORT, EXPERIENTIAL LEARNING, EVENTS, & SPEAKERS

WORKFORCE DEVELOPMENT PIPELINE





SCHOLARSHIP PROGRAM

SUMMER HIGH SCHOOL INTERNSHIPS



SUMMER HIGH SCHOOL INTERNSHIPS



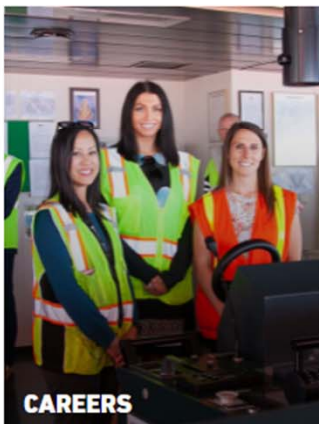
- Six-week program offers real work experience and mentoring.
- 25 juniors and seniors from the LBUSD service area selected and placed in various harbor divisions
- Interns complete Personal Enrichment Training
- Focus on career exploration and professional development

EDUCATION

Explore maritime industry careers, find out about scholarships and internships, and learn about the Port's local education partnerships.

EXPLORE EDUCATION RESOURCES

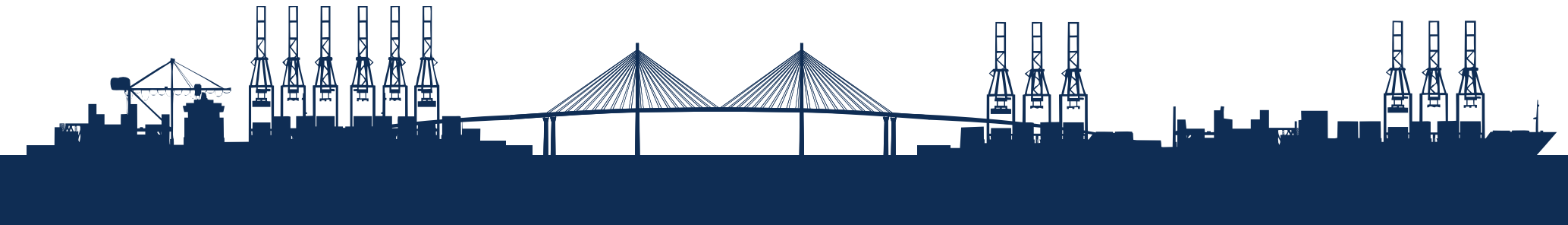
Find a career, apply for an internship or scholarship, and find out more about the Port's educational programs.





Port of
LONG BEACH
THE PORT OF CHOICE

QUESTIONS?





For Your Consideration: A Green Workforce Coalition for All

November 17, 2021

Stella Ursua & Adewale Ogunbadejo

SSCAC Presentation 11-19-21



A Green Workforce Coalition?

Pilot in Long Beach with local partners, including mission-aligned cbos and nonprofits, to create an ongoing training pipeline that will educate and prepare residents for training/careers in emerging green technology and clean energy spaces, and is connected to union pre-apprenticeship programs.

Connect workforce organizations to upcoming project opportunities:

- LB Climate Action & Adaptation Plan (CAAP)**
- Electrification of the POLB/POLA**
- Residential Solar Accelerator program and**
- Renewable energy, clean mobility & energy efficiency projects & goals for the city of Long Beach**



Our Goals:

- Create awareness and identify opportunities for local workforce programs and local trainees
- Identify & catalog workforce programs from all partner organizations...identify gaps/opportunities
- Partner with local community colleges and workforce boards to offer Green Workforce training programs
- Create a scalable & sustainable Green Utility worker phased or leveled training programs
- Develop long-term, well defined training pipeline to connect local workforce to union pre-apprenticeship & apprenticeship programs as well as public/private workforce opportunities at local utilities
- Determine local unions for GWC engagement and partnerships; present workforce pipeline opportunities
- Engage city departments to identify upcoming project opportunities
- Identify grants and additional funding sources to pilot 2-year workforce pipeline program
- Conduct ongoing evaluation process - ensure key skills and effective workforce experience are developed

Imagine a pool of diverse & aspiring local candidates trained for...

The electrification of
the Ports of Long
Beach and Los Angeles.

Addressing climate
emergencies in their
communities.

Clean energy and
transportation.

Working in clean tech
industries to lessen
climate change impacts
on underserved
communities.

Prepared for pre-
apprenticeship
opportunities with
local unions.

Local Workforce Impact Examples



In the past 34-years, CCLB has trained and educated more than 10,500 youth and young adults, including more than 1,150 high school drop-outs that earned a high school diploma via CCLB's charter high school. CCLB has completed thousands of conservation and environmental work projects throughout southeastern LA County including Catalina Island, the Angeles National Forest and the Lower LA River.

GRID Alternatives: Since 2004, worked with 80+ job partners, 4200 individuals received "on-the-roof" training. Approximately 70-80 people placed in full time positions each year.





Our
Workforce
partners... at
work:
CCLB
WINTER
H4H
GRID
Alternatives



Creating equitable workforce opportunities

Greenlining defines racial equity as the practice of transforming the behaviors, institutions and systems that disproportionately harm marginalized communities.

Equity means increasing access to power, redistributing and providing additional resources, and eliminating barriers to opportunity, in order to empower low-income communities of color to thrive and reach their full potential.

At GRID, we believe that a successful transition to clean energy must include everyone. And it will include our partner organizations.



JF1



Workforce Development

Connecting people that need good jobs with an industry that needs good people.

Slide 9

JF1

How about for each of these two sections, Workforce and Solar Installation, you have a section breaker slide that is full-screen and bigger text. So here you could make the image full screen and run the text across it. Kate could help. And make a similar one for Solar Installation

Julian Foley, 10/7/2016

Our Workforce Efforts...local community members learning:

1. **Making Cities More Resilient**
2. **Transformative Climate Communities Grant projects**
3. **Solar installs for Residential and Affordable Housing projects**
4. **Clean Mobility & EV Charging Installation**
5. **Multifamily Affordable Housing projects (solar, battery storage & EV charging stations)**
6. **“Resilience Center” projects across LA County.**



Special Programs & Initiatives



Women In Solar



Troops to Solar



Reentry Initiative

Educational Programs



Solar Futures



Collegiate Network & Solar Spring Break

The 1st Charging Station Install...

**Solar Install
Volunteers?**





Resiliency Centers

- Solar combined with battery storage to provide back-up power during blackout events
- Provide at-risk populations refuge with access to critical loads during 100+ degree days



Transformative Climate Communities





Green Together is an exceptionally qualified collaborative team of experts in each topic area, building on two decades of planning and visioning – ready to execute across multiple strategies.



Focus Area 1 Clean Energy Economy

The integrated Green Together Resource Center is a “one-stop-shop” for clean energy upgrades where outreach workers will engage the community on:

- Solar energy system installations on (175) single-family homes
- Cool roof installations (35 homes)
- FiT energy system installations on (8-11) multi-family complexes
- Opportunities for workforce development and training (150+ residents trained)
- Community resiliency center

Solar Installation



Low-Income Community Solar

Who Benefits?

- Low-income households (not just renters or homeowners)
- Local utilities

What GRID Does:

- Project development
- Installation with warranty
- Job training
- Community engagement



Efforts with Local Tribes

Who Benefits?

- Tribal partners
- Tribal colleges

What GRID Does:

- Job training
- Community engagement
- Joint fundraising



Why a Green Workforce Coalition for local residents, cities & partner organizations?

Create an ongoing training pipeline that:

- Connects to union pre-apprenticeship programs
- Educates and prepares residents for training/careers in emerging green technology and clean energy spaces
- Create a scalable & sustainable Green Utility worker phased or leveled training programs.
- Builds required knowledge, relevant skill sets and hands-on project experience in related industries
- Works with local community colleges and workforce boards to create Green Workforce training programs





We invest in our community



We invest in workforce development

A Green Workforce Coalition is invested in an innovative, collaborative approach to:

- Address Climate change
- The “green divide”
- Environmental justice
- Solar education & training
- Equitable workforce development & job creation
- Community education & resilience



Next Steps:

Compiling current workforce programs for each coalition member (CCLB, GRID, WINTER, LA Jobs Corps & Habitat) per request of Pacific Gateway; identifying green job-related training gaps for assistance from workforce network.

Connect with potential labor partners to discuss pre-apprenticeship opportunities.

Subcontractor for RHETTA project:

Electric Truck Research and Utilization Center (eTRUC), California's premier Research Hub for Electric Technologies in Truck Applications (RHETTA).

eTRUC follows a "Community First" approach for AR&D and TD&D activities to 1) develop, validate, and accelerate the commercialization of innovative technologies; 2) design innovative public-access charging corridor deployment strategies for ZE truck charging; and 3) strategically deploy high-power charging systems along priority freight corridors that extend the range and increase the operational flexibility of ZE trucks. GRID responsible for Community Engagement and Workforce Development: Comprehensive approach to engaging CBOs and EJ organizations along the State's freight corridors to understand needs, workforce goals, and provide two-way dialogue between community and industry.

Thanks to
Our
Thought
Partners...

Mayor Rex Richardson
City Councilmember Suley Saro
City Councilmember Cindy Allen
Councilmember Mary Zendejas
Long Beach Office of Sustainability
Melissa Infusimo: Long Beach Community College
Workforce Development
Nick Schultz: Pacific Gateway WIN
Rick Cameron: Port of Long Beach
Senator Lena Gonzalez (District 33)
SCE Clean Energy Access Workgroup
Port of Long Beach Harbor Commissioner Sharon
Weissman
CA Workforce Development Board

Partner with us.
Together, we can
change people's
lives and our
environment!

Contact
Adewale Ogunbadejo at:
aogunbadejo@gridalternatives.org
Stella Ursua at:
sursua@gridalternatives.org



IDEAL ZEV Workforce

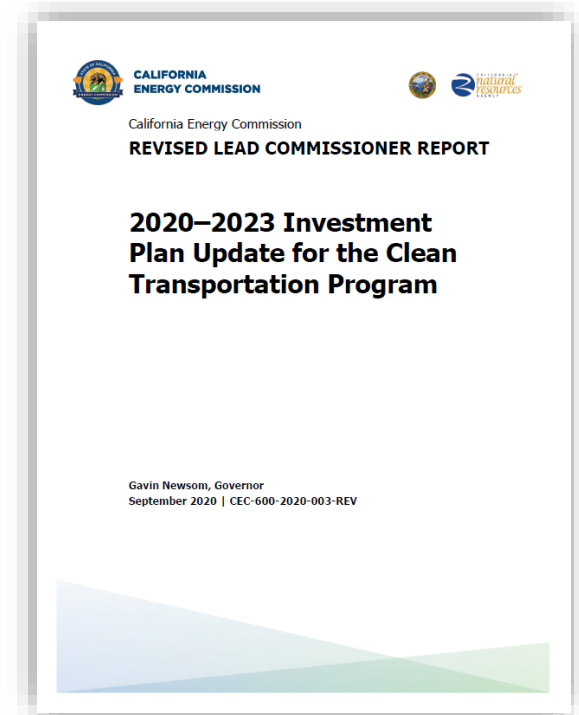
Sustainable Supply Chain Advisory Committee Meeting

November 17, 2021

California Energy Commission
Fuels and Transportation Division
Larry Rillera, ZEV Workforce, Equity, and Partnerships
Larry.Rillera@energy.ca.gov

Clean Transportation Program Background

- Established in 2007 by Assembly Bill 118 (2007).
- Extended to January 1, 2024 by Assembly Bill 8 (2013)
- Provides approximately \$95 million of funding per year through 2023.
- Investment Plan to determine funding allocations across various categories.
- Total program investment in workforce to date: \$34.5 million



Workforce Portfolio

State Agency Partners

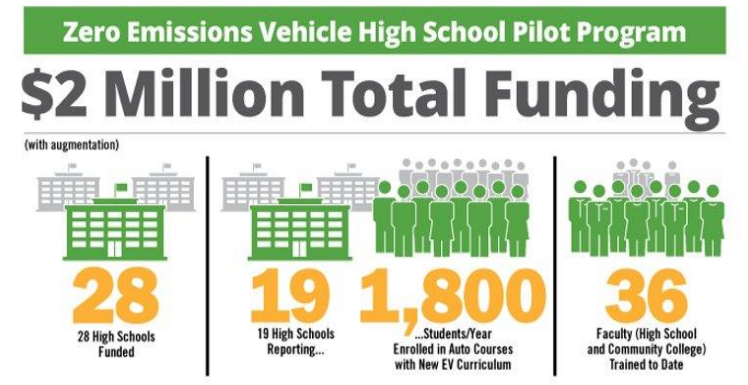
- California Employment Training Panel
- California Employment Development Department
- California Community College Chancellor's Office
- California Workforce Development Board
- California Community Colleges
- California Air Resources Board

Projects

- Transit Training Apprenticeship
- Clean Transportation Pilot Training Project
- Electric School Bus Training Project
- ZEV College Training Project
- High School "Automotive 3: ZEV Technology" Pilot Project
- **California Sustainable Freight Workforce Pilot Project**
- **CEC/CARB ZE Drayage Truck and Infrastructure Project**



Advanced Transportation
and Logistics





Pre-Solicitation Workshop

Draft IDEAL ZEV Workforce Pilot

California Energy Commission and California Air Resources Board
February 26, 2021 | 9:00 am



GFO-21-602 Pre-Application Workshop

IDEAL ZEV Workforce Pilot

Fuels and Transportation Division
October 11, 2021 | 10:00 am

Timeline

Activity	Date
Solicitation Release	October 1, 2021
Pre-Application Workshop	October 11, 2021
Deadline to Submit Applications	December 2021
Anticipated Energy Commission Business Meeting	Q1 2022

<https://www.energy.ca.gov/solicitations/2021-10/gfo-21-602-ideal-zev-workforce-pilot>

7. Conclusion & Next Steps – 2022 Focus Areas

SSCAC members identified nearly a dozen priority topics for discussion and action in 2022.

- Emissions impact of supply chain crisis (OGVs & Drayage Trucks)
- Clean Truck Program implementation & impact
- Opportunity / increased need for on-dock rail and freight efficiency measures
- Regulatory trend towards ZE technologies
 - Cost-effectiveness of an exclusively ZE approach
- ZE infrastructure planning & implementation
- Strategic approaches to diverse and emerging funding sources (Federal, State, LCFS)
- Workforce training strategies & resources
- Renewable energy deployments

SSCAC members also recommended several steps to improve Committee operations & impact.

- Regular updates from members on activities & priorities
- Identifying areas of common ground and shared perspectives on “sustainability”
- Regular involvement from the CEC
- Regular in-depth engagement from the mayors and port directors
- Site visits (COVID-allowing)

8. Conclusion & Next Steps – Proposed Dates

Date	Theme	Specific Topics
January 26 th	<ul style="list-style-type: none"> SSCAC 2022 Level-Set 	<ul style="list-style-type: none"> Updates from Members, Mayors, Ports on 2022 activities & priorities Updates from CARB, Ports on funding programs, strategies Progress with existing SSCAC recs Definition of “sustainability”
March 16 th	<ul style="list-style-type: none"> CTP Implementation & ZE Infrastructure 	<ul style="list-style-type: none"> CTP Implementation
May 18 th	<ul style="list-style-type: none"> Marine Vessels – 2021 activity & technology opportunity 	<ul style="list-style-type: none"> Approach to the 2021 emissions inventory Commercial Harbor Craft regulation hearing
July 20 th	<ul style="list-style-type: none"> Increased Efficiency & On-dock Rail 	<ul style="list-style-type: none"> Federal focus & funding Research & resources for needs, impact assessments Short haul rail ZE opportunities CARB Locomotive regulation
September 21 st	<ul style="list-style-type: none"> Workforce Development 	<ul style="list-style-type: none"> Training center developments Member activities
November 16 th	<ul style="list-style-type: none"> ZE Trucks & CHE Implementation 	<ul style="list-style-type: none"> CTP Update SPBP Technology Feasibility Assessment ACF Rulemaking