



SAN PEDRO BAY PORTS  
**CLEAN AIR ACTION PLAN 2017**

Draft Final  
Clean Air Action Plan Update  
Public Comments

**JULY 19, 2017 to SEPTEMBER 18, 2017**

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## **Comment Letters Received**

**(as of September 18, 2017)**

*Click on the link to be taken directly to the letter. Attachments referenced in the letters are available upon request.*

### **Section 1 – Agencies & Academic Institutions**

California Air Resources Board (September 18, 2017)

South Coast Air Quality Management District (September 18, 2017)

Mount San Antonio College (August 28, 2017)

University of Riverside, College of Engineering – Center for Environmental Research & Technology (August 28, 2017)

### **Section 2 – Industry Stakeholders**

John McLaurin – Daily Breeze Guest Commentary (July 21, 2017)

Pacific Enterprise Bank (July 28, 2017)

Bank of America Merrill Lynch (August 2, 2017)

ANGTL/ANRTL (August 11, 2017)

Pacific Merchant Shipping Association (PMSA) GHG Analysis (August 21, 2017)

Scott M. Jones (August 29, 2017)

PMSA on Draft CAAP Workshop (August 30, 2017)

Azusa Chamber of Commerce (August 31, 2017)

PMSA West Coast Trade Report – Jock O’Connell (August 2017)

PMSA West Coast Trade Report – John McLaurin (August 2017)

Coalition for Responsible Transportation et al. (September 7, 2017)

Inland Kenworth (US), Inc (September 11, 2017)

Opterra Energy Services (September 11, 2017)

Pomona Chamber of Commerce (September 13, 2017)

International Warehouse Logistics Association (September 13, 2017)

American Trucking Associations et al. (September 14, 2017)

Duncan & Sons Lines (September 14, 2017)

PierPass (September 14, 2017)

BizFed et al. (September 15, 2017)

Los Angeles Area Chamber of Commerce (September 15, 2017)

Agility Fuel Solutions (September 15, 2017)

International Brotherhood of Electrical Workers (September 15, 2017)

Quantum Fuel Systems (September 15, 2017)

Yang Ming Group (September 15, 2017)

Cummins Westport Inc. (September 15, 2017)

Inland Kenworth – Carson & Inland Group (September 15, 2017)

Pacific Enterprise Bank (September 15, 2017)

Rush Enterprises (September 15, 2017)

Dairy Farmers of America (September 18, 2017)

Los Angeles Gateway Chamber of Commerce (September 18, 2017)

Long Beach Area Chamber of Commerce (September 18, 2017)

Wilmington Chamber of Commerce (September 18, 2017)

South Bay Association of Chambers of Commerce (September 18, 2017)

California Natural Gas Vehicle Coalition (September 18, 2017)

Clean Energy Fuels (September 18, 2017)

The Coalition for Renewable Natural Gas (September 18, 2017)

SEA\LNG (September 18, 2017)

Shell North America LNG LLC (September 18, 2017)

Southern California Edison (September 18, 2017)

SoCal Gas (September 18, 2017)

Teamsters Port Division (September 18, 2017)

California Class 1 Railroads et al. (September 18, 2017)

American Waterways Operators (September 18, 2017)

Foreign Trade Association (September 18, 2017)

Agriculture Transportation Coalition et al. (September 18, 2017)

PMSA (September 18, 2017)

Siemens eHighway Department (September 18, 2017)  
Tesla, Inc. (September 18, 2017)  
Carmichael International Service (September 18, 2017)  
Evergreen Shipping Agency (America) Corporation (September 18, 2017)  
FuturePorts et al. (September 18, 2017)  
Green Marine (September 18, 2017)  
Harbor Association of Industry & Commerce (September 18, 2017)  
Carrix – SSA Marine, Inc. (September 18, 2017)  
International Transportation Service, Inc. (September 18, 2017)  
Matson Navigation Company, Inc. (September 18, 2017)  
Mitsubishi Cement Corporation (September 18, 2017)  
Ports America (September 18, 2017)  
Yusen Terminals LLC (September 18, 2017)  
Daimler Trucks North America LLC (September 18, 2017)  
Velocity Vehicle Group (September 18, 2017)  
SA Recycling (September 18, 2017)

### **Section 3 – Community Stakeholders**

R. Hicks (July 19, 2017)  
Andrew Boven (July 25, 2017)  
City of Carson (August 15, 2017)  
Asian Pacific American Leadership Foundation (August 15, 2017)  
The Salvadoran American Leadership & Educational Fund (August 21, 2017)  
Asian-American Resource Center (August 23, 2017)  
Jessica Andrade (August 23, 2017)  
Richard Hopkins (August 24, 2017)  
Jason Takaki (August 26, 2017)  
Carole Grover (August 29, 2017)  
Ashley Hernandez (August 30, 2017)

Brandon Molina (August 30, 2017)  
Cindy Koch (August 31, 2017)  
Alvaro Perez (September 2, 2017)  
John Graf (September 5, 2017)  
Jeronimo Reyes (September 6, 2017)  
Pedro Diaz (September 7, 2017)  
Alvaro Perez (September 8, 2017)  
Eduardo Quintero (September 9, 2017)  
Jay Cheng (September 9, 2017)  
Christina Hall (September 12, 2017)  
Leo B. (September 12, 2017)  
Andrea Helzer (September 13, 2017)  
Lorens Salgado (September 13, 2017)  
Richard Havenick (September 13, 2017)  
Raye Murphy (September 13, 2017)  
Angela Bradford (September 14, 2017)  
Anna Ernehholm (September 14, 2017)  
Aleta (September 14, 2017)  
Dean Krivicic (September 14, 2017)  
Harry Helman (September 14, 2017)  
Coastal San Pedro Neighborhood Council (September 14, 2017)  
Alicia Cox (September 15, 2017)  
Barry R. Sedlik (September 15, 2017)  
PTGJR (September 15, 2017)  
Brian Yanity (September 17, 2017)  
Jane Williams (September 17, 2017)  
City of Carson (September 18, 2017)  
Alejandro Marquez (September 18, 2017)

Janet Gunter (September 18, 2017)

Tallan Acalin (September 18, 2017)

Central San Pedro Neighborhood Council (September 18, 2017)

Northwest San Pedro Neighborhood Council (September 18, 2017)

San Pedro Peninsula Homeowner's Coalition (September 18, 2017)

#### **Section 4 – Environmental Stakeholders**

Breath California of Los Angeles County (September 6, 2017)

Center for Latino Community Health (September 7, 2017)

Latino Coalition for A Healthy California (September 7, 2017)

Coalition for A Safe Environment et al. (September 18, 2017)

Citizens Coalition of a Safe Community (September 18, 2017)

Coalition for Clean Air (September 18, 2017)

Natural Resources Defense Council et al. (September 18, 2017)

Sierra Club Angeles Chapter Transportation (September 18, 2017)

Sierra Club Angeles Chapter Climate Change (September 18, 2017)

South Bay Los Angeles 350 (September 18, 2017)

#### **Section 5 – Other Stakeholders**

*ACT Now LA*

Huy Le (August 21, 2017)

Ofelia Medina (August 21, 2017)

Alexandra Radford (August 22, 2017)

Joseph Landau (August 22, 2017)

Rafael Renteria (August 22, 2017)

Jason Gutierrez (August 23, 2017)

Joseph Mueller (August 23, 2017)

Jessica Andrade (August 24, 2017)

Katrina Harding (August 24, 2017)

Michael Busman (August 25, 2017)

Kim Carroll (August 26, 2017)  
Robert Brennan (August 26, 2017)  
Sean Carroll (August 26, 2017)  
Andy Carrasco (August 28, 2017)  
Angela Bradford (August 28, 2017)  
Charlotte Castillo (August 28, 2017)  
Cynthia Mann (August 28, 2017)  
Christophe Dupin de Saint Cyr (August 28, 2017)  
Devin O'Brien (August 28, 2017)  
Jason Takaki (August 28, 2017)  
John Bradford (August 28, 2017)  
John Smith (August 28, 2017)  
Juliette Carrillo (August 28, 2017)  
Monique McCollam (August 28, 2017)  
Maricella Cardona (August 28, 2017)  
Rebecca Coleman (August 28, 2017)  
Roberto Carneiro (August 28, 2017)  
Rochelle Serna (August 28, 2017)  
William Brown (August 28, 2017)  
Anthony Montapert (August 30, 2017)  
Ashley White (August 30, 2017)  
Carole Schindler Grover (August 30, 2017)  
Chengcheng Qian (August 30, 2017)  
Christina Irving (August 30, 2017)  
Darko Blazic (August 30, 2017)  
Jorge Garcia (August 30, 2017)  
Eladio Estrada (August 30, 2017)  
Laura Sanborn (August 30, 2017)



Lidiana Portales Bliar (August 30, 2017)  
Maribel Alejandre (August 30, 2017)  
Mark Friedman (August 30, 2017)  
Marlene Dermer (August 30, 2017)  
Thomas O'Brien (August 30, 2017)  
Theo Diaz (August 30, 2017)  
Isaac Wollman (August 31, 2017)  
Lee Fukui (August 31, 2017)  
Michael T. Wollman (August 31, 2017)  
Kenneth Socha (September 1, 2017)  
William Fahey (September 1, 2017)  
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Adimir Barahona (September 5, 2017)  
Adele Snyder (September 5, 2017)  
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Kirstin Wagner (September 5, 2017)  
Renee Figueira (September 5, 2017)  
Andrea Campbell (September 6, 2017)  
Case Wong (September 6, 2017)  
Erick Moran (September 6, 2017)  
George Chalmers (September 6, 2017)  
Carly Iuffredo (September 7, 2017)  
Dave Schroeder (September 7, 2017)  
Gabrielle James (September 7, 2017)  
Fernando Cardenas (September 7, 2017)  
Hannah Jenkins (September 7, 2017)  
Isabella Centofanti (September 7, 2017)

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Matthew Palmer (September 7, 2017)  
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Paul Alexander (September 7, 2017)  
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Irene McKenna (September 8, 2017)  
Joseph Horta (September 8, 2017)  
Jean Molina (September 8, 2017)  
June Smith (September 8, 2017)

Marcela Vazquez (September 8, 2017)  
Matt Sersion (September 8, 2017)  
Mike Castillo (September 8, 2017)  
Pamela Salyer (September 8, 2017)  
Steven Benavides (September 8, 2017)  
Raymundo Frank Fuentes (September 8, 2017)  
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Jesus Cano (September 11, 2017)  
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Lucille Atillo (September 11, 2017)  
Maati Auset (September 11, 2017)  
Marco Valenzuela (September 11, 2017)  
Martha Contreras (September 11, 2017)  
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Ryan Campbell (September 12, 2017)  
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Jon Jensen (September 13, 2017)  
Jose Rodriguez (September 13, 2017)  
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Juan Guerrero (September 13, 2017)  
Judy Caroline (September 13, 2017)  
Malila Hollow (September 13, 2017)  
Nicolas Gonzalez (September 13, 2017)  
Patricia Gomez (September 13, 2017)  
Peter Schissler (September 13, 2017)  
Robert Dale (September 13, 2017)  
Ron Schweitzer Jr. (September 13, 2017)  
Salvador Navarro (September 13, 2017)  
William Stapleton (September 13, 2017)  
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Alicia Isaslazo (September 16, 2017)  
Corey Dominguez (September 16, 2017)

Dave Cortez (September 16, 2017)  
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Felipe Guliman, Jr. (September 16, 2017)  
Greg & Sandra Ortega Torres (September 16, 2017)  
Jarold Healey (September 16, 2017)  
Jo Thompson (September 16, 2017)  
Katie Spahn (September 16, 2017)  
Natascha Runge (September 16, 2017)  
Sabina Simsbury (September 16, 2017)  
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Billy Thompson (September 18, 2017)

Brian Lawler (September 18, 2017)  
Carl A. Olson (September 18, 2017)  
Carlos Marin (September 18, 2017)  
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Denise Lyn (September 18, 2017)  
Diane Aponte (September 18, 2017)  
Diane Harper (September 18, 2017)  
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Donald True (September 18, 2017)  
Drake Trethaway (September 18, 2017)  
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Emily Pitts (September 18, 2017)  
Erica Parra (September 18, 2017)  
Erick Parada (September 18, 2017)  
Esmeralda Hernandez (September 18, 2017)  
Grant Hudson (September 18, 2017)  
Hatim Osman (September 18, 2017)  
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Hugo Silva (September 18, 2017)  
Jeannette Sumner (September 18, 2017)  
Jesee Melendez (September 18, 2017)  
Jessica Annand (September 18, 2017)  
Jessica Vee (September 18, 2017)  
Jimmie Bates (September 18, 2017)  
John Pagan (September 18, 2017)  
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Jolie Gregory (September 18, 2017)  
Jose Garay (September 18, 2017)  
Jose Ruiz Mijares (September 18, 2017)  
Juan Martinez (September 18, 2017)  
Julio Paiz (September 18, 2017)  
Karen Hemperly (September 18, 2017)  
Karina Acevedo (September 18, 2017)  
Kathy (September 18, 2017)  
Kavin Kanjanawijit (September 18, 2017)  
Kurtis Jay (September 18, 2017)  
Laura Guzman (September 18, 2017)  
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Linda Klein (September 18, 2017)  
Lisa Bre (September 18, 2017)  
Liz Reyes (September 18, 2017)



Lou Schumow (September 18, 2017)  
M. Apodaca (September 18, 2017)  
Mario Cruz (September 18, 2017)  
Martha Munoz (September 18, 2017)  
Marya Mazor (September 18, 2017)  
Mel Walls (September 18, 2017)  
Michael Martinovich (September 18, 2017)  
Michele Swanson (September 18, 2017)  
Moff Kyle (September 18, 2017)  
Moses Carl (September 18, 2017)  
Myrna Myles (September 18, 2017)  
Nadia McCaffrey (September 18, 2017)  
Nelda Ann Ritchey (September 18, 2017)  
Noel Park (September 18, 2017)  
Osvany-Alejandra Cepero (September 18, 2017)  
Pamela Mauricio (September 18, 2017)  
Patricia Clark (September 18, 2017)  
Patty Friedman (September 18, 2017)  
Peter Addis (September 18, 2017)  
Ralph Picazzo (September 18, 2017)  
Rana Jamil (September 18, 2017)  
Rebecca Rosenberg (September 18, 2017)  
Richard Goodman (September 18, 2017)  
Richard Smith (September 18, 2017)  
Robert Curtis (September 18, 2017)  
Robert Cutts (September 18, 2017)  
Roland Morel (September 18, 2017)  
Sandra Stanton (September 18, 2017)

Santos Trani (September 18, 2017)  
Sara Qamar (September 18, 2017)  
Shakayla Thomas (September 18, 2017)  
Shelia & Jeff Brakefield (September 18, 2017)  
Sherryl Burns (September 18, 2017)  
Star Galvan (September 18, 2017)  
Steven Cantu (September 18, 2017)  
Sylver Vandeth (September 18, 2017)  
Tallan Acalin (September 18, 2017)  
Taylor Christian (September 18, 2017)  
Theresa Brown (September 18, 2017)  
Tiffany Jackson (September 18, 2017)  
Walt Wenzel (September 18, 2017)  
Warren Beaver (September 18, 2017)  
Wendy Lemus (September 18, 2017)  
Wynett Devencenzi (September 18, 2017)  
Zobeida Porter-Castillo (September 18, 2017)

*Other*

David Garcia (September 10, 2017)

Section 1  
Agencies & Academic Institutions

September 18, 2017

Mr. Mario Cordero, P.E.  
Executive Director  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, California 90815

Mr. Gene Seroka  
Executive Director  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Dear Mr. Cordero and Mr. Seroka:

Thank you for providing the California Air Resources Board (CARB) staff the opportunity to comment on the San Pedro Bay Ports Draft Final Clean Air Action Plan 2017 (2017 CAAP). This draft of the CAAP clearly articulates the necessary, longer-term objective to transition to zero emission operations at the Ports of Los Angeles and Long Beach (Ports). We urge you to establish additional interim milestones to introduce a combination of zero and near-zero emission equipment to meet near-term air quality needs and support this transition.

CARB has numerous efforts underway to develop new programs and strengthen existing regulations to continue reducing emissions at seaports and other freight facilities throughout the State. The early actions of the San Pedro Bay Ports to demonstrate cleaner technologies and fuels were critical factors in the successful implementation of prior port-related air quality initiatives. Our mutual commitment to this partnership is even more essential as we look forward to the next round of technology advancements and public-private investments.

California's 2016 Sustainable Freight Action Plan includes a vision for a freight system that can "transport freight reliably and efficiently by zero emission equipment everywhere feasible, and near-zero emission equipment powered by clean, low-carbon renewable fuels everywhere else." Several measures outlined in the CAAP will help support this vision, but the Ports can and should do more to accelerate the adoption of zero and near-zero emission technology in the near-term. Consistent with the

Mr. Mario Cordero, P.E.  
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objectives of the State's freight plan, we support the ongoing efforts of the Ports to work with stakeholders to concurrently increase efficiency and the ability of the Ports to compete for cargo activity.

The State of California has recently placed additional emphasis on protecting local communities from the harmful effects of air pollution through the passage of Assembly Bill (AB) 617 (Garcia, Chapter 136, Statutes of 2017). AB 617 is the most significant piece of air quality legislation in decades and highlights the need for further reductions in communities with high exposure burdens. The Ports must continue to play a critical role in reducing health impacts to neighboring communities. We are confident that the Ports can take more aggressive action to accelerate adoption of zero and near-zero emission vehicles and equipment, especially for sources that travel through neighboring communities or create a broad regional pollution footprint. This near-term action is critical to address localized health risk by further cutting diesel particulate matter emissions beyond the 85 percent reduction target in the 2010 CAAP, and to help achieve ambient air quality standards by reducing oxides of nitrogen (NOx).

We have attached our specific comments and recommendations that we urge the Ports to incorporate in the final version of the CAAP to protect public health, improve air quality, and combat climate change. The Ports have been worldwide leaders in reducing emissions, and adoption of a strengthened final 2017 CAAP presents an opportunity to continue that role in the years to come. We look forward to maintaining our strong working relationship to develop and implement complementary strategies in San Pedro Bay and across California.

If you have any questions, please call me at (916) 445-4383 or have your staff contact Cynthia Marvin, Chief, Transportation and Toxics Division, at (916) 324-0062 or via email at [cynthia.marvin@arb.ca.gov](mailto:cynthia.marvin@arb.ca.gov).

Sincerely,



Richard W. Corey  
Executive Officer

Attachment

cc: See next page

Mr. Mario Cordero, P.E.  
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cc: Elizabeth Adams  
Acting Director  
Air Division, Region 9  
U.S. Environmental Protection Agency  
75 Hawthorne Street  
San Francisco, California 94105

Wayne Natri  
Executive Officer  
South Coast Air Quality Management District  
21865 Copley Drive  
Diamond Bar, California 91765-4182

Cynthia Marvin, Chief  
Transportation and Toxics Division

## California Air Resources Board Staff Comments and Recommendations on San Pedro Bay Ports Draft Final Clean Air Action Plan 2017

The California Air Resources Board (CARB) provides the following comments and recommendations for the Port of Los Angeles and the Port of Long Beach (Ports) to consider as they move towards a final Clean Air Action Plan (CAAP) to present to the Ports' Boards of Harbor Commissioners in November 2017.

- Air toxics targets: As you are aware, diesel particulate matter (diesel PM) is a toxic air contaminant that can cause cancer, cardiac and respiratory illness, and other health problems. The Ports and the industry have made significant progress in reducing diesel PM emissions and health risks, but the job of protecting portside communities is not yet done. We are pleased to see a more robust discussion in this draft of the CAAP on the residual health risks associated with Port activity. In the context of these continued health risks, it is critical that the Ports commit to moving beyond the 85 percent cancer risk reduction target set in the 2010 CAAP. To support this, we recommend that the Ports:
  1. State clearly that the 2017 CAAP retains the existing San Pedro Bay standard (established in the 2010 CAAP) for new projects of a maximum incremental cancer risk of 10 chances per million, and seek to fully mitigate any health impacts with zero emission technology.
  2. Quantify and display diesel PM or PM<sub>2.5</sub> emissions and anticipated reductions, along with the existing NO<sub>x</sub> and greenhouse gas numbers, throughout the CAAP and its supplemental documents.
- Climate targets: We appreciate the Ports' inclusion of the State's ambitious 2030 and 2050 greenhouse gas (GHG) reduction targets in this draft of the CAAP. We encourage the Ports to strive to use renewable energy to power near-zero and zero emission vehicles and equipment to support further progress towards a decarbonized future.
- Emission projections: The emission reduction estimates for the Clean Trucks Program and Cargo Handling Equipment (CHE) measures are useful in helping us understand and evaluate the potential impacts of these programs. We are concerned, however, that the CAAP does not show a quantitative estimate or range of potential benefits for many of the other measures. It is imperative that the final CAAP identify the anticipated emission impacts for each action.
- Technology feasibility assessments: We appreciate the Ports' commitment to conducting feasibility assessments to gauge progress on zero and near-zero emission equipment. We encourage the Ports to conduct port-specific evaluations to ensure necessary equipment is available to meet the operational needs of the terminals, as well as trucking, rail, and marine vessel operators.

- Trucks: Reducing NOx emissions from trucks will play a key role in attaining federal ambient air quality standards in the South Coast Air Basin, while further reductions in diesel PM emissions are needed to protect community health. We recognize the tremendous impact that the Ports' first Clean Trucks Program, especially the dirty truck fee, had in quickly converting trucks used for drayage in San Pedro Bay from the dirtiest fleet to the cleanest.

To motivate the next waves of progress, we support the primary concepts identified in the draft CAAP: (a) to limit new entrants to the Ports' Drayage Truck Registry to successively cleaner emission levels, and (b) to develop a rate structure for cargo carried on trucks that emit pollution at levels higher than a zero or near-zero emission standard. However, we believe the Ports can and should implement the rate structure earlier than the proposed 2023 date to send a strong economic signal supporting zero and near-zero emission truck operations, beyond any financial incentives offered for truck purchases. A robust rate structure should be designed in a public process and implemented by 2020 or earlier. CARB's low-NOx truck engine standard is currently under development for Board consideration in 2019 and implementation in 2023 – this timing supports a port truck rate structure by 2020 that uses the State's definition of a low-NOx, near-zero emission truck.

As stated in CARB's September 6, 2017 Discussion Paper "*Implementation of March 2017 Board Direction on Reducing the Community Health Impacts from Freight Facilities*," Senate Bill 1 (Beall, Chapter 5, Statutes of 2017) does not prohibit the Ports from establishing their own measures to accelerate the transition to a cleaner port truck fleet and to reduce emissions from trucks serving their facilities.

Based on our joint experience with the prior drayage truck turnover to a cleaner fleet, we know it is important to identify operational and financing models that support the ability of existing drayage truck operators to make the transition. The Port of Los Angeles' Sustainable Freight Advisory Committee began to explore new concepts to meet this need last year. CARB staff will continue to participate in discussions in whatever forum the Ports determine is most appropriate to develop these and other ideas in cooperation with the trucking industry, leasing and financing companies, and other public agencies potentially offering incentives.

- Ocean-going vessels at berth: In March 2017, our Board directed staff to expand the CARB At-berth Regulation to achieve up to 100 percent compliance by 2030. Although we are appreciative of the Ports' commitment to continue participating in our rule development process, the CAAP should go further to achieve early reductions to benefit portside communities and maximize the opportunities for incentive funding. We make the following specific recommendations:
  1. Require, where feasible, use of shore power for 100 percent of visits by vessels equipped with shore power starting in 2020. CARB's regulation already requires an equipped vessel at an equipped berth to connect. This recommended CAAP measure would put responsibility on marine terminal operators to provide access



to shore power connections for each vessel equipped to plug in, accelerating the anticipated CARB requirements.

2. Set interim goals for demonstrating and deploying alternative emissions capture and control systems. The CAAP describes a forthcoming solicitation for development and demonstration of capture and control systems for non-container vessels. The Ports should seek to complete development and demonstration (under emissions test plans approved by CARB) of three or more systems for non-container vessels before 2020. Assuming that two or more systems receive CARB approval in that timeframe, at least half of the planned 11 systems at Los Angeles and 12 systems at Long Beach should be deployed by 2025 to reduce emissions from vessel visits not subject to the existing CARB regulation.

Regarding control technologies for vessels at berth, we recognize that there are challenges associated with barge-based emission control systems for tanker vessels. However, with further development, these systems may be candidates for controlling emissions from these vessels in the future. The CAAP should not exclude barge-based capture and control systems as potential options at this early stage and instead should acknowledge that unique solutions may be necessary to enable the use of these systems on tanker vessels. We also recommend the Ports incorporate cost estimates for the increasing number of container and cruise vessels expected to utilize shore power in the coming years.

- Ocean-going vessels in transit: For ocean-going vessels in transit, we support the approaches described for the Green Ship Incentives, the Clean Ship Program, and strengthening the vessel speed reduction (VSR) program. We urge the Ports to implement the rate structure in the Clean Ship Program earlier than the proposed 2025 date to accelerate the benefits and aid attainment of the federal air quality standards.

The CAAP proposal to expand VSR to 40 nautical miles (nm) and shift to a per-call incentive would promote increased participation. We encourage the Ports to monitor this program closely and develop any necessary metrics to ensure against any unintended consequences. VSR within 40 nm could lead to increased greenhouse gas emissions elsewhere if vessels increase speeds to make up time, and some vessels that participated under the current program structure may no longer do so if there is no risk of jeopardizing the fleets' full incentive. We are also concerned that if alternative compliance plans allow for faster speeds within the 40 nm zone, ship whale strikes could increase.

- International Maritime Organization (IMO) 2015-2050 Vessel Tier Forecast: Although there are many factors expected to contribute to the delay in lower NOx Tier 3 vessels being introduced into California's market (like the many vessel keels laid in 2015 and deployment priority to the Asia-Europe trade), the IMO Vessel Tier Forecast shows a delay in Tier 3 implementation that goes beyond these factors.

The method used for the IMO Vessel Tier Forecast appears to make the assumption that no ship owners/operators will voluntarily bring Tier 3 ships to the Ports until the entire global supply of pre-Tier 3 vessels is exhausted. This worst case analysis seems unrealistic, as there are numerous other global ports that existing older vessels may choose to visit other than the San Pedro Bay Ports. Due to this assumption, rapid turnover from Tier 2 to Tier 3 is forecast for some vessel categories, with whole fleets projected to turn over in a matter of a few years in some cases. We understand that this is due to a limitation with the forecast method used, but encourage the Ports to reconsider this approach to improve the reasonableness of the forecast after 2030.

- Cargo handling equipment: The CAAP relies heavily on potential amendments to CARB's cargo handling equipment (CHE) regulation instead of proposing to accelerate the use of zero and near-zero emission equipment through San Pedro Bay-specific requirements. We support the CAAP's long-term goal of 100 percent zero emission CHE, while recognizing that zero emission technology for different types of CHE is likely to be available in different timeframes. In addition to the ultimate zero emission target, we support the following CAAP measures for CHE:
  1. Establish interim targets for zero emission CHE operations across each port that ramp up over time as the advanced cargo equipment becomes demonstrated and the necessary fueling/charging infrastructure can be installed. Zero emission technology is already available or rapidly commercializing for several CHE categories that make up a significant share of the CHE equipment population, including yard trucks and rubber-tired gantry cranes. In the CAAP, the Ports project that commitments by terminal operators and incentive funding projects would result in roughly 13 percent of the pieces of CHE being zero emissions by 2020. With new funding for zero and near-zero emission freight equipment just approved by the Legislature, there will be opportunities to pursue additional incentives. These facts suggest that a target of 15-25 percent of CHE at zero emission levels at each port by 2023 should be considered.

Recognizing that not all cargo handling applications will have zero emission technology that is both successfully demonstrated and cost-effective in that timeframe, the Ports may wish to consider a companion 2023 target for near-zero emission equipment operating on renewable fuels as well.
  2. Develop and implement the Ports' proposed anti-idling program for CHE, which has the potential to achieve immediate emission reductions and fuel savings.
- Locomotives: Locomotive operations on dock and in neighboring communities continue to present a serious risk to public health. In response, CARB has requested that U.S. EPA establish more stringent national emission standards for remanufactured locomotives to take effect in 2023 and a new Tier 5 standard to take effect in 2025, which would require newly built locomotives to be capable of limited

zero emission operation. We appreciate the Ports' letter supporting CARB's petition to U.S. EPA for more stringent locomotive emission standards.

As the Ports increase the share of cargo moved by rail, the railroads must accelerate fleet turnover and utilize the cleanest technologies available to reduce emissions of criteria pollutants and toxic air contaminants. We are pleased to see the commitment from the Ports to work with rail operators and technology developers on demonstration and deployment of the cleanest locomotives. It is critical, however, that the Ports identify specific mechanisms to increase deployment of these locomotives. We again request that the CAAP include an update on the fleet mix of line-haul locomotives serving the Ports, identify actions needed to achieve the 2010 CAAP goal to transition to virtually all Tier 4 locomotives by 2020, and discuss specific strategies to demonstrate the use of Tier 5 equivalent engines and zero emission mile capable locomotives.

- Commercial harbor craft: As stated in the CAAP, commercial harbor craft will contribute an increasing share of emissions over time. While ongoing incentives remain key to deploying cleaner technologies, we encourage the Ports to go further in their strategy to reduce emissions from commercial harbor craft by developing an idling reduction program that could include shore power for some vessels while docked.



# South Coast Air Quality Management District

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Mr. Gene Seroka  
Executive Director  
Port of Los Angeles  
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September 18, 2017

Mr. Mario Cordero  
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Port of Long Beach  
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## **SCAQMD Staff Comments on the Draft Final San Pedro Bay Ports Clean Air Action Plan 2017 Update**

The South Coast Air Quality Management District (SCAQMD) staff appreciates the opportunity to comment on the Draft Final San Pedro Bay Ports Clean Air Action Plan 2017 Update (2017 CAAP Update) and supporting documents. The stated purpose of the 2017 CAAP Update is to provide policy guidance to help the region achieve its clean air goals and to support the statewide vision for more sustainable freight movement. SCAQMD staff acknowledges the significant challenges associated with achieving these goals and is committed to supporting the Port of Los Angeles and Port of Long Beach (Ports) efforts to meet the clean air goals for the region.

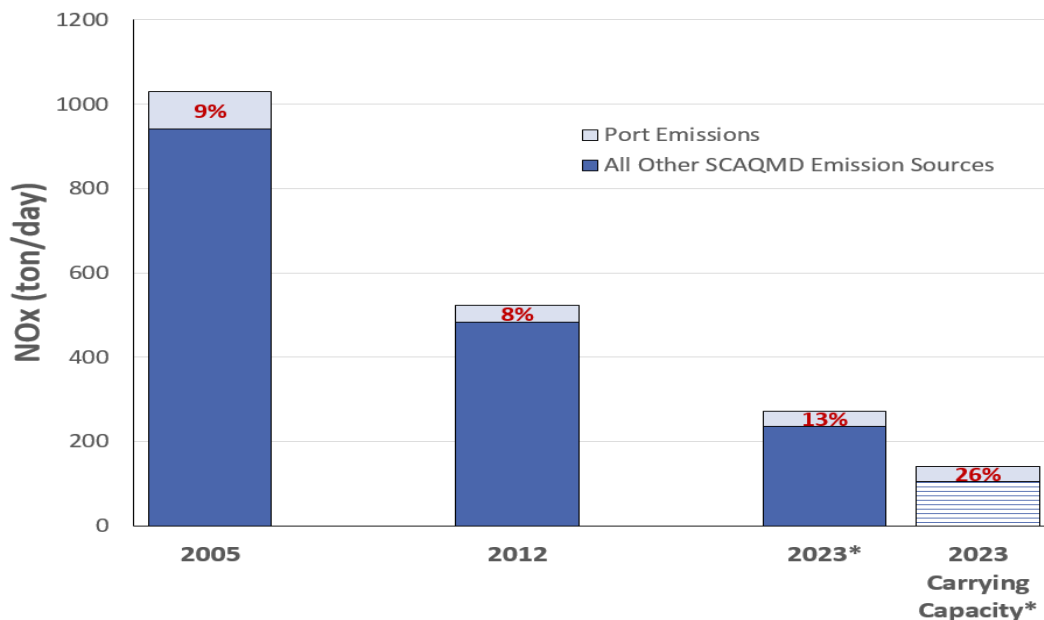
The Ports are an essential hub of commerce and an economic engine for both the region and the nation. However, the Ports are also the largest regional source of nitrogen oxides (NOx), a key precursor pollutant for regional ozone and fine particulate matter, and the epicenter of the highest air toxic cancer risks in the Basin due to diesel emissions from the ships, locomotives, trucks, etc. that operate at the Ports. It is therefore essential that the 2017 CAAP Update provide the necessary measures to reduce the significant public health impacts from Port related emissions as soon as practicable. The comments in this letter are intended to express SCAQMD staff's concerns with the 2017 CAAP Update and to help guide the Ports as they finalize the document and ultimately implement its proposed measures.

SCAQMD recently adopted its 2016 Air Quality Management Plan (2016 AQMP) that lays out a regional blueprint for achieving federal air quality standards and healthful

air. The emission reduction control strategy adopted in the 2016 AQMP requires a significant reduction of nitrogen oxides (NOx) emissions to meet federal ozone ambient air quality standards in the key attainment years of 2023 and 2031. Specifically, the 2016 AQMP calls for reducing NOx emissions an additional 45% basin-wide by 2023 beyond the emission reductions expected from existing regulations, and similarly reducing NOx 55% by 2031. If federal air quality standards are not achieved on time, our region faces significant consequences, most importantly the continued adverse impacts to public health, as well as federally mandated sanctions such as the loss of most federal transportation funds, substantially increased costs to obtain many air permits, and loss of local control over air pollution regulations. For these reasons, it is critical that the 2017 CAAP Update meet its fair share of emission reductions so that the region can meet its clean air goals.

The 2017 CAAP Update carries forward the existing emission reduction targets that were adopted in the previous 2010 CAAP. These targets call for reducing port-related emissions below 2005 levels by 59% for NOx, 93% for sulfur oxides (SOx) and 77% for diesel particulate matter (DPM). If the CAAP only achieves this stated target for NOx, port-related emissions would represent about 26% of the NOx emissions level required to meet the ozone ambient air quality standard in 2023 (i.e., the Basin’s carrying capacity). In this scenario, port related emissions will become a substantially larger share of the Basin’s emissions budget compared to previous years (Figure 1).

*Figure 1: Implications of 2017 CAAP Update NOx Emissions Reduction Target*



\*2023 Port emissions assume 59% reduction below 2005 levels  
All Other SCAQMD emissions from 2016 AQMP

Further, as reported in the Ports' 2016 Annual Emissions Reports, they have already achieved a 56% reduction below 2005 NOx emissions levels. While this decrease in emissions ahead of schedule represents the significant work and real progress that has been made since 2005, the chart in Figure 1 illustrates that more is needed for the Ports to meet their fair share of emission reductions. For this reason, it is critical that the Ports ultimately set NOx emissions reduction targets that go beyond the 59% target from the 2010 CAAP.

Therefore, SCAQMD staff strongly recommends that the Ports update their emissions reduction targets to be consistent with the air quality attainment goals of the 2016 AQMP. In addition to updated emission reduction targets, SCAQMD staff recommends that the Ports enhance the strategies in the proposed 2017 CAAP Update to include additional measures and more detailed descriptions of the actions necessary to ensure successful implementation. These details include timelines for setting and assessing the targets that advance the goals stated above, the criteria that will be used to assess targets, implementation schedules for each measure, and the process for evaluating the effectiveness of any proposed measure. As an example, the proposed rate structure for drayage trucks is not proposed to begin until 2023 and the details of how and when this rate will be determined are not included. By starting the rate structure in 2023, it is not clear how this timing will be sufficient to turn over enough of the truck fleet to meet air quality standards in that same year. Further, the details of how and when this rate will be determined should be included in the final 2017 CAAP Update.

Details regarding the comments above and other important concerns and considerations are enclosed. We look forward to continuing the close collaboration between our agencies on crafting emission reduction solutions. Please feel free to call me or Dr. Philip Fine, Deputy Executive Officer of Planning, Rule Development, and Area Sources, at (909) 396-2239 if you have questions or wish to discuss our comments.

Sincerely,

Wayne Nastri  
Executive Officer

PF:IM:DG:ML  
Attachment

cc: Mr. Richard Cameron, Port of Long Beach  
Mr. Chris Cannon, Port of Los Angeles  
Ms. Heather Tomley, Port of Long Beach  
Ms. Lisa Wunder, Port of Los Angeles

**Emission Reduction Targets and Goals**

SCAQMD staff recognizes that there are many air quality goals and targets the Ports must meet. All of the goals outlined in the 2017 CAAP Update are important and should be achieved, however it is important to not lose sight of the near term requirements to meet ambient air quality standards, including the upcoming critical attainment date of 2023 for federal ozone standards. The implications of not meeting federal air quality standards would have severe public health and economic consequences for the region. Public health impacts from pollutant levels above federal air quality standards and from high diesel particulate matter levels include health endpoints such as increased asthma onset and exacerbation, cancer risks, hospitalizations, and premature death. In addition, federal sanctions that would prohibit transportation funding, impose higher permitting costs including to critical infrastructure, and usurp local control over air pollution regulations would impose severe economic strain on the region.

SCAQMD staff's February 17, 2017 comment letter on the 2017 CAAP Update Discussion Document requested that the Ports revise NO<sub>x</sub>, SO<sub>x</sub> and PM emissions reduction targets for the 2017 CAAP Update to reflect the overall regional emission reduction targets from the 2016 AQMP. The Draft Final 2017 CAAP Update includes a revised discussion on CAAP Goals (page 21 of the 2017 CAAP Update) that provides information on a joint declaration signed by the Mayors of the cities of Los Angeles and Long Beach regarding the transition to zero-emission vehicles, however, this discussion does not include emissions reduction strategies that provide consistency between the Ports previous emission reduction targets and the 2016 AQMP.

The targets carried forward into the 2017 CAAP were established during the 2010 CAAP process and based on pre-recession port growth forecasts and assumptions from the 2007 AQMP. New emission reduction targets based on more recent port growth projections, 2016 AQMP emission inventories, and updated technology assessments would improve quantification efforts to help determine the Port's fair share of emissions reductions. Therefore, SCAQMD staff continues to urge the Ports to revise the NO<sub>x</sub>, SO<sub>x</sub>, and PM emission reduction targets for 2023 to be consistent with the 2106 AQMP and emerging technological opportunities.

**State Implementation Plan (SIP) Credit**

SCAQMD staff appreciates the level of engagement by the staff of both ports on ensuring that emission reductions obtained by the CAAP are fully creditable to the SIP. We look forward to continuing our discussions with the Ports to address important details moving forward. There are two primary issues that must be addressed to obtain SIP credit for future emission reductions from proposed measures. First, the proposed measures must meet the 'integrity elements' laid out by EPA, namely the reductions must be

enforceable, quantifiable, surplus, and permanent.<sup>1</sup> Secondly, these measures must be sufficiently defined by 2020 under Clean Air Act requirements. It is critical that the EPA's requirements and timing related to SIP credit are addressed as the 2017 CAAP is revised and implemented.

### **Health Risk Reduction Goals**

The 2006 CAAP included health risk reduction policies by establishing an increment threshold of ten in a million excess residential cancer risk for new projects. The 2010 CAAP further established the San Pedro Bay-wide health risk reduction goal to reduce residential cancer risk from port-related diesel particulate emissions 85 percent by 2020, compared to 2005 levels. The 2017 CAAP Update indicates the San Pedro Bay-wide health risk reduction goals will be maintained, however, it states that the residential cancer risk increment threshold for individual projects may be modified on a case-by-case basis. SCAQMD staff is aware that recent State Office of Environmental Health Hazard Assessment guidance for conducting risk assessments that takes greater account of potential risks to children has increased estimated cancer risks by about a factor of three. However, SCAQMD continues to use a ten in one million threshold for permitting and CEQA purposes and urges the Ports to maintain this threshold to provide the same level of public health protection. If the Ports decide to revisit this threshold in the future, we recommend that the Ports do so only after a public process that includes opportunity for input from the public, appropriate regulatory agencies, and other key stakeholders.

In addition to revising the cancer risk threshold proposal in the 2017 CAAP Update, the Ports should also revisit strategies to reduce diesel particulate matter from port operations. Many of the strategies in the CAAP focus on two key pollutants that affect regional and global environmental impacts, NO<sub>x</sub> and CO<sub>2</sub>e. However, diesel particulate matter emissions continue to impact the already over-burdened local community, and while strategies to reduce this pollutant may overlap with those to reduce NO<sub>x</sub> or CO<sub>2</sub>e, there are some differences. For example, while harbor craft and locomotives each contribute about 10% of port NO<sub>x</sub> emissions, they each contribute about 21% of DPM emissions. In contrast, for both NO<sub>x</sub> and DPM, ocean going vessels contribute about 50% of emissions. Given the proximity of locomotives and harbor craft to nearby communities relative to the much greater distances for most ocean going vessel emissions, more emphasis should be placed on reducing DPM from harbor craft and locomotives than what has been described in the draft 2017 CAAP Update.

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<sup>1</sup> For a summary of these requirements and potential mechanisms to obtain SIP credit, see the July 27, 2017 Facility Based Mobile Source Measures Working Group presentation, available here: <http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/facility-based-mobile-source-measures/fbmsm-meetings>



**Implementation Strategies**

SCAQMD staff understands the need for additional work to determine how to implement proposed measures in the 2017 CAAP Update. For example, the proposed differentiated rate structures for trucks and ocean going vessels require future studies before implementing these programs. However, the 2017 CAAP Update should be modified to include specific details regarding timelines, decision-making criteria for setting and assessing targets, and implementation, reporting, and auditing procedures to determine measure effectiveness. Absent these details, it is unclear how emissions reductions from these broad strategies will achieve the levels necessary to be consistent with attainment of federal ambient air quality standards by the year 2023.

Beginning in 2018 the Ports are committed to conducting feasibility assessments every three years. The Ports outline the criteria that will be used to evaluate low emission vehicle availability in a support document titled “Framework for Developing Feasibility Assessments.” However, given that this document does not specify emission reduction goals it would be difficult to monitor the effectiveness of this program in relation to local and regional air quality goals.

Further, several of the control strategies proposed in the 2017 CAAP Update would be implemented through individual lease agreements that expire at different times throughout port facilities. Therefore, SCAQMD staff would like an opportunity to work with the Ports to explore procedures that uniformly require terminal operators to upgrade or replace equipment that results in air quality benefits. Significant effort needs to be made to ensure that emission reduction projects triggered by lease agreements with individual terminal operators do not unintentionally result in fewer emission benefits. For example, shippers that may switch to lower cost terminal operators not required to comply with more costly renegotiated lease agreements. Also, SCAQMD staff encourages the Ports to facilitate dialogue with terminal operators about identifying additional strategies that are available within their own operation that could further reduce emissions.

**Drayage Trucks**

The proposed drayage truck strategy to require all new trucks entering the Port Drayage Registry Program (DRP) to meet model year (MY) 2014 engine standards in 2018 would result in the use of more modern trucks, however, the emission reductions realized from this strategy would be nominal, especially in 2023, given current CARB regulations. Near-zero emission (NZE) trucks meeting the anticipated upcoming CARB engine standard of 0.02 or 0.05 g/bhp-hr NO<sub>x</sub> would also have no incentive to begin visiting the ports until 2023, under the current plan. SCAQMD staff is concerned that by delaying initial implementation of truck incentives until 2023, the 2017 CAAP Update would not

likely achieve significant emission reductions on a schedule that is consistent with the regional air quality goals identified above. Therefore, SCAQMD staff requests that the truck program incentivize NZE and/or zero-emission (ZE) trucks to enter the program well before 2023. This could be accomplished for example by tying the start of the rate structure to when CARB adopts its truck engine rule in 2019, instead of the proposed implementation date of that regulation in 2023. Alternatively, the rate structure implementation could be tied to when NZE or ZE engines are commercially available (expected in early 2018), and could also be tied to certain levels of incentive funding becoming available to offset increased costs to truck owners. These approaches would still be consistent with the 2006 and 2010 CAAP approach of accelerating implementation of State programs.

As the Ports implement their truck program, it is important that there be a continued focus on costs, and on ways to potentially reduce costs and ensure equitable access to cleaner technologies. One approach could include a specific program or report that evaluates mechanisms to reduce costs. This program could include potential strategies such as additional funding from the ports to implement the CAAP, alternative financing mechanisms, truck exchange programs with areas outside the air basin, partnering with engine manufacturers to identify ways to reduce the costs of cleaner technologies, efficiency measures to increase the utilization of cleaner trucks (hence increasing profits for those truck owners to help offset the potential higher purchase price), etc. SCAQMD staff is available to continue discussing how it can assist in some of these efforts, in particular through incentive funds that it administers.

### **Cargo Handling Equipment**

SCAQMD staff is supportive of a transition to zero-emission cargo handling equipment (CHE) by 2030 in accordance with CARB strategies and acknowledges benefits from the estimated 206 near-zero and zero-emission pieces of equipment expected to be added to the Ports between 2016 and 2020. However, similar to the comments provided above on drayage trucks, SCAQMD staff requests that the 2017 CAAP Update include specific timelines and interim milestones for the proposed transition to zero-emission cargo handling equipment and deployment of near-zero technologies if zero emission technologies do not perform adequately in the near term in certain operations. SCAQMD staff is also supportive of the effort to reduce CHE idling emissions through a study and analysis of equipment activity patterns. However, the 2017 CAAP does not include timelines for study development nor how a proposal to require terminal operators to prepare and submit idling reduction plans would be implemented. Finally, because of the diverse nature of the CHE fleet (RTGs, hostler, top-picks, etc.), one potential approach could be to focus first on certain types of equipment where technologies are available

today, rather than waiting on technologies to become available for this entire sector and trying to address them all at the same time.

### **Ocean-Going Vessels**

Based on the Port's 2016 emission inventories, emissions from Ocean Going Vessels (OGVs) represent more than 50% of the NO<sub>x</sub> emissions from port-related sources. SCAQMD staff is supportive of the proposed strategies to reduce OGV emissions but, due to the magnitude of emissions from this source category, earlier implementation of proposed control strategies is warranted. Specifically, the CAAP proposes a differentiated rate structure on OGV (higher rate for ships with Tier 0, then Tier 1 engines, etc.) to encourage calls by cleaner ships and to discourage older ships. However, with a proposed effective date of 2025 the program will not result in emission reductions needed by 2023. Additionally, SCAQMD staff requests the 2017 CAAP specify emission reduction goals and a process for evaluation of the proposed differentiated rate structure. Establishing a nominal fee would not likely be sufficient to encourage use of cleaner ships, but the fee can be adjusted if it is not achieving the specified goals.

In addition, further details should be provided for the Green Ship Incentives program. It is unclear if any emission reductions are achievable with this measure as written, and similar goals/targets/criteria should be established for this program as requested for other programs, like trucks. One potential approach would be to set standards that shipping lines could try to achieve. This could take the form of new tier standards (including potentially for new ships or for retrofits) from the International Maritime Organization, or Port-specific optional standards based on successful retrofits achieved-in-practice locally. Staff also looks forward to continue exploring new innovative projects with the Ports through its Technology Advancement Program.

### **Rail Operations**

SCAQMD staff supports the CAAP's goals to accommodate higher percentages of cargo leaving the port complex by rail (up from the 26% on-dock rail for containerized cargo in 2015), if this mode shift results in reduced emissions (for example by using tier 4 locomotives). However, with no timelines for these goals or interim milestones, the accompanying emission reductions from these goals cannot be quantified or relied upon. SCAQMD staff also supports the Ports' participation in the development and demonstration of newer technologies such as a near-zero emission locomotive for switching operations within the port complex, and recommends finding opportunities to move beyond pilot projects and into larger scale deployments as soon as feasible.

**Harbor Craft**

SCAQMD staff supports the planned action to release a Request for Proposals (RFP) to conduct a study on harbor craft emission reduction technologies in 2017 with a goal to begin demonstration projects by mid-2018, but requests that funding level commitments be added to the 2017 CAAP. SCAQMD staff also supports the 2017 CAAP proposed actions to reduce emissions from harbor craft from improved operational efficiencies and encourages the Ports to release an RFP to help quantify and prioritize these efforts. If such a measure is included, SCAQMD requests that funding levels and timelines for operational improvement studies be added to the 2017 CAAP.

## CAAP-Heavy Duty Truck Plan

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**Time:** Mon, 28 Aug 2017 15:41:55 -0700  
**From:** Donald Sachs <dsachs@mtsac.edu>  
**To:** caap@cleanairactionplan.org  
**Subject:** CAAP-Heavy Duty Truck Plan

**Attachments:** msg-16391-62.html (2k)  
msg-16391-63.jpg (15k)



To: Staff and Commissioners from both Ports,

I think you folks are missing the boat!

Despite significant improvements over the years, the South Coast Air Basin has some of the worst air quality in the nation. Based on current facts the region needs action now regarding emission reductions from trucks to meet federally mandated air quality standards. The proposed plan does not reduce impacts to public health in the near term, it does not help the region meet 2023 attainment standards, nor does it address GHG emissions or climate change impacts.

The technology exists today with near zero emission engines that can serve the trucking industry today. A study conducted by U C Riverside showed that in port applications NOx emissions are reduced by 99.8%. When near zero engines are paired with renewable natural gas, GHG emissions can be NET NEGATIVE.

As an individual, I strongly encourage the ports to implement the fees as soon as possible to support the use of existing technologies that achieve NOx and GHG emissions now.

Sincerely,

Donald Sachs



*Donald Sachs*

Special Assistant to the President

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dsachs@mtsac.edu

August 28, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Subject: Comments on Draft 2017 CAAP Update

Dear Mr. Cannon and Ms. Tomley:

Thank you for the opportunity to provide input as you update the Clean Air Action Plan (CAAP). I had the opportunity to provide public comment at the February 16, 2017 Port of Los Angeles Board meeting and submit comments to the initial draft CAAP update. As I commented previously, I have been involved for quite some time in evaluating emissions from port operations. My scientific interest is in quantifying real world emissions from sources. We have created a world class emissions testing capability at the University of California Riverside CE-CERT lab (see <http://www.cert.ucr.edu/research/efr/> for more information.)

CE-CERT has been studying the in-use emissions from heavy duty trucks to determine the actual emissions for a number of duty cycles that are commonly encountered in urban areas such as Southern California. These duty cycles complement the testing protocol that is used for emissions certification testing at the EPA and California Resources Board (CARB). The objective is to quantify emissions in real world settings so that public policy makers can make informed decisions and engine manufacturers gain more information about the performance of their product.

In my prior comment letter, I highlighted key findings from CE-CERT's evaluations of in-use heavy duty emissions from a broad range of diesel and natural gas engines ranging from pre-2010 emissions standard to the current optional low-NO<sub>x</sub> standards of CARB. One key finding with respect to diesel engines certified to the 2010 emission standard is that these engines emit higher NO<sub>x</sub> than certified levels in urban applications. These applications involve congested traffic and slower speed operations. The drayage application, which is of most interest to the Ports, exhibited emissions on average that are 5 times greater than certified emissions. The enclosed report explains why the emissions control system is challenged in the drayage application. This is an important finding because emissions 5 times greater than the standard is approaching the emissions limit of a pre-2010 certified engine.

The second key finding relates to CE-CERT's recent evaluation of in-use emissions from a natural gas engine that is certified to the CARB optional low NO<sub>x</sub> standard of 0.02 g/bhp-hr.

As I mentioned in my comments to the Board, this is the first technology tested where emissions *actually decrease* at lower speed duty cycles. In the port drayage application, the emissions were found to be 0.002 g/bhp-hr, which is 90% below the optional low NO<sub>x</sub> standard and 99% lower than the 2010 emission standard. We had to develop specialized testing to accurately quantify emissions at this level. This is an example of the innovative work that we do at CE-CERT.

Since I submitted my prior comments to the Ports, results from two additional studies have been released that are pertinent to the Ports' consideration of drayage truck strategies under the CAAP. First, CE-CERT recently completed a study of real-world activity patterns of heavy-duty vehicles for the California Air Resources Board. CE-CERT collected operational data on 90 trucks operating in a range of vocations in California, including drayage trucks operating in Northern and Southern California. These tests indicate that typical drayage truck operations produce exhaust temperatures that are too low for the diesel emission control system to effectively reduce NO<sub>x</sub> emissions more than 70% of the time.

CE-CERT also recently completed a study of diesel emissions from newer 2014 and 2015 model year trucks. These newer model year trucks are of particular interest because they employ a new hardware and software to comply with federal On Board Diagnostics II (OBDII) requirements that became mandatory in 2013. These new OBDII systems are required to more closely monitor exhaust emissions and could improve in-use emissions from diesel trucks. CE-CERT's evaluations indicated that, in transient duty cycles characteristic of surface street driving, even these OBDII-compliant diesel trucks exhibited NO<sub>x</sub> emissions that were up to 4 times greater than certified emissions. Engine certification is based on engine dynamometer testing, and on-road in use testing is based on the Not-To-Exceed emission limit. Diesel vehicles in low duty cycles do not perform at their engine dynamometer certification level. Natural gas vehicles, on the other hand, perform at or even below their certification level in the lab and in low duty cycles.

Based on the findings of these two recent studies, the Ports should exercise great caution in developing a CAAP that relies on diesel technology to provide NO<sub>x</sub> reductions from the drayage fleet. These studies highlight the significant challenges that diesel engine manufacturers face in meeting the existing certified NO<sub>x</sub> emissions standard in low speed operations such as drayage. Meeting even more stringent NO<sub>x</sub> standards will be even more difficult and expensive, and will likely result in tradeoffs between reduced NO<sub>x</sub> and increased fuel consumption and greenhouse gas emissions, as well as significant issues related to ongoing maintenance, durability and in-use emissions performance.

Given the urgency of the air quality improvements needed in Southern California, natural gas engines certified to the 0.02g CARB optional low NO<sub>x</sub> standard and other technologies that can deliver extremely low in-use emissions are likely more prudent technologies to rely upon as you develop your newest CAAP.

I applaud you for the work that you are doing to update the CAAP. I appreciate the difficult and complex task at hand, especially listening to public comment and the discussion by the

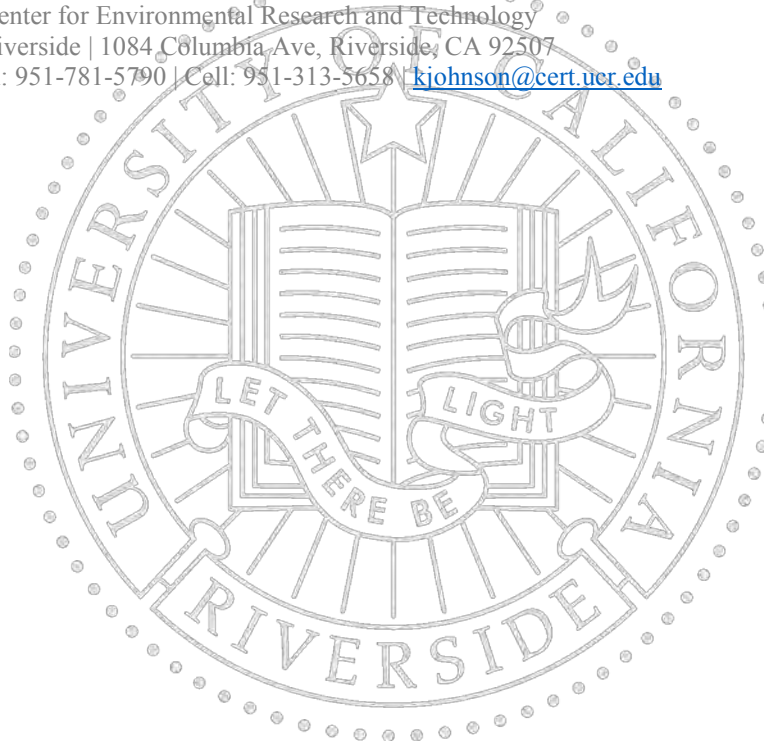
commissioners. I hope that the emissions testing work that we do at CE-CERT helps you with the policy work that you do.

Thank you for this opportunity to provide comments and please feel free to contact me at (951) 781-5786 or [kjohnson@cert.ucr.edu](mailto:kjohnson@cert.ucr.edu).

Sincerely,



**Kent Johnson, Ph.D.** | Principal Investigator, Emissions and Fuels Research  
College of Engineering - Center for Environmental Research and Technology  
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## Section 2

# Industry Stakeholders

# Daily Breeze

## Port clean-air plan risks rocking economic boat: Guest commentary



*In a file photo, cargo is moved from ship to truck at West Basin Container Terminal at the Port of Los Angeles in San Pedro. (Photo by Robert Casillas/Southern California News Group)*

By John McLaurin

Posted: 07/21/17, 9:20 AM PDT |

Since 2006, when the first Clean Air Action Plan was jointly adopted by the ports of Los Angeles and Long Beach, significant emissions reduction has occurred in San Pedro Bay. The latest Air Quality Report Card shows sulphur oxides emissions from ships is down 97 percent and diesel particulate matter from equipment at marine terminals is down 86 percent over 10 years.

As the new draft CAAP revision highlights, “These reductions are a testament to the CAAP’s cutting-edge strategies and the collaborative approach taken with the regulatory agencies and our industry partners to meet shared goals.”

With past progress in mind, we at the Pacific Merchant Shipping Association agree that further emissions and greenhouse gas reductions can and must occur. PMSA supports a revision that creates a smooth transition to zero-emissions technology while boosting both ports’ growth and recovering their lost market share, resulting in both a cleaner and more competitive San Pedro Bay port complex.

Unfortunately, the ports’ proposed revisions, released earlier this week, do not lay out the path to a win-win on the economy and the environment. Instead, their proposals focus on aggressive environmental mandates with no measure of cost-effectiveness, no comprehensive financial feasibility analysis, no funding plan and no business rationale for these goals.

One of these mandates is full zero-emissions electrification of all marine terminal equipment by 2030.

The only substantive cost estimate of moving to zero-emission technologies across San Pedro Bay is the Moffatt & Nichols study commissioned by PMSA. That analysis put the additional capital costs of moving to the only mature zero-emission technology available today at \$16 billion to \$28 billion statewide over 30 years, plus tens of billions more in additional operating costs. And that doesn’t include infrastructure costs outside the marine terminal gates.

But the proposed CAAP revision estimates that the cost to replace existing equipment with zero-emissions equipment will cost only \$1.8 billion and that port-side infrastructure will be \$2 billion.

To get such dramatically under-estimated costs, the CAAP revision is putting all of its eggs in one basket: unrealistically assuming that non-existent electrified cargo handling equipment technology will be developed, tested, work as planned and be affordably priced and produced in a quantity to meet the ports' rigid timelines.

That's a big assumption with no margin for error and no Plan B if and when something goes wrong.

What's more baffling is that this speculative exercise on technology and costs excludes the successes of commercially available automated electrified zero-emissions equipment in use at ports today. But, apparently because it is automated technology, the CAAP ignores it as an option.

Regardless of the specific equipment costs, the CAAP doesn't ask the baseline question of whether either the ports or their customers have the revenue available to pay for these dramatically higher equipment and infrastructure costs in a highly competitive market.

Nor does it consider that terminal operators don't have the luxury of the CAAP's "wait, see and hope" approach to new technology. If these aggressive timelines are to be met, plans need to be developed, permits approved and financing arranged, and construction needs to occur almost immediately. All of the above needs to be accomplished while terminals continue to operate.

If done poorly, the ports run the real risk of only becoming less competitive.

During the past 10 years, the ports' "growth" has been non-existent. Just this past month, their combined volume equaled what it was in 2006. Without a strategy to grow cargo volumes and then to utilize this growth to finance the most efficient, and cost-effective transition to a zero-emissions San Pedro Bay, the ports' CAAP is simply incomplete.

We have one shot to get this right. If we miss the opportunity to balance continued environmental progress with economic competitiveness policies that increase the volume of goods moving through the ports, then the region's economy, businesses and residents will suffer, and the emission reductions that are important to communities surrounding the ports may prove illusive.

PMSA stands ready, willing and able to work with the ports on a balanced, collaborative approach to the CAAP: one that's worked in the past and can work again in the future.

*John McLaurin is president of the [Pacific Merchant Shipping Association](#).*

**From:** [DeMoss, Tim](#)  
**To:** [Coluso, Amber](#)  
**Cc:** [Pisano, Teresa](#); [Atkins, Carter](#); [Goldberg, Jacob](#)  
**Subject:** FW: CAAP and Financing  
**Date:** Friday, July 28, 2017 2:34:56 PM

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Please file. Thanks!

---

**From:** Cannon, Chris  
**Sent:** Friday, July 28, 2017 10:10 AM  
**To:** Renee Moilanen; DeMoss, Tim; Wunder, Lisa  
**Subject:** Fwd: CAAP and Financing

Sent from wireless

Begin forwarded message:

**From:** Leroy Onishi <[lonishi@pacificenterprisebank.com](mailto:lonishi@pacificenterprisebank.com)>  
**Date:** July 28, 2017 at 9:52:58 AM PDT  
**To:** "Chris Cannon ([CCannon@PortLA.org](mailto:CCannon@PortLA.org))" <[CCannon@PortLA.org](mailto:CCannon@PortLA.org)>, "Heather Tomley ([Heather.Tomley@POLB.com](mailto:Heather.Tomley@POLB.com))" <[Heather.Tomley@POLB.com](mailto:Heather.Tomley@POLB.com)>  
**Cc:** Marc Merino <[mmerino@pacificenterprisebank.com](mailto:mmerino@pacificenterprisebank.com)>  
**Subject:** CAAP and Financing

Chris and Heather,

Thank you for your presentation at the HTA meeting on Wednesday regarding the proposed revised Clean Air Action Plan ("CAAP"). It is a very ambitious plan to clean the air in and around the ports. If implemented, CAAP will affect hundreds if not thousands of independent owner-operators ("IOOs") who service the ports since it will require that they upgrade their existing trucks to newer, cleaner trucks. As we discussed after your presentation, they will need financial help both in the form of government assistance and private financing. As a bank that has been financing trucks for IOOs in Southern California for a number of years, we at Pacific Enterprise Bank may have some insight as to what lenders may require and the type of financing plans that will be necessary.

Most IOOs are hard working individuals and know how to run a truck. However, as a group, they typically don't have pristine credit and do not qualify for loans from most banks. However, we have found a niche and ways to provide financing for this sector and have done a very good job in providing financing to them. In fact, in the past three years, we have financed an average of \$19 million in truck loans.

I don't profess to have a grand plan that will help the IOOs but I am willing to sit down with you to see if we can collectively provide some ideas. I will ask the head of our department, Marc Merino who is copied on this email, to join in as well. If you think our participation will be beneficial, let's schedule a meeting at your convenience.

**Leroy B. Onishi**  
**Vice President & Business Development Officer**  
**PACIFIC ENTERPRISE BANK**  
17748 Skypark Circle, Suite 100  
Irvine, CA 92614  
949-623-7808 (direct)

949-463-9155 (cell)  
949-800-1169 (fax)

Pacific Enterprise Bank Performance Rankings:  
#1 CalCAP Bank Lender in California since 2009  
Top Ranked 100 Most Active SBA 7a Lenders in the United States  
Top Ranked 100 Banks in the United States (out of 3,291 banks as reported by SNL Financial for 2014)  
Rated 5 Stars out of 5 in the United States (by Bauer Financial Rankings for 2014)  
Rated 5 Stars out of 5 by [Bankrate.com](http://Bankrate.com) in the United States

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**From:** [DeMoss, Tim](mailto:DeMoss.Tim)  
**To:** [Coluso, Amber](mailto:Coluso.Amber)  
**Subject:** FW: HTA Presentation  
**Date:** Wednesday, August 02, 2017 10:33:45 AM

---

For the files...

---

**From:** Tomley, Heather [mailto:[heather.tomley@polb.com](mailto:heather.tomley@polb.com)]  
**Sent:** Wednesday, August 02, 2017 10:09 AM  
**To:** Buss, Paul H  
**Cc:** Cannon, Chris; Moilanen, Renee; DeMoss, Tim  
**Subject:** RE: HTA Presentation

Hi Paul –

The best place to start would be to review the proposed program in the Draft 2017 CAAP Update available here:

<http://www.cleanairactionplan.org/2017-clean-air-action-plan-update/>

We are currently seeking public review and comment on the draft document. No new requirements are in place at this time, however if the plan is approved, that would initiate the process for new requirements to be developed. The plan will be considered for approval by our Boards in November, after which time we would start the tariff amendment process to implement the program.

I hope that helps.

Thanks,  
Heather

---

**From:** Buss, Paul H [mailto:[paul.buss@baml.com](mailto:paul.buss@baml.com)]  
**Sent:** Tuesday, August 01, 2017 5:02 PM  
**To:** Tomley, Heather <[heather.tomley@polb.com](mailto:heather.tomley@polb.com)>  
**Subject:** HTA Presentation

Heather,

I attended the HTA meeting last week and I would love to get more information on the new rules affecting customers with the Ports. As you can guess by my position I am looking to advise my clients on purchases and help them get financing to keep things moving. Thanks in advance.

**Paul H. Buss**

Vice President

Relationship Manager

Commercial Banking

Bank of America Merrill Lynch

Bank of America, N.A.

CA8-518-08-04, 21250 Hawthorne Blvd. Ste. 850, Torrance, CA 90503

T 310.785-6219 **M 714-345-7819** F 213-457-2905

[paul.buss@baml.com](mailto:paul.buss@baml.com)

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**From:** [Wunder, Lisa](#)  
**To:** [Coluso, Amber](#)  
**Cc:** [DeMoss, Tim](#)  
**Subject:** FW: Are new-tech trucks ready to replace diesel  
**Date:** Monday, August 14, 2017 3:04:53 PM

---

I think this would qualify as a CAAP comment. Thanks.

---

**From:** Cannon, Chris  
**Sent:** Monday, August 14, 2017 2:42 PM  
**To:** DeMoss, Tim; Wunder, Lisa  
**Subject:** FW: Are new-tech trucks ready to replace diesel

**Christopher Cannon**

Environmental Management Division  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731  
310-732-3763 dir  
310-547-4643 fax

---

**From:** Tankersley, Eileen  
**Sent:** Monday, August 14, 2017 11:01 AM  
**To:** Seroka, Gene; Cannon, Chris; DiBernardo, Michael  
**Cc:** Calhoun, Erica  
**Subject:** FW: Are new-tech trucks ready to replace diesel

FYI

**Eileen Tankersley**  
**Assistant to Gene Seroka, Executive Director**  
**Port of Los Angeles | 425 S. Palos Verdes Street | San Pedro, CA 90731**  
**(310) 732-3456 | [etankersley@portla.org](mailto:etankersley@portla.org)**



---

**From:** Richard Peterson [<mailto:rpeterson@angtl.com>]  
**Sent:** Friday, August 11, 2017 1:38 PM  
**To:** Tankersley, Eileen  
**Subject:** Are new-tech trucks ready to replace diesel

Executive Director Seroka,

Although I live in Alaska, I keep a sail boat in San Pedro at CBYC so I stay up with Port happenings. Rachel Uranga with the LA Daily News had an interesting article July 30,



2017, titled "Are new-tech trucks ready to replace diesel, keep California's pollution-fighting promise?". She mentioned how the Port of LA under your leadership has been looking for lower emission vehicles for Port operations. As a boat owner who constantly has to clean the "soot" off my decks, I strongly support your efforts. Good article although she missed one important fact. *Synthetic diesel made from natural gas.*

While natural gas is a present day player with a checkered past there is a well proven natural gas technology called gas to liquids or GTL that gets around the short comings of both CNG and LNG. Synthetic Fischer-Tropsch diesel (F-T diesel) made with the GTL process is an exact replacement for ultra low sulfur diesel. It burns as clean as both CNG and LNG but doesn't require any changes or modifications to fuel storage, transportation, or delivery systems nor the engines. Unlike CNG and LNG, F-T diesel has the same energy content of ULSD so the diesel truck doesn't end up with lower power or reduce mileage, a common complaint of many users of CNG or LNG. F-T diesel has no sulfur, "zero sulfur" and more importantly it has almost zero aromatics. You may recall that CARB lowered the aromatic content for California diesel from 30% to 10% because aromatics produce the smoke and particulates partially responsible for California's historic smog issues. The EPA in the late 1990's ruled that F-T diesel was non-toxic. UNOCAL wanted a synthetic drilling fluid it could discharge into the ocean. See *EPA Water Docket, EB 57 located at 401 M Street SW Washington DC, 20460 Reference Docket No. W-98-26 in UNOCAL data file 4.A.a.3, Vol 13.*

You may ask why isn't F-T synthetic diesel in the California market? It is in very small quantities. It was used as a blending fuel to improve the output of a small refinery. However, the majority of the worlds production goes to Europe where they actually value this ultra clean burning fuel. There are billions of gallons of F-T diesel already sold throughout Europe. Two plants recently came on line in Qatar producing over 7 million gallons per day of GTL products. Almost all is destined for Europe.

Like hydrogen and zero emission electric trucks the GTL process is expensive. Unlike wind, solar, electric cars or bio-renewable transport fuels, the GTL process has no State or Federal support to help defray these extraordinary costs. They do in Europe so that's why the majority of F-T diesel is sold in Europe. Fischer-Tropsch, the F-T in the process has well over 400,000 barrels per day (over 6 billion gallons per year) of plants operating around the world.

Again nice article but she missed the real technology that works today and we believe could be a great bridge transport fuel to get to the nirvana of "zero emission" vehicles.

Warm regards,

Dick Peterson

Richard Peterson  
ANGTL/ANRTL  
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(907) 264-6709 office  
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Contact:

Thomas Jelenić

562-432-4043

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## **COSTLY ENVIRONMENTAL POLICIES MAY RESULT IN INCREASED GREENHOUSE GAS EMISSIONS IF CARGO BYPASSES LA/LB PORTS FOR DISTANT EAST AND GULF COAST PORTS**

**LONG BEACH, CALIF.** – An analysis released today that was commissioned by the Pacific Merchant Shipping Association (PMSA) and conducted by Starcrest Consulting Group demonstrates that greenhouse gas (GHG) may increase if cargo is diverted from West Coast ports. The GHG increases are dependent on a number of factors including port of origin, port of destination, inland destination and container vessel sizes moving the cargo.

Policy proposals at the ports of Los Angeles and Long Beach, as well as those introduced by the state of California, to reduce GHGs could have an opposite effect than intended. Shippers and cargo owners, in response to increased costs due to regulation, may divert cargo from higher-cost West Coast ports to lower-cost East Coast and Gulf Coast ports. The analysis tool can be used to illustrate numerous scenarios, and many of them result in increased emissions.

As the analysis highlights, regulations intended to reduce greenhouse gas emissions associated with the supply chain may increase operational costs for cargo owners. As a result, cargo owners may shift their products to less expensive gateways with longer transit times and distances. The Starcrest analysis found that GHG emissions may average up to 22 percent higher, when cargo originating from Asia bypasses the ports of Los Angeles and Long Beach in favor of ports on the East Coast and Gulf Coast, with final destinations of Chicago, St. Louis and Memphis.

The analysis highlights three important factors when cargo owners decide where to send shipments – destination, reliability and cost. California ports offer the most direct shipping route from Asia to the U.S., and to inland U.S. destinations given their proximity to infrastructure, logistics networks and population centers.

However, with the increased costs of proposed regulations, today's cargo owners have more gateway options and, as regulations increase prices, other gateways are becoming viable transit options.

“Cargo owners around the world make decisions based on their pocket-books,” contends PMSA President John McLaurin. “We urge policy-makers to take a more holistic view and include global competitiveness as a factor in developing regulations to clean the air – doing so is essential to keep cargo and jobs in Los Angeles and Long Beach, and to avoid unintended GHG emissions increases.”

A spreadsheet-based Greenhouse Gas Route Comparison Tool developed by Starcrest Consulting Group is being made publically available by PMSA. The GHG Route Comparison Tool analyzes emissions associated with trips from South Korea, China and Singapore to West Coast, Gulf Coast and East Coast ports via the Pacific Ocean, Suez and Panama canals.

“Ultimately, this analysis paints a cautionary picture of the unintended consequences that may result from policy proposals designed to reduce GHG emissions but which may actually increase them due to the many options which exist for cargo owners,” concluded McLaurin. “Look no further than the Clean Air Action Plan. This proposal would add more than \$14 billion in costs without counterbalancing programs or funding to increase efficiency or competitiveness.”

#### **About the Pacific Merchant Shipping Association**

The Pacific Merchant Shipping Association (PMSA) is an independent, not-for-profit association focused on global trade. PMSA operates offices in Oakland, Long Beach and Seattle, and represents owners and operators of marine terminals and U.S. and foreign vessels operating throughout the world. For more information, visit [www.pmsaship.com](http://www.pmsaship.com).

#### **About Starcrest Consulting, L.L.C.**

Starcrest Consulting Group specializes in assisting port and maritime clients address their technical and policy related air quality, climate, sustainability, and data management needs. For more information, visit [www.starcrestllc.com](http://www.starcrestllc.com).

###

#### [EDITOR’S NOTE]

Download a copy of the Starcrest report [here](#).

Download a report infographic [here](#).

Download a copy of the Pacific Northwest Greenhouse Gas Comparison Tool [here](#).

Download a copy of the California Greenhouse Gas Comparison Tool [here](#).

## LA/LB Clean Air Action Plan

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**Time:** Tue, 29 Aug 2017 17:00:55 +0000  
**From:** "Scott M. Jones" <scott.jones@gensteam.com>  
**To:** "CAAP@cleanairactionplan.org" <CAAP@cleanairactionplan.org>  
**CC:** John Berge <jberge@pmsaship.com> , Chris K <chris.k@gensteam.com> , "Mike Hubbard" <mike.hubbard@gensteam.com>  
**Subject:** LA/LB Clean Air Action Plan  
**Attachments:** msg-28667-124.html (5k)



There is a very large segment of the maritime trade in the LA/LB area that is not appreciated nor adequately publicly represented in comparison to the container trades. The segment is the bulk and breakbulk business that are large users of labor and terminal space in the joint harbor complex. Their business is not fancy. They don't bring in the hottest athletic shoes, electronics or auto parts. They do not serve Walmart, Best Buy or the retail trades in general. They bring steel products, automobiles, aggregates, oil, base chemicals, lumber and all the other myriad items that serve the industrial needs of LA/LB AND the entire Southwest United States. You have a duty to consider the impacts of your draconian, 100% capture, proposal on the infrastructure that exists to support millions of jobs and lifestyles.

Electrification of all berths will not work for these trades. The vast majority of vessels that serve them trade worldwide, are hired by the voyage and will not be equipped to plug in. They are not dedicated vessels to an owner occupied terminal complex a la MAERSK. They operate in a fundamentally different manner than the Liner trades. That is why they are called the TRAMP trades. Therefore they will be forced to utilize the bonnet system which creates a host of problems. First, it is highly likely that these systems are NOT 100% efficient. Second, many of these vessels require line haul shifting along the berth multiple times. Detaching and reattaching the bonnet systems (do not believe for second that real world work rules will not require same) every time a shifting must occur is obviously detrimental to the operation and increases risk to the detriment of safety.

The tanker trades have even greater concern with the electrification requirement of berths for obvious reasons. Sparks and tankers do not mix. Given the bonnet systems being unlikely to achieve 100% recovery what reasonable choice is left? Shall we row the ethanol cargoes ashore that are needed to meet the automobile fuel standards?

There are the ridiculously low cost estimates in your projections. We have seen so many examples of final costs compared to the blue sky preliminary estimates within the harbor complex that this issue is beyond dispute. There is also the FACT that the alternate technologies that are counted upon as a magic wanted are not even developed let alone proven.

Lastly, if enacted as envisioned by the politicians, there will be a massive diversion of cargo away from Southern California. For the cargo that remains there will be a large increase in expense and a very large loss of jobs and taxes as a result. Emissions will in fact increase due to greater demand for trucking to bring cargo in to the basin. GHG emissions from vessels diverting to other North American ports will INCREASE far more than the incremental savings envisioned.

You have a duty to consider more than gamed up computer modeling being used to justify a political end. Emissions are down in the harbor area over 90% in the last 15 years. This effort at stomping out the last 10% from a segment of industry that is politically weak and not understood by you, basis your proposal, is counterproductive and just plain wrong. This needs a scalpel, not a meat axe.

May you see the light.

Regards, S.M. Jones

**FW: In case you missed it: Statement from Pacific Merchant Shipping Association on CAAP Workshop**

---

**Time:** Tue, 5 Sep 2017 16:48:39 +0000  
**From:** "Tomley, Heather" <heather.tomley@polb.com>  
**To:** ""caap@cleanairactionplan.org" <caap@cleanairactionplan.org> , "Cannon, Chris (CCannon@portla.org)" <CCannon@portla.org> , "Moilanen, Renee" <renee.moilanen@polb.com> , "Tim DeMoss (tdemoss@portla.org)" <tdemoss@portla.org> , "Wunder, Lisa" <lwunder@portla.org> , "Cameron, Rick" <rick.cameron@polb.com> , "McIntosh, Dawn" <dawn.mcintosh@longbeach.gov> , "Houterman, Justin (JHouterman@portla.org)" <JHouterman@portla.org> , "Joy Crose" <JCrose@portla.org>  
**Subject:** FW: In case you missed it: Statement from Pacific Merchant Shipping Association on CAAP Workshop  
**Attachments:** msg-26609-212.html (22k)



**From:** PMSA [mailto:jalvarenga@pmsaship.com]  
**Sent:** Tuesday, September 05, 2017 9:40 AM  
**To:** Tomley, Heather <heather.tomley@polb.com>  
**Subject:** In case you missed it: Statement from Pacific Merchant Shipping Association on CAAP Workshop



The Ports of LA and Long Beach held a joint public workshop on the Clean Air Action Plan, on August 30th. Below, see what John McLaurin, President of the Pacific Merchant Shipping Association, had to say.

**Contact:**  
**Thomas Jelenić**  
**(562)432-4043**

**FOR IMMEDIATE RELEASE**

**August 30, 2017**

## Statement from Pacific Merchant Shipping Association on CAAP Workshop

WILMINGTON, CALIF. – John McLaurin, President of the Pacific Merchant Shipping Association, released this statement following the Ports of Los Angeles and Long Beach’s public workshop on proposed Clean Air Action Plan (CAAP) Revisions:

For more than a decade, and at great expense, the maritime industry has worked closely with the Ports of Los Angeles and Long Beach to dramatically decrease emissions and improve the air quality of Southern California. This significant and unprecedented progress was confirmed in the Ports’ recently released 2016 emissions inventory, which shows that diesel emissions from cargo handling equipment and trucks have been reduced by 96% over the past 10 years.

The Ports acknowledge that this “unprecedented success” in dramatic emissions reductions “would not have been achieved without the support of the maritime industry and the other stakeholders.” We look forward to continuing these partnerships and building on these successful environmental achievements together, however that will only occur if the Draft CAAP strategies are cost-effective and ensure that the ports grow their cargo volumes and market share.

The newly proposed Draft CAAP is focused on how to reduce the remaining 4% of these emissions to zero but does not address either the cost-effectiveness or the market share growth necessary to pay for these strategies. The Draft CAAP estimates to reduce the remaining 4% emissions gap, it will cost an additional \$14 billion for new technology that does not exist and has not been developed or demonstrated to be commercially feasible. Cost estimates based on current commercially available and feasible technology are tens of billions of dollars higher.

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PMSA | 70 Washington Street, Suite 305, Oakland, CA 94607

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**A Z U S A**  
CHAMBER OF COMMERCE



# AZUSA Chamber of Commerce

August 31, 2017

To: Staff and Commissioners from both Ports,

Despite significant improvements over the years, the South Coast Air Basin has some of the worst air quality in the nation.

Based on current facts the region needs action now regarding emission reductions from trucks to meet federally mandated air quality standards. The proposed plan does not reduce impacts to public health in the near term, it does not help the region meet 2023 attainment standards, nor does it address GHG emissions or climate change impacts.

The technology exists today with near zero emission engines that can serve the trucking industry today. A study conducted by U C Riverside showed that in port applications NOx emissions are reduced by 99.8%. When near zero engines are paired with renewable natural gas, GHG emissions can be NET NEGATIVE.

The Chamber strongly encourages the ports to implement the fees as soon as possible to support the use of existing technologies that achieve NOx and GHG emissions now.

Respectfully,

  
Steven A. Castro, CEO

Azusa Chamber of Commerce

240 W. Foothill Boulevard, Azusa, CA . 91702 • Phone (626) 334-1507 Fax (626) 334-5217

[www.azusachamber.org](http://www.azusachamber.org)



## Jock O'Connell's Commentary: Musing Over CAAP 2017

Late last month, the Ports of Los Angeles and Long Beach released their proposed 2017 Clean Air Action Plan (CAAP) Update. The document, now open for public comment through September 18, outlines a highly aggressive strategy to “ultimately achieve zero emissions for trucks and terminal equipment.”

The two ports have also released a detailed cost analysis by EnSafe, a Tennessee-based consulting firm. The numbers in the EnSafe analysis quickly fall into the daunting “a billion here, a billion there” category. Unfortunately, as we shall see, the numbers that are not in the EnSafe study are likely to be even more daunting.

Here we don't propose to do a full-blown audit of EnSafe's cost estimates. Instead, we simply would like to emphasize just how extraordinarily conditional those estimates are by highlighting the several times the folks at EnSafe candidly concede that their cost estimates could very well prove to be, well, fantastic.

The following quotes – pre-emptive *mea culpas* if you will – are from the introductory pages of the EnSafe report.

- *“In many cases, assumptions have been made to estimate the cost of technology that is not commercially available.”*
- *“At this time, the state of near-zero and zero-emission technology development varies...The variability in the emerging near-zero and zero-emission market creates large uncertainties in the costs of future equipment and related infrastructure.”*
- *“This analysis assumes terminal and Port operations remain the same or similar to existing conditions.”*
- *“This analysis does not include maritime terminal costs resulting from implementation of the near-zero and zero-emission technology into ongoing terminal operations such as increased costs resulting from reduced productivity, lost revenue from repositioned cargo to other terminals during construction, or costs of phased construction.”*

- *“The analysis does not include cost estimates for fueling or charging infrastructure for heavy-duty trucks, which is likely to exist outside the Harbor Districts and throughout the region.”*
- *“Furthermore, estimates are based on costs in 2017; inflation and the ‘future cost of money’ have not been included in this analysis.”*

These are all very reasonable and honest allusions to the conditionality of economic forecasting. Projecting costs or even future levels of maritime traffic at the two ports is fraught with the perils of prophecy, especially given the fluid nature of today's shipping industry (e.g., alliance consolidation, ever larger vessels, shifting trade routes) as well as the fairly peculiar competitive challenges posed by California's aggressive regulatory environment.

I am prepared to wager heavily that, by 2030, the cost estimates offered by EnSafe will be a mere fraction of the actual expenditures that will ultimately be required to implement CAAP 2017. So that is why many of us find the reluctance of public officials to squarely address what we believe is the most fundamental issue here: Who's going to pay?

Right now, neither the State of California nor the United States Government appears eager to contribute more than token amounts. Will the shipping lines, terminal operators, truckers, railroads pony up the billions that will be needed? Will the ILWU offer wage and benefit concessions? Will port pilots hold a bake sale? Will beneficial cargo owners agree to a CAAP compliance surcharge or would they just take their business elsewhere?

Perhaps, taking a cue from the President, we should just demand that the Chinese pay.

*Jock's comments are his own and do not necessarily represent the views of PMSA.*





## The Clean Air Action Plan – Can Ports Compete If It Is Enacted?

By John McLaurin  
President, Pacific Merchant Shipping Association

The Ports of Los Angeles and Long Beach have published a draft Clean Air Action Plan (CAAP), a document that was widely publicized and praised by the ports. According to port leaders, the CAAP, in terms that would make Star Trek's famous Captain James T. Kirk proud, would lead the ports to go "...where no port has gone before," through a "...new array of technologies and strategies to further lower port-related emissions in the decades ahead."

The success in reducing transportation emissions related to port activities is well-documented and a function of cooperative and voluntary efforts, as well as compliance with regulatory measures by marine terminal operators, ocean carriers, trucking companies and harbor craft. You would be hard pressed to name an industry that has seen such dramatic reductions in emissions in as such a short period of time as compared to the maritime industry.

But the CAAP will bring about even more transformational changes to the San Pedro waterfront. The draft CAAP represents a gamble on the part of those pushing for these changes to dramatically reduce emissions without negatively impacting jobs or trade volumes.

It is also a gamble by the International Longshore and Warehouse Union (ILWU), which has taken a back seat to the overall zero-emission debate – except to advocate the prohibition of the use of certain public funds for automated zero emissions equipment.

The CAAP's goals, while admirable, also raise significant questions – queries that must be answered before either port commission approves this document. The most fundamental questions revolve around whether the technology relied on in the CAAP will actually be in existence and commercially available to meet the zero-emission deadlines of 2030.

Second and equally important, where will the money come from (we're talking about billions of dollars) to pay for this equipment and will exceptionally high costs divert cargo to other gateways?

Why does the CAAP specify a specific technology, power source and operational mandate? The CAAP declares itself to be "...technology-neutral, fuel-neutral, and operations neutral" – but the current draft has a clear preference for non-automated zero-emissions equipment...equipment that currently does not exist.

With regard to the ILWU, despite the CAAP's preference for non-automated zero-emissions equipment, will the cost of zero-emissions equipment coupled with operational restrictions and fines be so high as to actually encourage marine terminals to use automation as a way of achieving the port's zero-emission goals?

Ultimately, all questions about the CAAP circle back to those involving cost, cargo availability and velocity. According to the Ports of Los Angeles and Long Beach, the cost of the CAAP is estimated to be between \$8.5 and \$14 billion. Cost estimates utilize prices for "...zero emission options that do not exist." The port estimates also do not include a number of costs that would directly impact their tenants and customers such as:

- A fee assessed against cargo owners for use of dirty trucks starting in 2023.
- "...increased costs resulting from reduced [terminal] productivity, lost revenue from repositioning of cargo to other terminals during construction, or costs of phased construction."
- Ongoing operational or maintenance costs.

Continued

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## The Clean Air Action Plan – Can Ports Compete If It Is Enacted? *Continued*

- Fueling or charging infrastructure for heavy duty trucks, which will need to exist outside the harbor districts.
- Imposition of fines or penalties on trucking companies or terminal operators for failing to meet appointment window requirements – or the cost of reducing cargo volumes in order to avoid such penalties.

Despite these omissions, the CAAP repeatedly warns about the cost impacts that will be imposed on cargo owners, terminals, ocean carriers and the ports themselves by stating that, “Keeping the ports economically competitive... will be challenging” and that “...these strategies will place an enormous financial burden on the Ports and the goods movement industry.”

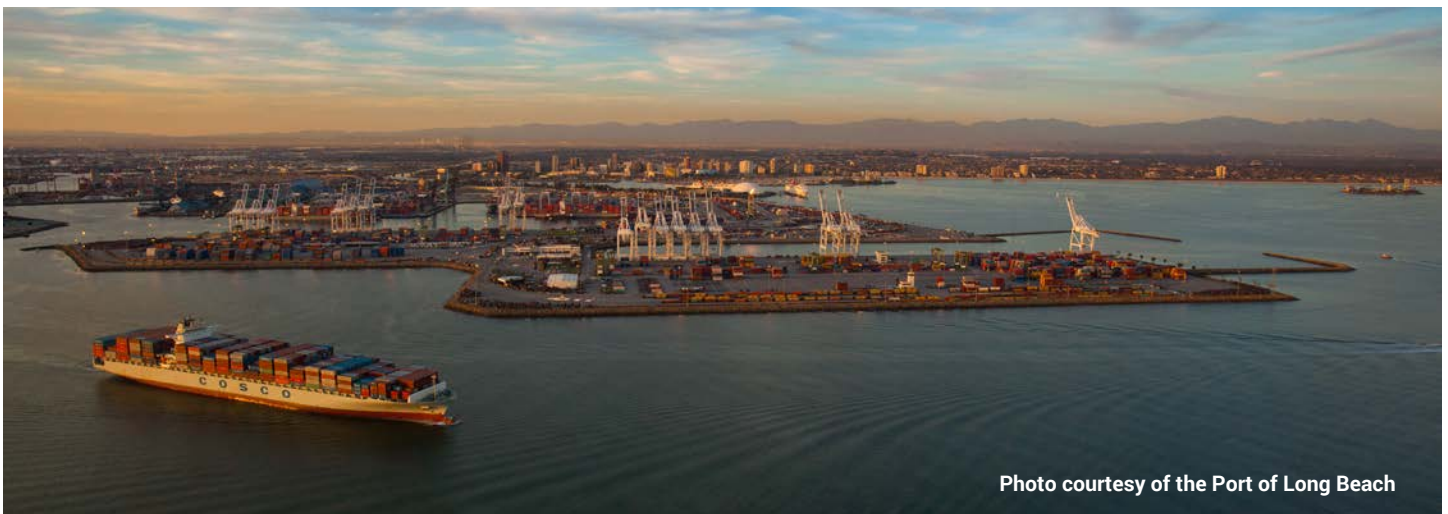
Interestingly, one solution offered by the ports is to impose some of the CAAP strategies and costs throughout the nation “...through state and federal mandates, in order to minimize impacts to economic competitiveness for our customers.” However, assuming

that other competing North American port gateways will follow the lead of the ports of Los Angeles and Long Beach is highly speculative, or naïve...or both.

The CAAP also acknowledges that it does not contain a “detailed economic analysis of individual CAAP strategies” and “does not purport to determine the net effect of the CAAP strategies on the industry or public health.” In other words, no one really knows what impact, either for good or bad, the CAAP will bring to the Ports of Los Angeles and Long Beach, surrounding communities and those that rely on the ports for jobs.

With as yet to be developed technology forming the basis of speculative cost estimates coupled with no reliable funding stream to meet a 2030 deadline that is without rationale, and in the absence of any analysis of the overall economic and environmental net effect, we are left with a CAAP that is based mostly on faith.

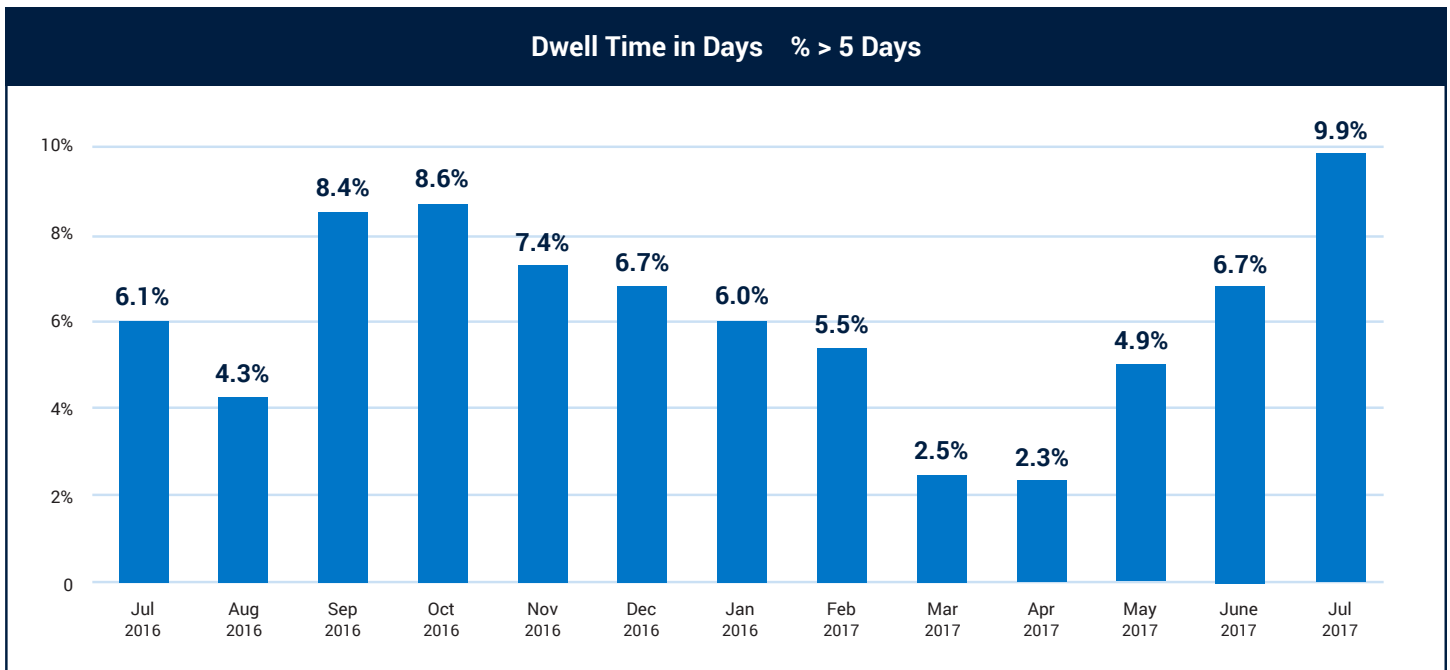
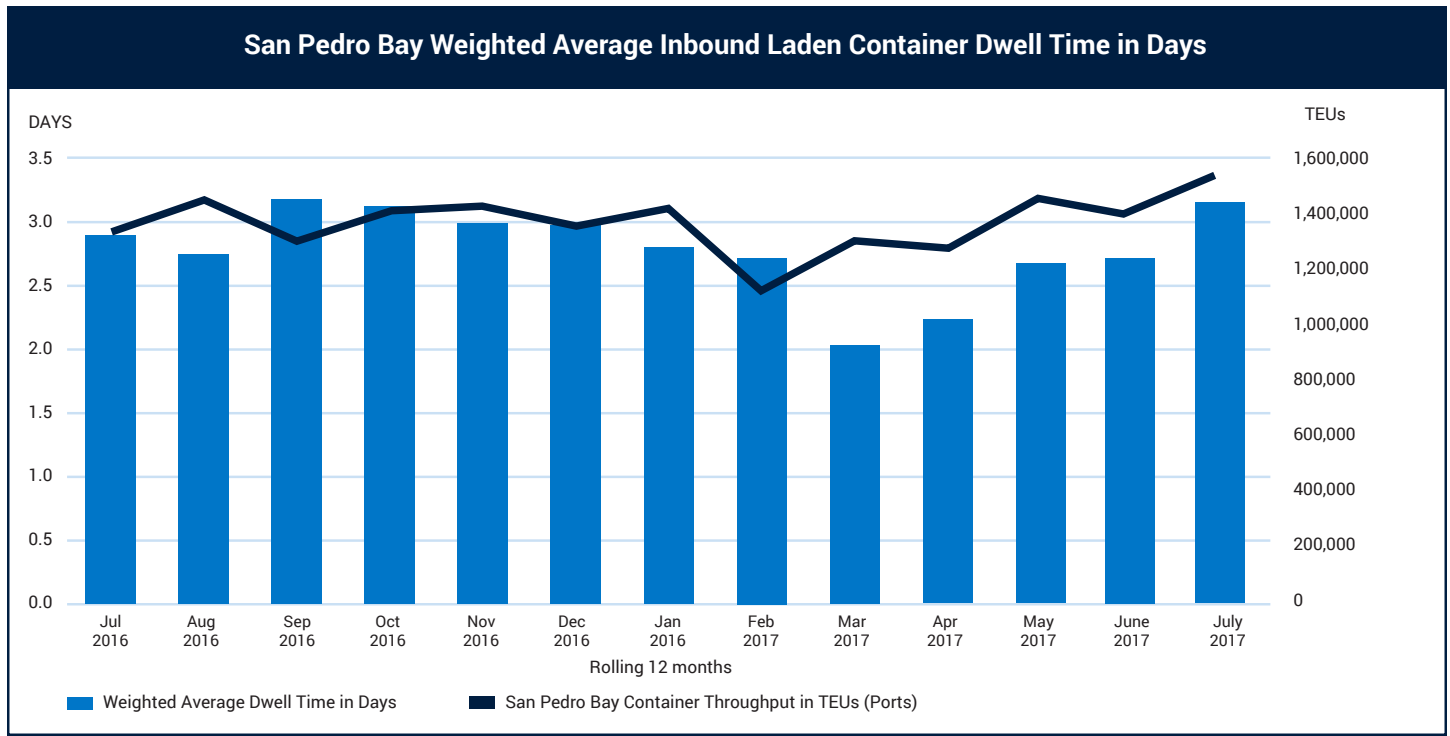
On behalf of all of us who work at the ports, let us all pray.



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## Container Dwell Time Increases In July



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September 7, 2017

Best Buy

BNSF Railway

California  
Multimodal Inc.

CMC Logistics

Evans Delivery

GSC Logistics

The Home Depot

HP

Lowe's

Majestic Realty

Nike

NYK

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Port of Los Angeles

Retail Industry  
Leaders Association

RoadOne

South Carolina  
State Ports  
Authority

Southeast  
Streamline

Target

TOTE

Total  
Transportation  
Services, Inc.

Yang Ming

Mr. Gene Seroka  
Executive Director  
Port of Los Angeles  
425 S. Palos Verdes Street  
San Pedro, CA 90733

Mr. Mario Cordero  
Executive Director  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Dear Mr. Seroka and Mr. Cordero:

The Coalition for Responsible Transportation (CRT) is a U.S. EPA Award-Winning Coalition of the nation's largest shippers, Ports, Ocean Carriers, Railroads and Trucking providers. Through CRT, our shippers and service providers have led acclaimed national initiatives to promote emission reductions and efficiency at ports across the nation.

These companies share the belief that by partnering together, ports and their customers can improve the environmental quality of port communities across the country while ensuring that the ports remain an engine for job creation and a thriving economy.

CRT member companies were among the earliest industry stakeholders to publicly support the clean air goals that were proposed a decade ago by the Ports of Los Angeles and Long Beach through the phase-out of older, high-polluting trucks. The challenges that shippers and providers faced to meet the air quality goals set by the Ports were immense, but CRT's members understood those challenges, and saw the original CAAP as an opportunity for the goods movement industry to partner with the ports in reducing emissions and community health risks. The air quality improvements that resulted from the CAAP have exceeded even the most optimistic projections.

The success of the Ports and CRT's members are deeply intertwined, and CRT once again stands ready to partner with the Ports to implement the most ambitious update yet to the CAAP. In support of this partnership, CRT also requests that the Ports strengthen CAAP in three key areas, all of which are further detailed in this letter:

- The CAAP's economic impacts must be clearly understood and planned for prior to implementation;
- The CAAP must include both environmental and efficiency goals; and
- The CAAP should include consideration of LNG bunkering for oceangoing vessels.

**1) CRT supports the Ports' development of air quality initiatives through the CAAP and will partner with the Ports to support the CAAP's initiatives**

The air quality challenges facing Southern California are immense. Despite the monumental air quality improvements that have been made over the decade since the adoption of the initial CAAP, further reductions are needed to comply with state and federal air quality standards and further reduce health impacts to local communities. Southern California's topography, climate and urbanization contribute to the fact that the region suffers from the worst air quality in the United States. The region's historic inability to achieve national air quality standards has resulted in the adoption of some of the most aggressive emission reduction initiatives in the country. Their location in southern California and their role as a contributor to the region's air quality problems have required the Ports of LA and Long Beach to take more aggressive steps to curb pollution than any competing gateway in the nation. The fact of the matter is that the Ports' air quality challenges must be met if Southern California is to remain a viable gateway for international trade over the coming decades.

CRT fundamentally believes that Ports are the most appropriate decision-making body to develop the specific air quality goals and strategies that will impact their facilities. In the case of Southern California, the Ports of LA and Long Beach continue to demonstrate their strong commitment to environmental sustainability and their sensitivity to the impacts their operations have on neighboring communities. Importantly, the Ports are also uniquely positioned to understand and prevent or mitigate adverse economic impacts that could result from potential air quality improvement strategies that have been proposed for inclusion in the CAAP. This is due in large part to the collaborative relationship that the Ports' leadership has facilitated with their customers and service providers throughout the development of the CAAP.

As the first CAAP demonstrated a decade ago, the most successful path to meeting the Ports' clean air goals is the partnership between industry stakeholders and the Ports, recognizing that industry can provide the Ports with insight, experience and expertise on how to reach their goals in the most efficient and cost-effective manner.

However, if the Ports, its customers, and its service providers are unable to answer the air quality challenges facing the San Pedro harbor, it is certain that regulators outside the Ports will impose their own requirements on the Ports and freight industry. Regulations which are unilaterally imposed by outside agencies are more likely to ignore competitive consequences to the Ports and unfavorable implications to the freight sector and broader economy. Customer-averse policies including indirect source rules and container fee increases are likely outcomes of a process led by external regulators and will result in serious harm to the competitive position of the Ports and Southern California's freight sector.



Ultimately, developing air quality programs that have the support and participation of the Ports, its customers, and its service providers is the most effective way to ensure that ports do not lose discretionary cargo to their competitors and that freight industry remains a vital catalyst for economic development and job creation in the region.

**2) The success of the CAAP's environmental initiatives are dependent upon the Plan's economic sustainability, and the CAAP's economic impacts must be clearly understood prior to implementation**

The Ports have estimated incremental costs of \$8.5 billion to as high as nearly \$14 billion for new technologies, infrastructure investments, and incentive programs to support the CAAP 3.0 strategies. These figures dwarf the estimated \$2 billion that was spent on emission reduction strategies over the past decade as a result of the original CAAP. As the Ports correctly point out in the CAAP Update document, "the CAAP cannot be successful, and the industry cannot remain economically competitive, without the significant financial support of the state and federal government."

CRT member companies are united by their commitment to environmental sustainability and recognize that partnering with the Ports to meet the goals articulated in CAAP 3.0 will require very significant financial support. Private-sector investment will be an absolutely critical component to the success of the CAAP, just as it was a decade ago when CRT member companies invested hundreds of millions of dollars to deploy trucks meeting 2007 federal emissions standards into drayage service at the Ports of LA and Long Beach. This unprecedented level of private investment, coupled with significant public funding (including \$1 billion from Prop 1B), allowed the shipping industry to meet the CAAP's original truck retirement goals two full years ahead of the Ports' aggressive deadlines.

However, the enormous industry investment made in clean technology over the past decade amounts to just a fraction of the estimated cost of CAAP 3.0, and the amount of dedicated public funding to support the CAAP is considerably less than it was ten years ago.

Given the sheer scale of investment that will be required under CAAP 3.0, it is imperative that the Ports undertake a considerably more detailed analysis of the program costs and their impacts to specific industry sectors before implementation of the CAAP strategies.

As a first step, a detailed inventory of public sector resources including Port, local, regional, state and federal funding currently available to offset the implementation

costs of CAAP strategies should be conducted to identify the estimated net cost to industry of compliance with each CAAP strategy.

Subsequently, the Ports must convene a direct consultation with supply chain participants that is narrowly focused on determining a realistic estimate of the amount of additional annualized expenditure that can be borne by the private sector to support CAAP strategies without causing significant harm to the Ports' competitive position or economic disruption within the supply chain.

In this analysis, the emergence of a significant delta between the CAAP implementation costs assigned to industry and the level of additional costs that can be sustained by industry must be closely examined as a critical indicator of the long-term economic sustainability and viability of the CAAP.

If the Ports find that the CAAP's expected industry cost burden will result in dramatic cost increases to move cargo through southern California, cargo diversion away from the Ports becomes a very real concern. As the Ports are keenly aware, the decision of how to move cargo is an economic one for any company that is importing its goods into the US or exporting goods into the global marketplace. Simply put, if cargo becomes significantly more expensive to move through southern California, that cargo will likely find another alternative. This can have potentially perilous economic consequences for the ability of the Ports to remain engines for job creation and regional economic growth. Recent studies have also illustrated that cargo diversion around southern California results in significant increases to supply chain GHG emissions.

But even more importantly, the Ports' ongoing environmental sustainability is directly dependent upon the Ports' economic sustainability. Simply put, cargo diversion away from southern California will seriously harm the ability of the Ports to continue to attract the substantial private capital needed to successfully implement the CAAP's strategies.

We urge the Ports to undertake the economic analysis described above not to discourage the adoption of the CAAP, but because we believe a forthright assessment of the CAAP's costs and economic impacts are imperative to the Ports' planning and decision-making process. CRT and its members are committed to close collaboration with the Ports throughout this process.

To the degree that this analysis reveals CAAP implementation costs exceed what can reasonably be sustained by industry, there are a variety of strategies that the Ports' will need to consider to bridge this funding gap. Implementing these strategies at the front end of the CAAP is far superior to mid-program intervention to chase cargo that has already left and market share that has already dropped.

CRT also believes that this analysis will underscore the absolutely critical need for new public-private partnerships to financially support what will be the largest environmental investment ever undertaken in a port complex.

CRT is committed dedicating our organization's advocacy resources to partnering with the Ports at the local, state and federal level to identify and secure funding to support the initiatives and strategies contained in the CAAP. We consider the urgent need for funding to support the CAAP an important opportunity to partner with environmental and community advocates in support of a common goal, and we call on our partners within the freight industry to join in this effort as well. CRT takes great pride in the success that has been achieved through similar partnerships, such as when CRT, the Retail Industry Leaders Association and the Environmental Defense Fund partnered in joint advocacy efforts to support funding for Diesel Emission Reduction Act grants and the U.S. EPA SmartWay Partnership.

### **3) The CAAP must include both environmental and efficiency goals**

CRT strongly agrees with the CAAP's recognition that operational efficiencies are valuable both as an emission reduction strategy and as a method to provide cost savings to cargo owners and providers to help offset CAAP compliance costs. The Ports have demonstrated their commitment to improving efficiency through the creation of the Supply Chain Optimization strategy, and by leading several pilot programs to improve cargo flow.

Given the important implications for system efficiency in emission reduction, industry cost mitigation and maintenance of the competitive position of the Ports, CRT believes that the CAAP should include specific measurable goals for efficiency improvement at the Ports. The CAAP proposes the most aggressive environmental measures ever undertaken by a port complex, and should similarly propose aggressive efficiency strategies and goals to accompany these environmental measures. Setting aggressive efficiency goals and holding themselves accountable to achieving them will send an important signal that the Ports are committed to both the environmental and economic sustainability of the gateway.

Measuring port performance is an essential part of any efficiency improvement effort because it provides a baseline from which goals can be set and improvements can be measured. This exercise should not be used to measure the Ports against competing gateways, but rather to measure process improvement within the Ports themselves.

Southern California's port trucking industry provides a useful example of the types of performance goals that should be included in the CAAP. For instance, the deployment

of GeoStamp across the harbor provides real-time data on marine terminal conditions which allows motor carriers to optimize their driver fleet each day. But GeoStamp also provides a vast amount of important historical data which documents truck turn times across all of the Ports' terminals. Using this data to create a baseline measurement of turn times would allow the Ports to work with terminals and truckers to set measurable goals for turn time reduction and implement strategies to meet those goals. Requiring a significant but achievable goal for turn time reduction in the CAAP would provide both measurable emission reductions and costs savings to the Ports, their providers and customers.

The CAAP also offers an important opportunity to promote strategies to address the inefficient practice of transporting empty containers for one leg of each round-trip to and from a port. These unnecessary miles, or "empty" miles, result in increased traffic congestion, increased emissions and increased cost to the shipping community. This practice exacerbates port congestion because terminals are handling a significantly inflated number of containers, and surrounding communities are left with the resulting traffic and health impacts.

The CAAP presents an opportunity for the Ports to prioritize the development of a collaborative logistics system where exporters can utilize empty import containers in the field to return them to the port loaded with an export shipment. Each shipping container that is matched in the field eliminates two empty one-way trips for that container. If the CAAP set even a modest goal of a 10% "match rate" for import containers, the resulting reductions in emissions, congestion, and cost would be very substantial. Container matching programs have been successfully operated for many years on the East Coast, and CRT believes there are tremendous potential benefits from the implementation of a similar system in southern California.

The CAAP strategies identified above also have important implications for the independent owner operators (IOOs) who comprise roughly 90% of the driver population in Southern California. The transition to cleaner truck technology anticipated in the CAAP will place a significant financial burden on IOOs if they are to continue to do business at the Ports. The costs of transitioning to model year 2007 trucks under the original CAAP resulted in several thousand IOOs permanently leaving the harbor, and the costs of this new technology will likely be even greater. The port trucking industry is already facing a driver shortage, and it will be important for all parties to ensure that truck owners have the ability to recoup their investment in the new trucks that will be required under the CAAP so they are able to remain in southern California's drayage industry. The ability of the drayage industry to survive this next technology transition will also be dependent upon their ability to generate sufficient revenue is directly dependent upon how many turns per day, week or month they are able to complete. Reducing port truck congestion and unproductive moves are two of

the most important ways that the Ports can ensure that port drayage remains economically sustainable for drivers under the CAAP. This is why CRT believes it is imperative for port efficiency goals and strategies to be an integral part of the CAAP.

#### **4) LNG vessel fuel bunkering must be considered in the CAAP**

CRT is concerned that LNG vessel fuel bunkering is not identified as an emission reduction strategy in the CAAP.

The environmental benefits of LNG as a marine fuel are increasingly being recognized by the shipping industry, ports and port communities world-wide. LNG offers the shipping industry a credible, safe, competitive and environmentally beneficial fuel. Compared to existing alternatives and other unproven technologies, LNG provides a means to address key environmental needs today. It is in use now and has proven itself to be an effective and safe marine fuel.

Of the world's top ten bunkering ports all, except for the Ports of Long Beach and Los Angeles, either already offer LNG bunkering or have firm plans to do so by 2020. For example, Singapore, which accounts for the biggest volume of marine fuel bunkers, is piloting truck-to-ship LNG bunkering and has a goal of being fully LNG bunker-ready by 2020. In Rotterdam, the world's second biggest bunker port, LNG via truck-to-ship, tank-to-ship and ship-to-ship bunkering is already available, and as noted above, the port is starting to explore the use of renewable natural gas as part of its LNG bunkering service offering and strategy.

LNG bunkering in Southern California would enable the Ports to attract the cleanest vessels in the US and global shipping fleet to the San Pedro Bay ports. Given the Ports' significance as a major international shipping hub, they should play a key role in facilitating the IMO's (International Maritime Organisation) initiatives to reduce global emissions from the shipping sector, particularly in its introduction of a global sulphur cap of 0.5% for marine fuels from 2020.

Ultimately, LNG-fueled vessels and bunkering infrastructure could potentially provide a zero-emissions pathway for shipping; an incredibly important opportunity that CRT believes must be considered in the CAAP.

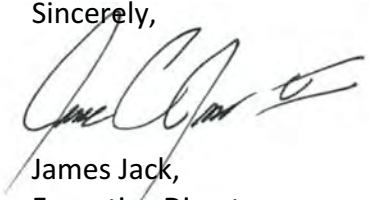
#### **Conclusion**

The overwhelming success of the Clean Air Action Plan in improving air quality in Southern California offers an important case study in how the shipping industry and local ports can partner together to make significant reduce diesel pollution.

Developing air quality programs that have the support and participation of the Ports, its customers, and its service providers is the most effective way to ensure that ports do not lose discretionary cargo to their competitors and that freight industry remains a vital catalyst for economic development and job creation in the region.

CRT looks forward to our continued collaboration with the Ports on the CAAP and the specific suggestions we have provided in this document.

Sincerely,

A handwritten signature in black ink, appearing to read "James Jack", with a stylized flourish at the end.

James Jack,  
Executive Director



***Inland Kenworth (US), Inc.***  
*1600 Washington Blvd*  
*Montebello, CA 90640*

September 11, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

Subject: Inland Kenworth Support of RNG Low NOx Trucks for the Clean Air Action Plan

Dear Mr. Cannon and Ms. Tomley:

Inland Kenworth is a local business that sells, services and supports Kenworth trucks. We have been in business for over 70 years. Our territory covers all of Southern California, Central Coast of California, Arizona, New Mexico and British Columbia. In Southern California we operate sales and service facilities in Carson, Montebello, Fontana, San Diego and Otay Mesa. We employ 1200 people in service, sales, parts, and administration.

Inland Kenworth has been a trailblazer with natural gas heavy duty trucks going back 10 years to the first Clean Trucks Program. We installed the first 100 LNG HPDI conversion systems for Westport Innovations on Kenworth trucks. Inland Kenworth also sold and serviced trucks with the Cummins Westport engine. Since that time, our business with natural gas trucks has expanded and encompasses all forms of heavy duty trucks from tractors to concrete mixers to refuse trucks. Kenworth offers a comprehensive product lineup for natural gas trucks including T270, T370, T470, T680, T880, T800 models. Kenworth is also working on new technology clean trucks under various CA grants for hybrid trucks using Cummins Westport natural gas engines and other new technologies not in commercial production.

The newest ultra-low NOx 12 liter engine from Cummins Westport (CWI) achieves emissions levels that rival a battery electric truck. The arrival of this engine to market at the same time as the Clean Air Action Plan (CAAP) is being updated creates the opportunity of a lifetime. Inland Kenworth agrees with the Advanced Clean Trucks Now (ACT Now) Plan proposed by the California Natural Gas Vehicle Coalition that renewable natural gas powering the ultra-low NOx engine is the quickest and most affordable path to clean air at the ports.

#### **NOx Emissions**

The CWI 12 liter ultra-low NOx engine is being certified to the ARB's lowest alternative low NOx standard of 0.02 g/bhp-hr. This NOx level is so low that AQMD and CEC consider this to be equivalent to an electric battery truck that is charged by the grid. The NOx control technology is so efficient that a recent test by UC Riverside found that the NOx emissions in slow speed applications like port drayage are actually 0.002 – 90% lower than the 0.02 certification level. The significance of this finding cannot be understated. UC Riverside found that modern diesel engines in slow speed applications like port drayage emit 5 times higher than their certified emissions. Between the higher emissions of diesel engines and the lower emissions of the CWI engine, the CWI engine is 99% cleaner than diesel and on par if not better than electric.

#### **Diesel Particulate Matter (DPM) Emissions**

The CWI 12 liter engine has zero, 0, emissions of DPM. DPM emissions are completely eliminated. While it can be argued that modern diesel engines have control systems for DPM, the fact remains that these control systems can fail or malfunction due to age or improper maintenance or defeating. All of these issues go away by using natural gas engines.

**Greenhouse Gas (GHG) Emissions**

The case for using the CWI near zero engine is even more compelling by powering with Renewable Natural Gas (RNG). RNG is a sustainable, low carbon fuel with greenhouse gas (GHG) emission reductions that are equal to and even better than an electrical vehicle powered by the electric grid. RNG is produced from the waste products that we generate, green waste that is diverted from landfills, and methane-producing waste from dairy farms and other agricultural operations. Rather than letting the resulting methane leak into the atmosphere and cause climate damage, the methane is captured and converted into a valuable fuel that directly replaces fossil fuels in transportation.

RNG can reduce GHG emissions by 70% to over 100% compared to diesel. RNG from dairy farms and some diverted green waste can have negative – subzero – carbon emissions. Consider the importance of this resource in fighting climate change. Every mile driven by an RNG truck is actually pulling GHG out of the atmosphere! No other technology, including an electric battery trucks directly powered by wind or solar, can approach these levels of GHG reduction.

Growing the RNG industry in California also means jobs and economic investment. According to ICF, transitioning California trucks to RNG fuel can create 130,000 jobs and foster \$14B on economic investment.

**Fossil Fuel Displacement**

California has a goal to replace fossil fuel with renewable fuels. RNG is an easy substitute fuel for fossil natural gas. Every gallon of RNG used in a truck is a direct displacement of a gallon of fossil fuel. In 2016, over 60% of the vehicular gas used in California was RNG and this total will now grow to over 90% as Metro transitions their bus fleet to RNG. Importantly, the infrastructure for distributing and supplying RNG already exists.

**Cost-Effectiveness Matters**

California simply cannot afford to chase every shiny object. The state needs affordable, practical and cost-effective solutions to our problems. Achieving the end goal at a lower cost means that the money saved can be used for other purposes. Zero emission technologies like electric and fuel cell may someday play a role, but these technologies are inherently far more expensive than trucks with the CWI 0.02 near zero engine. The range can be expected to be 2 times to 4 times more expensive just for the vehicle. The charging or fueling infrastructure adds even more costs. Some estimates are that charging infrastructure will cost dollar-for-dollar the cost of the vehicles deployed. This makes no economic sense. The ACT Now Plan will achieve better emissions reductions compared to the draft CAAP at 50% of the cost – saving our goods movement economy over \$2B for truck replacements. The savings is far greater when also including the charging infrastructure.

**Market Readiness**

The CWI 12 liter engine has been on the market since 2013 and has been proven by fleets across America. The 0.02 near zero version of this engine will be in production in February of 2018. This engine will be readily available in Kenworth trucks in early 2018. This is not reinventing the wheel like electric battery and fuel cell trucks. The national service and support network already exists for this engine. Service shops are available. Technicians are trained and certified. Parts are readily available. Public and private fueling stations exist across America.

**Summary**

There are only benefits and no downside to relying on RNG powered trucks to solve the problems of air pollution and climate damaging emissions while keeping goods moving:

- NOx Emissions ..... 99% lower than diesel, equivalent to an electric battery truck
- GHG Emissions..... 70% to over 100% (subzero) lower, better than an electric battery truck
- DPM Emissions ..... 100% reduction
- Fossil Fuel ..... 100% reduction



- Cost-Effectiveness ..... 50% less expensive than draft CAAP, saving \$2B
- Sales, Service & Support ..... Already exist
- Fueling ..... Already exist
- Readiness..... 2018
- CNGVC ACT Now Plan ..... Fully Support

I reiterate support for the ACT Now Plan to use currently available and cost-effective technology to upgrade the port truck fleet over the next 5 years. There is no reason to wait with the technology available today. I urge the Ports to be bold and visionary and adopt a strong CAAP that reflects the ACT Now Plan. Inland Kenworth is committed to providing the sales and services needed for the program to succeed.

I appreciate the hard work that goes into revising the CAAP. I want you to know that Inland Kenworth stands ready to partner with the Ports and clean the air with reliable Kenworth trucks. I am available to answer any questions by contacting me at (323) 278-4100.

Sincerely,



Mark Zucker  
Vice President US  
Inland Kenworth (US), Inc.

cc:

Gene Seroka, Executive Director, Port of Los Angeles  
Mario Cordero, Executive Director, Port of Long Beach  
Rick Cameron, Managing Director Environmental Affairs & Planning, Port of Long Beach

**Public Comment - Clean Air Action Plan**

**Time:** Mon, 11 Sep 2017 20:58:46 +0000  
**From:** Michael Busman <mbusman@opterraenergy.com>  
**To:** "caap@cleanairactionplan.org" <caap@cleanairactionplan.org>  
**CC:** "helen@methodcampaigns.com" <helen@methodcampaigns.com>  
**Subject:** Public Comment - Clean Air Action Plan

**Attachments:** msg-7761-54.html (20k)  
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 image014.png (2k)  
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I have reviewed the Clean Air Action Plan (CAAP) as well as the two web sites [www.actnowla.org](http://www.actnowla.org) and <http://www.rngcoalition.com/what-is-rng/>. Although the action plan is one way to improve local air quality around the ports, I have reservations whether the plan represents the best use of the tremendous investments directed to natural gas vehicles and infrastructure. I do not believe it is necessary to wait until 2035 for the final transition to electric vehicles when electrification should be a short-term priority **NOW**. Please understand that my viewpoints are from my experience as an engineer involved in energy efficiency, renewable energy, energy storage, and energy infrastructure upgrade projects. I first cut my teeth in energy conservation as the Energy Manager at the Atlanta Hilton Hotel following my graduation from Cornell University in 1976. So, I've been in the business for a few years.

To be totally upfront, I'll try to summarize how I believe the gas industry is sugar coating the push for natural gas vehicles. What I gleaned from the websites is that there is a tremendous cost for natural gas vehicles and infrastructure for an interim solution until about 2035 for final transition to electric vehicles. What happens to the sunk cost of natural gas vehicles and infrastructure at that point in time? I am sure that there will be those in the gas industry who would complain quite vocally about the sunk cost in equipment and systems that are still functioning. I know that Tesla and Cummins, as well as the other major truck manufacturers are already working on EV trucks that could be powered by the utility grid, solar and other renewable power, perhaps, through Community Choice Aggregation (CCA). The commercial availability of EV trucks is just around the corner. In my review of the CAAP and the web sites noted above, I observed several conflicting bits of information and numbers thrown around. Anyway, below I will summarize my review.

- The video from the Act Now web site blames the majority of pollution on trucks servicing the ports. The CAAP web site strategies web page cites ships as being the largest source of emissions at the ports of Long Beach and Los Angeles. Now which is it – trucks or ships?
- Even with 100% clean diesel trucks, the area/ports would still be out of compliance with EPA standards.
- New natural gas engines are claimed to reduce NOx 80% and get to 0 and near 0 emission trucks.
- The Advanced Clean Trucks (ACT) Plan aims to accelerate the San Pedro Ports Clean Air Action Plan (CAAP)
  - The plan claims it is a cost-effective opportunity to immediately reduce emissions from the 13,000 trucks serving the ports of LA & Long Beach.
- The ACT plan includes all 0 and near 0 emission technologies and fuels such as "renewable" natural gas, propane, battery electric, hydrogen fuel cell EVs (one still needs natural gas to break out the hydrogen for a fuel as electrolysis of water is not economically viable yet), and others that meet the California Air Resources Board (CARB) alternative standard of 0.02g/bhp-hr (0.02 grams/horsepower-hour) and achieve a minimum 40% reduction of greenhouse gas emissions using "renewable" fuels or energy. There is actually very little discussion in the plan about electric trucks.....mostly natural gas.
- The ACT plan claims it would provide a 99% reduction in NOx emissions, 100% reduction in petroleum consumption, would require \$1billion - \$1.3 billion of private sector investment in fueling infrastructure and immediate based job creation in the next 5-10 years. What is overlooked is that one fossil fuel is essentially be replaced by another fossil fuel. Additionally, where will the private sector investment come from?
- The ACT plan is supported by the California Natural Gas Vehicle Coalition (CNGVC). Why am I not surprised?
  - It would replace 100% of the truck fleet by 2023.
  - The plan talks about capture and use of waste methane as an ultra-low carbon fuel. I assume this is a reference to natural gas released at wells, distribution & storage facilities, and/or biogas.
  - Engineering and construction related jobs are falsely referred to as "Green Tech". There is very little to nothing green about burning fossil fuels.
  - Although it might be the lowest cost pathway to cleaning truck emissions, I question whether this temporary solution is the best long-term solution or just kicking the can down the road until 2035.
  - There are approximately 700 existing, in-use natural gas trucks now.
- Funding:
  - Funding would come from existing fees, an alleged \$100's of millions in available incentives and a "variety" of other sources. Would any of this be placed on the backs of individual truck drivers?
  - CNGVC "recommends" grants of \$100k/zero or near zero emission truck. Unless my tired old eyes missed it, I don't recall reading where CNGVC mentioned where the grants would come from.

- 13,000 trucks would equal about \$1.3 billion in incentives required by an incentive program. That's about the same number quoted above for fueling infrastructure. Is it possible somebody's math is a bit off? What about natural gas compressor stations, pipelines, and other fueling infrastructure?
- There would be 50-100 new refueling stations required in Southern California and the southwestern states (\$235 million quoted). Pipeline improvements for compressed natural gas or liquefied natural gas production plants another \$200 - \$250 million. A number of in-state "renewable" natural gas production facilities (\$570 million).
- 100% of the required \$1 billion-\$1.3 billion in fueling infrastructure to come from the private sector.
- Dept. of Energy (doubtful given Trump's reduced budget).
- \$318 million from the Volkswagen settlement over tampering to make emissions from diesel cars look better.
- AB1613 - \$900 million pot of funds to draw from.
- AB118 - \$100 million from the Cal. Energy Commission.
- Initial deployments of natural gas trucks, electric trucks to be phased in as commercially available and economically viable up to the year 2035.

The Coalition for Renewable Natural Gas web site discusses "renewable" natural gas (RNG) or biogas, which is methane that comes from landfills, wastewater treatment plant sewage digesters, and agricultural digesters using cattle manure or food processing waste. I've looked at landfill gas and wastewater treatment plant digester gas and most if not all of the landfills or treatment plants of a size to be economically viable already capture the biogas and produce electricity on site. Agricultural digesters, although possible present the problems of gathering the livestock manure, building the digesters, producing pipeline quality gas, and piping it to the nearest gas company pipelines. Production of pipeline quality gas requires cleanup systems to remove siloxanes and other "nasties" that can ruin boilers, engine-driven electric generators, and vehicle engines. Additionally, the methane and heat content of biogas is only about 50% of the content in regular natural gas, requiring the removal of CO<sub>2</sub>. The November, 2016 article "Hard To Digest: Greenwashing Manure Into Renewable Energy" from Food & Water Watch, debunks the theory of using anaerobic digested manure as a renewable fuel. The article discusses the problems of digested waste disposal, release of "fugitive methane" from digester facilities, and the need for taxpayer subsidies as in most cases, manure digesters do not make economic sense as sources of electricity alone. So, in theory this may sound great, but I don't think there exists the potential for significant amounts of NEW biogas.

In closing, I would like to recommend that the adoption of EV trucks be accelerated versus the short-term and expensive solution of conversion to natural gas vehicles. I would also recommend that a close review be made of those companies or organizations promoting natural gas as they stand to gain the most from the conversion. It is definitely not the citizens who breath the air in the vicinity of the ports.

Thank you.

**Mike Busman, *Certified Energy Manager® (CEM®) - a DOE Recognized Program***

Lead Project Engineer

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**POMONA CHAMBER of COMMERCE**



September 13, 2017

**To: Staff and Commissioners from the Port of Los Angeles and Port of Long Beach,**

I am writing to express my support to move forward on the Clean Air Action Plan-CAAP and adopt the current technology available today and not wait until 2035.

The Pomona Chamber fully supports your efforts to provide improved air quality in the communities disproportionately impacted by diesel emissions. At the same time, we believe the goals included are far too distant since the ports air pollution results in a real cost to the health of many in this community and others surrounding the ports. The Chamber encourages a more aggressive approach in implementation of the plan.

We need action now regarding emission reductions from trucks to meet federally mandated air quality standards. Why wait? The technology exists today with near zero emission engines that can serve the trucking industry today. As the representative of the Pomona Chamber of Commerce, I strongly encourage the ports to not delay in the adoption of current technology and work and begin the process of improving the clean air quality.

Together we can achieve great success and work towards seeing the Ports, Pomona Valley and State thrive. If you have any questions regarding our commitment, please do not hesitate to contact me directly at (909) 622-1256.

Sincerely,

A handwritten signature in black ink, appearing to read "Erica Frausto".

Erica Frausto  
CEO  
Pomona Chamber of Commerce



The Resource for Warehouse Logistics

6540 Alder Park Circle  
Roseville, CA 95678  
www.IWLA.com

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F: 916.666.7575  
E: mwilliams@IWLA.com

Sept. 13, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon:

The International Warehouse Logistics Association (IWLA) appreciates the opportunity to express our concerns with the Draft Clean Air Action Plan (CAAP) Update.

IWLA is a nonprofit association for warehouse-based third party logistics (3PL) providers. IWLA members provide warehousing; fulfillment; reverse logistics; transportation, freight forwarding and brokerage services; inventory and supply chain management capabilities; and a broad range of value-added services

Our members will be significantly impacted by increased transportation and storage costs as a result of the proposed CAAP. Especially considering the commercial availability and affordability of non-existent electrified cargo handling equipment technology, which will need to be developed, tested, work as planned, be affordably priced and produced in a quantity to meet the urgent timelines.

We understand the maritime, supply and logistics industries have partnered with the ports of Los Angeles and Long Beach for more than a decade to achieve significant reductions in pollutants and greenhouse gases. In fact, the Draft CAAP praises industry for its efforts to reduce air emissions at the ports. We wholeheartedly support these efforts and look forward to seeing them continue long into the future.

In spite of this progress and the notable partnership between the ports and industry, following our review of the Draft CAAP, We feel compelled to express the following concerns with the document, as it is currently written:

- A lack of information or clarity with respect to the commercial availability or affordability of identified technologies;
- The uncertainty of the draft plan's overall cost;
- A reliance on federal and state grants to fund programs the draft Plan describes as unaffordable to the ports and to businesses doing businesses with the ports but with no specificity on where, how or when these resources will become available;
- The absence of any analysis regarding the ports' future competitiveness if it were to implement the policy proposals;
- The document's lack of technology and fuel neutrality; and,
- The lack of information on the air quality benefits that would result from these programs.



The Resource for Warehouse Logistics

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In sum, we are concerned that the Draft CAAP would require businesses engaged in commerce with the ports of Los Angeles and Long Beach to bear the lion share of \$14 billion in costs with no measurable increase in volume.

Port volumes in CA are back to 2006 levels while other ports outside the state are seeing double digit increases in volume. We would like to see this plan take to heart Governor Brown's Executive Order B-32-15 to ensure the economic competitiveness of our state.

If the Draft Clean Air Action Plan update is approved as is, we are deeply concerned that it will negatively impact our members businesses with increased delay's and lost productivity at the ports causing a ripple effect throughout the entire supply chain.

Should you have any questions or need any additional information, please feel free to reach me by at (916) 704-2392 or by email at mwilliams@iwla.com.

Sincerely,

A handwritten signature in cursive script that reads "Mike Williams".

Mike Williams

IWLA

Executive Director CA Government Relations

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero



September 14, 2017

**RE: Clean Air Action Plan 2017, Draft Final**

**Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)**

The American Trucking Associations' (ATA), California Trucking Association (CTA) and Harbor Trucking Association (HTA) represent the preponderance of licensed motor carrier (LMC) interest in the San Pedro Bay port complex.

We would like to first compliment the Ports and your respective staff for the exceptional amount of outreach conducted to date to all impacted community, public agency and industry stakeholders and thank you for the opportunity to comment on the Draft Final San Pedro Bay Ports 2017 Clean Air Action Plan (CAAP).

### **Background**

Since the inception of the original CAAP, no equipment category has achieved greater emission reductions than heavy-duty vehicles. Trucks have achieved the largest reductions in 7 of the 8 pollutants in your emissions inventory and are the smallest source category of the pollutant of most local concern, diesel particulate matter<sup>1</sup>.

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<sup>1</sup> <http://polb.com/civica/filebank/blobdload.asp?BlobID=13555>

	PM <sub>10</sub>	PM <sub>2.5</sub>	DPM	NO <sub>x</sub>	SO <sub>x</sub>	CO	HC	CO <sub>2</sub> e
	tons	tons	tons	tons	tons	tons	tons	mt
<b>2005</b>								
Ocean-going vessels	720	577	605	6,726	6,865	537	236	389,510
Harbor craft	45	41	45	1,107	5	294	70	44,746
Cargo handling equipment	47	44	47	1,289	11	398	65	103,710
Locomotives	43	40	43	1,273	76	179	66	60,579
Heavy-duty vehicles	205	196	205	5,273	37	1,523	318	387,056
<b>Total</b>	<b>1,060</b>	<b>898</b>	<b>945</b>	<b>15,667</b>	<b>6,993</b>	<b>2,931</b>	<b>755</b>	<b>985,603</b>
<b>2015</b>								
Ocean-going vessels	101	95	78	4,738	238	408	178	331,802
Harbor craft	29	27	29	778	1	425	72	53,061
Cargo handling equipment	10	9	9	591	2	721	44	126,889
Locomotives	27	24	27	710	1	165	40	58,071
Heavy-duty vehicles	6	6	6	1,395	3	96	26	279,182
<b>Total</b>	<b>173</b>	<b>161</b>	<b>148</b>	<b>8,212</b>	<b>244</b>	<b>1,815</b>	<b>360</b>	<b>849,005</b>
<b>Change between 2005 and 2015 (percent)</b>								
Ocean-going vessels	-86%	-84%	-87%	-30%	-97%	-24%	-25%	-15%
Harbor craft	-34%	-35%	-34%	-30%	-87%	44%	3%	19%
Cargo handling equipment	-79%	-80%	-82%	-54%	-87%	81%	-33%	22%
Locomotives	-38%	-39%	-38%	-44%	-99%	-8%	-40%	-4%
Heavy-duty vehicles	-97%	-97%	-97%	-74%	-91%	-94%	-92%	-28%
<b>Total</b>	<b>-84%</b>	<b>-82%</b>	<b>-84%</b>	<b>-48%</b>	<b>-97%</b>	<b>-38%</b>	<b>-52%</b>	<b>-14%</b>

To achieve these incredible emission reductions, LMCs servicing the San Pedro Bay port complex have spent significant sums of money and taken on considerable debt and liability. These are burdens exclusively bourn by LMCs servicing California ports. Of the next five highest volume container ports in North America, none have adopted truck programs as stringent as the original CAAP and no State in the country has adopted California's strict in-use truck requirements<sup>2</sup>.

This is important context for the updated CAAP as, yet again, LMCs are being asked to bare most of the cost<sup>3</sup>.

Equipment Type	Est. Cost Low	Est. Cost High	Share of Total Cost of Proposed CAAP
<b>Trucks</b>	<b>\$ 3,929,000,000</b>	<b>\$ 9,315,000,000</b>	<b>53.8% - 67.1%</b>
CHE	\$ 3,080,000,000	\$ 4,271,000,000	30.8% - 42.2%
Ships	\$ 275,000,000	\$ 275,000,000	2.0 - 3.8%
Tech	\$ 22,000,000	\$ 22,000,000	0.2- 0.3%
<b>TOTAL</b>	<b>\$ 7,306,000,000</b>	<b>\$13,883,000,000</b>	

<sup>2</sup> The California Air Resources Board required all drayage trucks to meet EPA model year 2007 or newer emission standards by 2014 and will require all trucks to meet EPA model year 2010 or newer emission standards by 2023.

<sup>3</sup> <http://www.cleanairactionplan.org/documents/draft-clean-air-action-plan-2017-presentation.pdf>



It is of note that the California Air Resources Board estimated that the cost to retrofit and replace 734,024 trucks subject to the Statewide Truck and Bus Regulation was \$2.25 billion<sup>4</sup>, resulting in maximum annual statewide reductions of up to 2500 tons of PM2.5 and 35,000 tons of NOx<sup>5</sup>. Here, the CAAP proposes that LMCs spend between \$3.93 and \$9.32 billion to replace approximately 17,500 trucks.

In other words, the CAAP proposes to deliver, at most, 0.3% the reduction in particulate matter and 2-3% the reduction in NOx for as much as *four times* the cost of prior emission reduction efforts.

Therefore, while we support measures to incentivize further reductions in the San Pedro Bay port complex attributable to trucks, it is imperative that the Ports' proceed with care to ensure truckers and their customers do not bare a disproportionate share of costs for a diminishing return of emission benefits.

Because of the incredible progress already achieved, now is the time to balance efficiency improvements and emission reductions while preserving the San Pedro Bay port complex as the nation's leading trade gateway in the face of growing competition.

### **Procedural Issues Related to CAAP Litigation History**

From a national perspective, the American Trucking Associations' Intermodal Motor Carriers Conference (IMCC) has been working with CTA and port officials to ensure that intermodal commerce related aspects of truck – port drayage are not impaired by any changes or modifications being considered or proposed to the clean truck program. As you know, during the development and deployment of the initial program in 2008, ATA sued both the Ports of Los Angeles and Long Beach arguing that the Federal Aviation Administration Authorization Act of 1994 [FAAAA, §14501(c)(1)] expressly preempted certain identified elements in the combined ports' program.

As a result of extensive negotiations between ATA and Long Beach port and city officials, a settlement was signed in October 2009 and approved by the U.S. District Court Central District of California which removed Long Beach from the lawsuit. The court order, which remains in effect, included the following restrictive language relevant to future changes or modifications to the program: “The parties agree that any material change by the Long Beach Defendants to the Registration and Agreement without the prior agreement of ATA set forth in a writing signed by representatives of each party having the express authority to so bind...would constitute a breach of this Settlement.”

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<sup>4</sup> <https://www.arb.ca.gov/regact/2010/truckbus10/truckbusappi.pdf>

<sup>5</sup> [https://www.arb.ca.gov/msprog/onrdiesel/background/2014/ei\\_summary\\_02102014.xlsx](https://www.arb.ca.gov/msprog/onrdiesel/background/2014/ei_summary_02102014.xlsx)

In addition, the settlement further stated that...“ATA shall not be precluded by this Settlement from filing a new complaint reinstating any claims previously brought against the Long Beach Defendants and/or asserting additional claims against the Long Beach Defendants arising from the Concession Agreement or the Registration and Agreement if the Long Beach Defendants—at any future time amend in any material way the terms of, or the procedures applicable to, the Registration and Agreement without the prior agreement of ATA...”

Regarding the Port of Los Angeles, on June 13, 2013, by a 9-0 unanimous vote, the U.S. Supreme Court ruled in favor of ATA’s assertion that the FAAAA expressly preempts the port’s specific concession agreement requirements identified by ATA and that Section 14501(c)(1) indeed preempts a state “law, regulation, or other provision having the force and effect of law related to a price, route, or service of any motor carrier . . . with respect to the transportation of property.” 49 U. S. C. §14501(c) (1).

Concerning any future changes by the port regarding program enforcement activities, because the port argued that it in fact had never used its enforcement, suspension or revocation power to penalize a motor carrier’s past violations of program requirements, the court deferred on making a specific preemption ruling on enforcement actions. However, in its written opinion, the court clearly inferred that a decision would be appropriate when, if ever, the Port enforces its agreement in a way arguably violating the legal precedent ATA had presented.

In summary, the ATA will continue to work with CTA and its motor carrier members to ensure that the Long Beach-ATA settlement considerations and Los Angeles v. ATA Supreme Court decision guidance on concession enforcement is not infringed or impaired.

### Support for Efficiency Measures

We applaud your focus on efficiency measures. Since 2013, the HTA has tracked and published truck visit time. While some marine terminals have done an exemplary job of increasing landside efficiency, as you can see, complex-wide about 1 in 4 transactions still takes more than two hours. We support your goal of reducing the amount of time it takes to conduct a dual transaction to one hour and look forward to working with the Port and other stakeholders to advance that goal.





### Truck Rate Likely Preempted

The ports’ proposed “rate” on any truck not meeting certain emission standards is likely preempted by the FAAAA.

As explained by the Supreme Court in striking down Maine’s law prohibiting unlicensed tobacco shipment, holding that such requirements had a direct “connection with” motor carrier services:

In *Morales*, the Court determined: (1) that “[s]tate enforcement actions having a connection with, or reference to, carrier ‘rates, routes, or services’ are pre-empted,”... (2) that such pre-emption may occur even if a state law’s effect on rates, routes or services “is only indirect,”... (3) that, in respect to pre-emption, it makes no difference whether a state law is “consistent” or “inconsistent” with federal regulation... and (4) that pre-emption occurs at least where state laws have a “significant impact” related to Congress’ deregulatory and pre-emption-related objectives” - *Rowe v. New Hampshire Motor Transp.* (2008) 552 U.S. 364, 372.

That the port proposes to assess the “rate” against the shipper/owner of the cargo that is being transported by the truck does not help the proposed “rate” escape preemption. The *Rowe* court emphasized that:

We concede that the regulation here is less “direct” than it might be, for it tells *shippers* what to choose rather than *carriers* what to do. Nonetheless, the effect of the regulation is that carriers will have to offer . . . delivery services that differ significantly from those that, in the absence of the regulation, the market might dictate. And that being so, “treating sales restrictions and purchase restrictions differently for pre-emption purposes would make no sense.” *Engine Mfrs. Assn. v. South Coast Air Quality Management Dist.*, 541 U. S. 246, 255 (2004). If federal law pre-empts state efforts to regulate, and consequently to affect, the advertising about carrier rates and services at issue in *Morales*, it must pre-empt Maine’s efforts to regulate carrier delivery services themselves... To allow Maine to insist that the carriers provide a special checking system would allow other States to do the same. And to interpret the federal law to permit these, and similar, state requirements could easily lead to a patchwork of state service-determining laws, rules, and regulations.

The Draft Final CAAP makes it clear that the intent of the “rate” is to compel shipper/cargo owner purchase behavior by creating an economic disincentive for use of certain trucks otherwise compliant with State and Federal emission standards. To allow such a “rate” could lead to an endless patchwork of economic regulation imposed by states and their subdivisions, directly or indirectly aimed at regulating motor carrier rates, routes and services, circumventing Congress’ deregulatory and pre-emption related objectives.

We urge the ports to work closely with ATA, CTA and HTA to ensure that implementation of the updated Clean Trucks Program is consistent with the ports’ jurisdiction and authority.

### **Conclusion**

The ATA, CTA and HTA look forward to working with the port on implementing a CAAP. We believe there are significant voluntary actions to take, within the ports’ jurisdiction and authority, which will result in the San Pedro Bay port complex continuing the lead the nation in sustainability.

Please feel free to contact us with any questions.

Tyler Rushforth, Executive Director  
American Trucking Associations’ Intermodal Motor Carriers Conference  
[trushforth@trucking.org](mailto:trushforth@trucking.org)

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# DUNCAN & SON LINES

September 14, 2017

## THE PORT OF LOS ANGELES

Attn: Ambassador Martinez and Harbor Commissioners  
425 S. Palos Verdes Street  
San Pedro, California 90731

## THE PORT OF LONG BEACH

Attn: President Lou Anne Bynum and Harbor Commissioners  
4801 Airport Plaza Dr.  
Long Beach, CA 90815

Dear Harbor Commissioners,

Duncan and Son Lines, Inc. is pleased to have the opportunity to comment on the Draft 2017 CAAP 3.0. This Plan is among the two other versions which align clean air strategies of the State of California in the reduction of emissions from port-related sources. This is a historic set of goals that cannot be accomplished without the cooperation of private and public sources and we are committed to continuing as a constructive partner in this endeavor.

Duncan and Son has been part of the San Pedro Bay Port Complex for almost 75 years- celebrating the milestone anniversary next year at TPM. We take the commitment to bringing the implementation of the CAAP 3.0 final version very seriously and wish to outline our commitment to present and future goals of the Green Port initiatives.

Duncan and Son supports the Ports' plan to establish a Proposed Universal Appointment system by 2020, which will reduce idling and the truck turn times present in the Port Complex. Terminal appointment systems already in use within the Complex work efficiently by reducing truck queuing areas that affect our ability to quickly pickup/deliver containers. We support any such efforts that unify the systems together ultimately reducing emissions by 2020. We have been involved in beta testing with different port terminals and offer our company for beta testing when the system is ready for testing.

Duncan and Son has one of the most state of the art truck fleet in the San Pedro Bay Port Complex. By year's end, the fleet will be model year 2015 or newer with over 65 2018 model year trucks on order. Our next set of truck orders will likely be LNG models when they become certified. We hope grant money will be available to quicken the fleet turnover. All trucks also have several other options for safety and environmental concerns, including but not limited to::

- Auxiliary Power Units (APUs) on all of our trucks which engage and keep all safety functions of the truck rig operational while not running the truck engines in queue
- "ECO" packages from the OEMs for increased fuel economy, which is up to 25% more efficient (This includes automatic transmissions, lower peak RPMs, better Aerodynamic , etc.)

# **DUNCAN & SON LINES**

- Industry leading safety packages with: all-disc brakes, front end collision avoidance, adaptive cruise control, lane departure warning, blind spot warning detection systems, roll stability, and dual- vision cameras (cab-facing/forward-facing).

We also support the Port's proposed three-year technology assessment period where implementation of the proposed 3.0 changes can happen in phases as the technology becomes financially feasible in the coming years. This is a balanced approach that takes into consideration the financial and representative truth to new technologies which will bring into alignment the Ports' efforts.

As mentioned above, Duncan and Son Lines have always strived to be in the lead of the industry as seen in our aggressive truck replacement program. We have over 225 employee drivers and own over 1200 chassis look forward to the accepted CAAP 3.0 Plan

Very Truly Yours,



David Duncan

Vice President of Operations



September 14, 2017

Port of Los Angeles  
Port of Long Beach  
c/o caap@cleanairactionplan.org

Dear San Pedro Bay Ports Management and Staff,

SUBJECT: PierPass Comments to the San Pedro Bay Ports Clean Air Action Plan 2017 DRAFT Final

We have received the San Pedro Bay Ports Clean Air Action Plan 2017 DRAFT Final (CAAP) and appreciate your request for comments by September 18<sup>th</sup>. Our comments are as follows:

1. The CAAP reads, “In May, PierPass – a nonprofit company created by terminal operators to address issues of congestion, air quality, and security – announced plans to evaluate a port-wide appointment system with an associated fee structure.” While this statement is partially true, it makes no mention that the plans also include an evaluation of a port-wide peel-off program. The port-wide appointment system with an associated fee structure and a port-wide peel-off program are both being evaluated at this time by the West Coast MTO Agreement (WCMTOA) members, various supply chain stakeholders, and both the Port of Los Angeles and the Port of Long Beach. The evaluation is reviewing possible alternatives to the existing WCMTOA OffPeak program managed by PierPass.

The two alternatives were recommended by participants at the PierPass Extended Gates Workshop in October, 2016. The participants included various supply chain service providers and modes, both the Port of Los Angeles and the Port of Long Beach, elected officials, and terminal operators. As a result of the workshop, two supply chain advisory groups, the PierPass Advisory Committee and the Extended Gates Subcommittee, have been analyzing these two alternatives. Both the Port of Los Angeles and the Port of Long Beach are represented in the Extended Gates Subcommittee.

During this analysis, the PierPass Advisory Committee and the Extended Gates Subcommittee have recommended that a transportation consultant be included to add their expertise. The Port of Los Angeles and the Port of Long Beach participated in nominating prospective consultants as well as reviewing their subsequent proposals. As of this writing, the proposals are being reviewed.

Ultimately, the consultant may recommend that PierPass continue with its current model or adopt an alternative model to the existing OffPeak program, such as a port-wide appointment system with an associated fee structure, a port-wide peel-off program, or potentially a hybrid of both, or other. The

WCMTOA members will be charged with addressing the recommendation(s) when completed at the conclusion of the analysis.

Comment: Based on the ongoing analysis of various port-wide operating models by the WCMTOA members, supply chain stakeholders, the Port of Los Angeles, the Port of Long Beach, and transportation consulting expertise, the CAAP should not include any specific program, including the "Universal Port Truck Appointment System" or include a pilot of such by January 1, 2019.

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2. The CAAP reads, "If there were a uniform portal for securing all aspects of a truck transaction, it could improve the functionality of the system, help to alleviate congestion issues, and promote dual transactions (e.g. empty return coupled with a loaded pick-up). Further, efficiency improvements at the gate and throughout the terminal can reduce truck idling time."

Comment: The CAAP should not include a uniform portal. There is no support for the claim that a uniform portal could alleviate congestion, promote dual transactions, improve terminal gates and reduce truck idling time. There is no uniform portal at any port complex cited to support any of these claimed benefits.

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3. The CAAP reads, "The Ports support an appointment system that can be paired with financial penalties for terminals and trucking companies that fail to uphold their end of the appointment. Other ports around the world have adopted similar programs. For example, Port Botany, Australia's second largest container port, has instituted financial penalties for terminals that do not honor a trucker's appointment and for truckers who do not arrive during their scheduled appointment time."

Comment: The CAAP should not include an appointment system with financial penalties. The CAAP is recommending financial penalties to a pilot to be launched January 1, 2019 on a program and date that has not been discussed with the terminal operators in either Port. The CAAP is proposing details to a port-wide appointment system yet 25% of the terminals do not have appointment systems nor do these terminals have scheduled implementation for appointment systems. Again, WCMTOA, with input from both Ports, is in the process of evaluating a number of different possible port-wide systems. In the course of these joint efforts, the Ports have not introduced or suggested an appointment system pilot with details including financial penalties.

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4. The CAAP reads, "The Ports could also explore a program that establishes maximum turn times for trucks within the terminal (i.e. from in-gate to out-gate). The goal would be to achieve a maximum visit time of 1 hour for a dual transaction. Port Metro Vancouver has implemented a system that imposes fees on terminals that exceed a specified truck turn-time threshold; such an approach could be a model here for terminals that exceed a certain turn-time standard."

Comment: The CAAP should not include turn time requirements. Turn times have not been discussed with the terminals and there are no cited benefits that this will bring to the CAAP. There is a turn time reference to Port Metro Vancouver - it should be noted that the CAAP proposes a turn time of one hour and Port Metro Vancouver has turn times of 90 minutes per transaction.



Furthermore, the turn time does not address issues such as terminal size, third party impacts on terminal turn times, nor does it take into consideration that turn times are in part a commercial issue – those who wish to pay more will typically receive a different level of service which may include turn times.

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In conclusion, while we commend the Port of Los Angeles and the Port of Long Beach for their ongoing stewardship on environmental issues, we cannot agree that a pilot program for a port-wide appointment system will address their objectives, certainly in-light of the current review of the aforementioned programs. We also recommend that a uniform portal, punitive financial actions to those who do offer appointment systems, and a specific turn time be removed from the CAAP as there was no supporting information to substantiate their beneficial claims.

The CAAP reads “The Port will continue to coordinate with PierPass to understand if the proposed program can be structured in a way to achieve our goals.” In closing, the WCMTOA members welcome such an opportunity to discuss these issues and recommend we do so before they become part of a CAAP.

Please do not hesitate to contact us with any questions or comments.

Sincerely,



John Cushing  
President & CEO  
PierPass

Cc: WCMTOA Members  
PierPass Board of Directors

**BizFed's Member Alliance**

ALA Los Angeles  
Alhambra Chamber  
American Beverage Association  
Antelope Valley Board of Trade  
Apartment Association, California Southern Cities  
Apartment Association of Greater Los Angeles  
Arcadia Association of Realtors  
Asian American Business Women Association  
Asian American Economic Development Enterprise  
Asian Business Association  
Association of Independent Commercial Producers  
Asusa Chamber  
Bell Gardens Chamber  
Beverly Hills Chamber  
Beverly Hills / Greater LA Association of Realtors  
Burbank Association of Realtors  
Building Industry Association, LA / Ventura Counties  
Building Owners & Managers Association, Greater LA  
Business & Industry Council for Emergency Planning &  
Preparedness  
CalAsian Chamber  
California Apartment Association, Los Angeles  
California Business Roundtable  
California Cannabis Industry Association  
California Construction Industry and Materials Association  
California Contract Cities Association  
California Consumer Finance Association  
California Fashion Association  
California Grocers Association  
California Hotel & Lodging Association  
California Independent Oil Marketers  
California Independent Petroleum Association  
California Life Sciences Association  
California Metals Coalition  
California Restaurant Association  
California Small Business Alliance  
California Trucking Association  
CALInnovates  
Carson Dominguez Employers Alliance  
Central City Association  
Cerritos Chamber  
Citrus Valley Association of Realtors  
Construction Industry Air and Water Quality Coalitions  
Consumer Healthcare Products Association  
Council on Trade and Investment for Filipino Americans  
Culver City Chamber  
Downey Association of Realtors  
Downtown Long Beach Alliance  
El Monte/South El Monte Chamber  
Employers Group  
Engineering Contractor's Association  
Entrepreneurs Organization, Los Angeles  
F.A.S.T.-Fixing Angelenos Stuck in Traffic  
FilmlA  
Foreign Trade Association  
FuturePorts  
Gateway to LA  
Glendale Association of Realtors  
Glendale Chamber  
Glendora Chamber  
Greater Los Angeles New Car Dealers Association  
Harbor Association of Industry and Commerce  
Harbor Trucking Association  
Hollywood Chamber  
Hospital Association of Southern California  
Hotel Association of Los Angeles  
Industry Manufacturers Council  
International Warehouse & Association  
Inglewood Airport Area Chamber  
Investing in Place  
Irwindale Chamber  
Japan Business Association of Southern California  
La Canada Flintridge Chamber  
LAX Coastal Area Chamber  
Leadership for Urban Renewal Network  
League of California Cities  
Local Search Association  
Long Beach Area Chamber  
Los Angeles Area Chamber  
Los Angeles Black MBA Association  
Los Angeles Cleantech Incubator  
Los Angeles County Bicycle Coalition  
Los Angeles County Consumer Affairs  
Los Angeles County Warehouse Management Association  
Los Angeles Gateway Chamber of Commerce  
Los Angeles Latino Chamber  
Los Angeles Parking Association  
Los Angeles Urban League  
Pacific Palisades Chamber  
Pasadena Chamber  
Pomona Chamber  
Maple Business Council  
Motion Picture Association of America  
MoveLA  
NAIOP Southern California Chapter  
National Alliance for Jobs and Innovation  
National Association of Women Business Owners, LA  
Pacific Merchant Shipping Association  
Pasadena-Foothills Association of Realtors  
Planned Parenthood Southern California Affiliates  
Recording Industry Association of America  
Regional Black - San Fernando Valley Chamber  
Regional San Gabriel Valley Chamber  
Rosemead Chamber  
Rotary Club of Los Angeles  
San Gabriel Chamber  
San Gabriel Valley Civic Alliance  
San Gabriel Valley Economic Partnership  
Santa Clarita Valley Economic Development Corp.  
San Pedro Peninsula Chamber  
Santa Monica Chamber  
Santa Monica Junior Chamber  
Small Business Action Committee  
South Bay Association of Chambers  
South Bay Association of Realtors  
Southern California Golf Association  
Southern California Grantmakers  
Southern California Minority Supplier Development Council Inc.  
Southern California Water Committee  
Southland Regional Association of Realtors  
Torrance Area Chamber  
Town Hall Los Angeles  
Tri-Counties Association of Realtors  
United Chambers San Fernando Valley  
United States-Mexico Chamber  
Valley Economic Alliance  
Valley Industry & Commerce Association  
Vernon Chamber  
Vietnamese American Chamber  
West Hollywood Chamber  
West Los Angeles Chamber  
West San Gabriel Valley Association  
Western Manufactured Housing Association  
Westside Council of Chambers  
Western States Petroleum Association  
West Valley/Warner Center Chamber  
Wilmington Chamber  
Young Professionals in Energy - LA Chapter  
Warner Center Association

9/15/2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes St. Dr.  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon,

We are contacting you on behalf of BizFed, a massive and diverse grassroots alliance that unites and amplifies the voice of business, **and we are writing to oppose unless amended the third draft of the Clean Air Action Plan (CAAP).**

BizFed advocates for policies and projects that strengthen our regional economy. Together, we stand with more than 160 business organizations that represent 325,000 employers with 3 million employees throughout Los Angeles County. As a united federation, business leaders in Los Angeles County are able to more efficiently collaborate and mobilize to advance a shared agenda on local, regional, state and national issues. BizFed members are force multipliers who mobilize and empower their communities to take action on policies and projects that affect our economy.

We support the CAAP's goal of reducing emissions from ships, trucks, cargo-handling equipment, locomotives and harbor craft. We applaud the partnership between the ports of Los Angeles and Long Beach and the maritime industry, who together have had considerable success in cleaning the air over the past 10 years.

However, we are deeply concerned over a Clean Air Action Plan that, by its own admission, will cost both the ports and industry over ten billion dollars. Of equal concern is that for some categories of technologies, the port seeks to implement equipment that are in development today. Finally, both ports should be very concerned about the significant growth of East Coast and Gulf Coast ports, as well as other West Coast ports – at the expense of the ports of Los Angeles and Long Beach.

With all this in mind, BizFed formally opposes the Clean Air Action Plan unless it is amended to include the following:

1. **A San Pedro Bay Port competitiveness action plan.** The ports of Los Angeles and Long Beach are on target to achieve volumes they haven't seen since 2006 – more than 10 years ago. This reflects over 10 years of no growth and continuing to lose market share. It is essential to the regional economy that the two ports remain competitive with shippers. In fact, on page 22 of the CAAP, the document's authors acknowledge the issue of competitiveness: "Keeping the Ports economically competitive amidst this transition to more sustainable goods movement will be challenging."
2. **A cost-effectiveness study.** The "Economic and Workforce Considerations for the Clean Air Action Plan Update" estimates it will be three to five times more expensive for the industry to implement this plan than previous efforts. Specifically, the CAAP estimates it will cost up to \$14 billion and seeks to implement some zero-emission equipment that are still in development. We ask that as part of this study, the Port evaluate the incremental cost effectiveness in \$/ton of emissions removed between near zero and zero emission technologies and include the replacement costs to meet requirements vs. life cycle for technologies. We also request that the ports coordinate with the South Coast Air Quality Management District to ensure that both public and private financial investments are prioritized in a manner that will achieve the most emission reduction benefits for the South Coast Basin.
3. **Revised language to allow near-zero technologies for cargo-handling equipment and heavy-duty trucks.** The CAAP should remain fuel and technology neutral, as is stated in the document on page 15: "The Ports are not mandating a particular technology pathway or a certain type of operation – we are technology-neutral, fuel-neutral, and operations-neutral. Through the Ports' Technology Advancement Program, we will continue to support and demonstrate a variety of technology options so there can be more tools in the toolbox."

We believe with these suggested amendments, the CAAP can take the ports of Los Angeles and Long Beach into a future where they can successfully remain competitive supporting over 900,000 jobs here in southern California while being an environmental leader in emission reductions and sustainability.

Should you have any questions or need any additional information, please feel free to Sarah Wiltfong who is the policy manager on this issue at [sarah.wiltfong@bizfed.org](mailto:sarah.wiltfong@bizfed.org).

Sincerely,



Mike Lewis  
BizFed Chair  
Senior VP,  
Construction Industry  
Water/Air Quality Coalitions



David Fleming  
BizFed Founding Chair



Tracy Hernandez  
BizFed Founding CEO  
Impower, Inc.

September 15, 2017

Port of Long Beach  
Attn: Heather Tomley  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Port of Los Angeles  
Attn: Chris Cannon  
425 S. Palos Verdes St.  
San Pedro, CA 90731

Dear Ms. Tomley and Mr. Cannon:

On behalf of the Los Angeles Area Chamber of Commerce, I'm writing to submit comments on the Draft 2017 Clean Air Action Plan update for the San Pedro Bay Ports. The Ports are regional and national assets and the Chamber believes that improving our air quality is imperative for future sustainable growth. However, we need to strike an appropriate balance between emission reductions and costs, economic development and technology constraints. We are concerned that the current draft does not strike that balance.

The Ports of Los Angeles and Long Beach are to be commended for the great strides made in reducing air pollution from port-related cargo movement since the inception of the CAAP in 2006. Due to significant input and collaboration by all involved in goods movement, from the regulatory and environmental agencies, to the railroads, shippers and the trucking industry, technology and industry advancements have all worked to greatly reduce emissions. Sulfur oxides, diesel particulate matter, nitrogen oxides and greenhouse gases were all reduced ahead of the 2014 goals and in two of the major source categories, we are already ahead of 2023 goals.

As the draft is revised prior to the joint POLA and POLB Board of Directors meeting on November 2<sup>nd</sup>, the Chamber asks that the following principles be considered regarding any new reduction targets and policy goals:

- *Cost-effectiveness:* Cargo handling equipment and trucks have successfully reduced diesel emissions 96 percent in the last decade. Achieving the last few percent should be done in an economically feasible manner. Estimates for the CAAP indicate a cost of \$7 billion up to \$14 billion for full zero emissions. The \$14b may be even higher when you factor in replacing equipment may not be one-for-one and the infrastructure not adequately in place for a move to full zero emissions.
- *Competitiveness:* While the San Pedro ports have finally fully recovered from the economic downturn, east and gulf coast ports, Canadian and Mexican ports have grown at a much quicker pace. The Southern California logistics industry is responsible for over 900,000 jobs in Southern California. While 20 percent of cargo will always remain in the region, we need to retain our competitive edge to ensure discretionary cargo doesn't go elsewhere. We believe statements in the draft CAAP that claim costs are not a major factor are incorrect

and in fact have resulted in loss of market share. Increased competitiveness doesn't just benefit the economy, it provides the ability to invest more in environmental improvements.

- *Technology and fuel neutral:* It should not be the role of the port authorities to choose winners and losers when a variety of technologies could help achieve the goals. The Chamber strongly supports a fuel neutral and technology neutral approach that seeks to improve standards, not limit possibilities.

Over a decade ago, the first Clean Air Action Plan challenged industry to deliver on an ambitious set of goals. Companies rose to the challenge and developed technologies that have not only helped to achieve substantial emission reductions, but have made the Ports a global model. We'd like to continue this collaboration on a program that utilizes zero and near-zero-emission technologies on an achievable timeline in a manner that keeps the San Pedro Bay Ports economically viable for the goods movement industry.

Sincerely,

A handwritten signature in black ink that reads "Gary Toebben". The signature is written in a cursive, flowing style.

Gary Toebben  
President & CEO



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Costa Mesa, CA 92626  
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September 15, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Re: Comments on CAAP Discussion Draft

Dear Mr. Cannon and Ms. Tomley:

On behalf of Agility Fuel Solutions, we would like to commend the Ports of Los Angeles and Long Beach for your heavy-duty vehicle clean air initiative. Agility is a California-based manufacturer of natural gas and liquid propane fuel solutions for Class 5-8 trucks and we are very excited to be part of the California Natural Gas Vehicle Coalition supporting the 2017 Clean Air Action Plan (CAAP).

The Ports of LA and Long Beach are pioneers in the transportation industry. The Clean Truck Program of 2006 resulted in the first factory-installed natural gas vehicles by Daimler Trucks North America. Since then, the medium and heavy-duty natural gas industry has evolved and grown. Engines are more powerful and reliable with significantly lower emission ratings. High-capacity fuel storage systems and expanded infrastructure have benefited long-haul routes with increased vehicle range. The increase in natural gas fleet vehicles has provided data that show a better total cost of ownership compared to diesel equivalents.

Agility is also a pioneer in the transportation industry. Customers trust our history, our technology, and our expertise. Our engineers take that trust seriously and have worked hard to develop safe, lightweight products that improve driver experience and reduce costs and downtime. Today's natural gas fuel solutions combined with near-zero engine technology and renewable natural gas will dramatically reduce dangerous nitrogen oxides, particulate matter, and greenhouse gases that damage the atmosphere in which we work and play.

California is a pioneer in the transportation industry. Its unique environmental conditions have driven research, product development, and infrastructure investment to create solutions that benefit the entire continent. Many

North American heavy-duty vehicle manufacturers now have factory installed or factory approved installation partners of natural gas engine options. North America will see capacity exceed 30,000 units per year by the end of 2017.

Agility believes the 2017 Clean Air Action Plan Update is a critical and vital next step to build on the legacy of the first Clean Truck plan. Our Low Emission Advanced Drayage (LEAD) truck plan can help with the achievement of these goals. We are committed to sustainability and support the coalition's three pillars: environment,



# IBEW

International Brotherhood of  
Electrical Workers, AFL-CIO

**Compliance Division**  
297 North Marengo Avenue  
Third Floor  
Pasadena, CA 91101  
PHONE: (626) 449-8058  
FAX: (626) 449-8125

September 15, 2017

Via E-mail & UPS

**Ms. Lou Ann Bynum, President**

[louanne.bynum@polb.com](mailto:louanne.bynum@polb.com);

**Ms. Tracy Escogue, Vice President**

[tracy.escogue@polb.com](mailto:tracy.escogue@polb.com)

[tracy@escoquelaw.com](mailto:tracy@escoquelaw.com);

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**Mr. Richard Jordan, Chief of Staff  
to the Board of Harbor**

**Commissioners**

[richard.jordan@polb.com](mailto:richard.jordan@polb.com);

**Ms. Janice Hahn, Supervisor**

**Fourth District**

[fourthdistrict@bos.lacounty.gov](mailto:fourthdistrict@bos.lacounty.gov);

**Jayne Wilson, Supervisor Hahn,  
Fourth District Deputy, Economic  
Development/Beaches & Harbor**

[jwilson@bos.lacounty.gov](mailto:jwilson@bos.lacounty.gov);

**Herlinda Chico, Supervisor Hahn,  
Fourth District**

**Field Deputy, Long Beach**

[hchico@bos.lacounty.gov](mailto:hchico@bos.lacounty.gov)

In re: Port of Long Beach Clean Air Action Plan

Dear Madams and Sirs:

Thank you in advance for the opportunity to provide comments to the latest draft of the Port of Long Beach (hereinafter "POLB" or "Port") Clean Air Action Plan (hereinafter "CAAP").

As an initial matter, we applaud the Port of Long Beach in their continued efforts to reduce the harmful emissions from port-related sources as well as the commitment to sustainable operations that will maintain and strengthen its competitive position in a global goods movement industry.

However, as imports approach record levels in Long Beach, we urge the POLB to consider taking a bold approach toward CAAP that would benefit port tenants, port-area residents, and workers who live and work on and near the POLB.

As you know, the International Brotherhood of Electrical Workers, Local Union 11 worked with the Port, as well as Southern California Edison, to acquire grant funding to electrify the rubber tire gantry equipment this last year, and discussed in the CAAP. As members who live and work in and around the Port of Long Beach, and a strategic partner who is providing solutions via partnering together with the POLB to acquire funding for the port; we have a vested interest in the climate and workforce aspirations contained in the current Clean Air Action Plan.

As a strategic partner, we appreciate the opportunity to provide the following CAAP comments:

**1. Engage Workforce Development efforts toward apprenticeship jobs that lead to careers that pay family-sustaining wages with health care and retirement benefits.**

In other words, focus workforce development toward apprenticeship efforts that will lead to careers that allow POLB workers to be paid enough to support local and small Long Beach businesses and real estate; engage in workforce efforts based on apprenticeship training that caters to all members of our community.

We are the only skilled tradesmen and women with a Net Zero Plus Electrical Training Institute. That means we are not only Net Zero, but with our large scale, solar, battery storage and micro-grids, we generate more energy than is



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required for operation, can island off of the electric grid and operate with no distribution from the grid in excess of 3 days.

Our apprenticeship program is *already* training the future workforce that will have the knowledge and skills to design, construct, install; as well as test, monitor and report back regarding operational efficiencies, for all the zero-emission, sustainable charging and energy infrastructure that the Port will need in the coming years: hydrogen and battery-electric charging infrastructure, as well as solar arrays that can be installed at various terminals.

Please also see the recent report (August 2017) from the UC Berkeley Labor Center, "Diversity in California's Clean Energy Workforce: Access to Jobs for Disadvantaged Workers In Renewable Construction". Key findings of significance to POLB workforce development efforts:

- Project labor agreements and state certified apprenticeship programs together can provide a vehicle for inclusion that "produces results";
- "Apprenticeship allows entry level, unskilled workers to obtain free training, a job, and a defined path toward a middle-class career."
- Outreach efforts by unions, including pre-apprenticeship programs result in disadvantaged communities accessing this opportunity toward a middle-class career. As well, the presence of ethnic and racial diversity improved over time in apprenticeship programs of the locals studied, the majority of which were IBEW local unions;
- "Workers who complete an apprenticeship program see a lifetime earning gain of almost \$270,000. This is a greater income premium than community college or alternative technical education training."
- Targeted hire provisions bring economic benefits to underserved communities, offering a pathway for socially and economically individuals to access middle-class jobs that pay family sustaining wages and benefits.

All of the above must be considered in terms of **both workforce development efforts and further continued project labor agreements and community benefit agreements.**

## **2. Commit to a deadline/ date certain to determine charging infrastructure.**

The Ports of Long Beach and Los Angeles have convened a working group to establish a charging standard for heavy-duty equipment and are evaluating various charging systems. However, it appears that there is no end date or indicated date on which this will be done. Commit to a date certain by which the Port of Long Beach will determine the charging standard given that this has been identified as necessary to support deployment of zero emission technologies.

Similarly, determine a date certain by which the POLB will make a determination regarding additional infrastructure needed to support additional fuel, whether the fuel is zero emission via electricity, hydrogen, et ceterra.

Finally, we recommend the POLB report back to the Commissioners on the prior or current studies that have occurred to date in terms of what steps have been undertaken, information considered and stakeholder and technical expertise input regarding current status of the working group evaluative studies.

## **3. Develop a comprehensive Energy Plan that is a component of the CAAP with specific, actionable goals for the following areas:**

- (a) **ENERGY MANAGEMENT STRATEGY,**
- (b) **ENERGY ACQUISITION,**
- (c) **RENEWABLE PORTFOLIO STANDARDS for same,**





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**(d) CHARGING AND FUELING INFRASTRUCTURAL NEEDS BASED ON ZERO-EMISSION GOALS, as well as state mandates, and**

**(e) POLB RESILIENCY.**

More specifically:

**(a) Develop a clearly-articulated energy management strategy:**

The Port of Long Beach has indicated that it is working on an energy management strategy and refers to the Energy Island, a project that has been shuttered since the departure of a prior POLB employee years ago. POLB just entered into a multi-million dollar contract with National Renewable Energy Laboratories in April, 2017. However, the NREL contract has a 36 month, 3 year term, meaning the POLB might not have any actionable information for strategic planning purposes *for years to come*.

**(b) POLB and Energy Acquisition: IOU customer, DA customer, Municipal utility or support local Community Choice Aggregations efforts:**

Determine whether the POLB is best served as a continuing Investor-Owned Utility customer (Southern California Edison), Direct Access customer, becoming its *own* municipal utility (e.g. Port of Oakland) or joining discussions about Community Choice Aggregation.

Should the POLB determine it is no longer best served as IOU customer, it has the ability to become a municipal utility district, (such as the Port of Oakland already is) resulting in buying power and selling power to business that operate on port property (such as terminal tenants); and eventually creating a distributed energy resource infrastructure to generate the POLB's power LOCALLY and then selling the locally-generated power to its tenants.

**(c) Set a Renewable Portfolio Standard:**

Set a renewable energy goal for our Green Port: for example, the Port of Oakland has pledged that by the year 2018, 75 percent of its energy provided to its tenants will come from renewable sources. It has also pledged to buy 11,000 megawatt hours of renewable electricity annually. Our Green Port can and should do the same.

Currently, Southern California Edison offers Green Tariff Shared Renewables Program, comprised of two tariff options (1) Green Rate and (2) Community Renewables, both available to commercial customers. Further, the Community Renewables Program allows commercial customers to enter into an agreement with a third-party renewable provider for renewable energy, SCE then provides a bill credit for generation services to the customer based on information provided by the third-party renewable provider.

**(d) Determine and set industry-leading energy efficiencies standards for the terminals.**

The terminals and buildings operating on POLB properties can and should begin benchmarking their energy usage annually. Determine a multi-year plan to for terminal operators to become net zero in their operations, taking into consideration air quality and terminal tenants' fiscal concerns inherent therein.

**(e) Determine an actual pathway to resiliency with definable goals and benchmarks.**

Minor grid disruptions can and do have major implications for port tenants, employees and those who work at the port. For this reason, the POLB can and should explore the "off-the-shelf" technologies that are available *today* to transition the POLB to being resilient (both for grid disruption purposes, as well as national security reasons). Solar (photo-voltaic) arrays, PV canopies, partnered with battery storage and micro-grids have already been installed by our contractors at military installations in California.



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**4. Prioritize funding for charging infrastructure, as well as zero-emission equipment**

It appears that governmental funding acquisition has focused on zero-emission equipment, but efforts can and should be made to secure funding for zero-emission charging infrastructure.

**5. As a strategic partner, IBEW would like to share our collective resources and assist the POLB with securing additional and on-going funding to achieve the zero-emission, renewable energy goals that will benefit the POLB, as well as local workers, residents and businesses.**

Thank you for the opportunity to provide comments in this regard. We look forward to further discussions in this regard.

Sincerely,

A handwritten signature in black ink, appearing to read "JKropke", written over a faint circular stamp.

Jennifer J. Kropke,  
IBEW Local Union 11, Director of Workforce and Environmental Engagement

economic investment and job creation, and port competitiveness. We look forward to our continued work with ports and the coalition for clean air and a healthy planet.



Kathleen Ligocki  
Chief Executive Officer  
Agility Fuel Solutions



William Nowicke  
Chief Operating Officer  
Agility Fuel Solutions



Seung W. Baik  
Chief Legal Officer  
Agility Fuel Solutions



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September 15, 2017

Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Port of Los Angeles  
425 S. Palos Verdes Street  
P.O. Box 151  
San Pedro, CA 90733

RE: Strengthening CAAP for Clean Air NOW

Dear Port of Long Beach and Port of Los Angeles Commissioners,

We strongly support the Advanced Clean Trucks Now Plan (ACT Now), to accelerate the San Pedro Bay Ports' Clean Air Action Plan (CAAP). The current iteration of the CAAP sets a zero-emissions target for 2035. We believe that is too long to wait when near-zero emissions technology exists today.

Quantum Fuel Systems has been a pioneer in clean vehicle technology for over 25 years with experience in natural gas and hydrogen fuel storage systems, vehicle integration and hybrid electric vehicle system technologies. We have 118 employees in Lake Forest, CA where we design, engineer and manufacture fuel system modules. Our business impacts even more Southern California jobs as we work with many local suppliers and vendors. Finally, we have the production capabilities and the capacity to start providing clean fuel systems for port trucks as soon as possible.

With our background we know that technology exists today to make port trucks 90% to 99% cleaner. We are manufacturing fuel system modules for heavy-duty trucks today that utilize Renewable Natural Gas (RNG). Starting in 2018, the Cummins near-zero emissions engine combined with our fuel systems and RNG could deliver far greater emissions reductions than the draft CAAP, at 50% of the cost.

Heavy-duty trucking is California's largest emissions challenge. Additionally, the ACT Now Plan emphasizes cost-effectiveness to ensure that the Ports can continue to grow and capture market share without being burdened by excessive costs. The costs to transition initially to RNG-powered trucks are low because RNG truck service and support shops and fuelling station networks are already available in California that have been built up over the past 10 years since the first Clean Truck Program.

We urge you to take action now to greatly strengthen the CAAP by incentivizing trucks that utilize the most advanced, yet cost effective, existing technology to phase out diesel trucks from our roads.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Arold".

Mark Arold  
President



Sept. 15, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon:

I am writing to you today to express my concerns with the Draft Clean Air Action Plan 2017. As a global ocean carrier and currently the 8<sup>th</sup> largest containership operator in the world, Yang Ming Marine Transport has provided continuous liner service to and from the Southern California region for over 37 years. Yang Ming's vessels have regularly called at the Port of Los Angeles and Port of Long Beach since 1979. Additionally, Yang Ming has been investing in the port as a co-owner of the West Basin Container Terminal since 2002.

Ocean carriers have partnered with the ports of Los Angeles and Long Beach for more than a decade in efforts to achieve significant reductions in pollutants and greenhouse gases from vessels. In fact, the Draft CAAP praises the industry for its successful efforts to reduce air emissions. I wholeheartedly support these efforts and look forward to seeing them continue long into the future.

In spite of this significant progress and the partnership between the ports and industry, this plan is proposing to add \$14 billion in costs at a time when the industry is struggling to return to financial profitability. Following review of the Draft CAAP 2017, I have serious concerns with the plan as it is proposed:

- Adding \$14 billion in costs will not increase the competitiveness of this gateway and will make it difficult to attract discretionary cargo.
- Where will the money come from and who will pay for these costs?
- The Vessel Speed Reduction has been one of the most successful voluntary emission reduction programs. We encourage you to retain the existing program.
- The operational requirements for appointments and mandatory turn times with penalties on both parties will only create a burdensome administration process and not increase the efficiency of the gateway. By including efficiency measures in the CAAP, the ports have turned their back on their stakeholder driven process in the Supply Chain Optimization forum. Instead of bringing the stakeholders together to find solutions,



these requirements increases conflict between the truckers and marine terminal operators.

Over a decade ago, the first Clean Air Action Plan challenged the industry to deliver on an ambitious set of goals. Companies rose to the challenge and achieved substantial emission reductions. We would like to continue this collaboration on a program that allows zero and near zero emission technologies on an achievable time frame. This will allow the San Pedro Bay gateway remain competitive in the global marketplace while being a leader in environmental sustainability.

Should you have any questions or need any additional information, please feel free to reach me by at 201-420-5898 or by email at [trlee@us.yangming.com](mailto:trlee@us.yangming.com).

Sincerely,

Capt. T. R. Lee  
Senior Vice President

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero



Cummins Westport  
The Natural Choice



September 15, 2017

Chris Cannon, Chief Sustainability Officer  
Director of Environmental Management  
The Port of Los Angeles  
425 S. Palos Verdes Street  
San Pedro, CA 90731

Dear Mr. Cannon,


On behalf of Cummins Westport Inc. (CWI), I am writing to express support *with amendments* for the Clean Air Action Plan (CAAP.) We urge accelerating the goals outlined in the plan to reduce truck emissions at the Ports of Long Beach and Los Angeles by adopting policies that promote a variety of technologies that can help the Ports and their communities move towards their clean air goals. CWI recognizes the many challenges in creating a plan that balances complex economic and environmental priorities with the needs of its community members. We're committed to being part of this comprehensive solution to help Southern California meet its clean air goals today.

Since its inception in 2001, Cummins Westport has delivered over 70,000 natural gas engines, and has continually strived to offer the best in technology, performance, and reliability to our customers. In 2016, we developed Near Zero NOx reduction technology and began production of the ISL G Near Zero engine. These engines are certified by the California Resource Board to a NOx emissions level of 0.02 g/bhp-hr, which is 90% below the current EPA standard of 0.2 g/bhp-hr and offer an immediate 90% NOx reduction from 2010 compliant engines. Near Zero technology powered by renewable natural gas (RNG), offers emissions and sustainability benefits today equivalent to electric battery trucks of the future. Cummins Westport natural gas engines are capable of operating on up to 100% RNG, leveraging the existing network of fueling stations and service and support providers.

Dollar-for-dollar, natural gas solutions are the least expensive way to reduce smog-forming NOx emissions. Every \$10 million invested in natural gas vehicles reduces more than seven times as many pounds of NOx than the same amount invested in electric vehicles.

Cummins Westport is expanding this Near Zero technology with the same 90% NOx reduction profile to our 12 liter ISX12N engine, currently undergoing testing in Port trucks and in other

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applications throughout the US for delivery in the first quarter of 2018. The ISX12N will offer port operators heavy duty truck performance with the lowest possible emissions. In 2018, all of Cummins Westport's engines will meet CARB and EPA optional low NOx standards.

The decisions to decrease the level of NOx emissions at the Ports will have a significant impact on the health and the lives of those who live in Los Angeles and Long Beach, especially those who live in the areas directly around the Ports. While the current plan ensures that sustainable solutions will be in use by 2030, we believe natural gas engines can play a key role today to accelerate the Ports move towards near-zero and zero emissions.

Cummins Westport natural gas engines are manufactured in Cummins factories, backed by a full Cummins factory warranty, and are supported locally in southern California by Cummins Pacific. Every leading truck manufacturer produces trucks with CWI natural gas engines including Freightliner, Volvo, Kenworth, Peterbilt, and Mack. Natural gas engines are a mature technology readily available today, and are supported by an established fueling and supply infrastructure, enabling fleets to incorporate near-zero emissions technology into their fleets today.

Cummins Westport is committed to helping the Ports of Los Angeles and Long Beach achieve immediate results in our collective battle to reduce NOx emissions in Southern California. We believe a solution is needed for today's communities as soon as possible, and encourage transitioning to Near Zero and Zero emissions technology by as soon as next year, with a full transition by 2023, to jumpstart the process of cleaning the air today.

Now is the time to begin reducing emissions: it is an action that paves the way for a healthier tomorrow and shows the rest of the US why California is a leader in sustainability. We look forward to working with the Ports to develop a stronger Clean Air Action Plan that helps the communities of Southern California pave a pathway for a sustainable and healthy future.

Sincerely,



Rob Neitzke  
President  
Cummins Westport Inc.





1202 East Carson Street Carson, CA 90745 (310) 984-3430

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September 15, 2018

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

Subject: Comments on the Draft Clean Air Action Plan (CAAP)

Dear Mr. Cannon and Ms. Tomley:

Inland Kenworth – Carson and the Inland Group of companies would like to commend the Ports of Los Angeles and Long Beach for their leadership in updating the Clean Air Action Plan (CAAP).

Representing the full line of Kenworth products, The Inland Group has been providing transportation companies with Heavy and Medium Duty trucks since 1949. With four (4) Southern California locations (Carson, Montebello, Fontana & San Diego) we have and continue to be, Kenworth's authorized dealer for the sale and servicing of trucks operating within the Ports of Los Angeles and Long Beach and our experience dates back to the introduction of the first Natural Gas powered trucks. Our Carson facility, which is strategically located very near the ports, has a long history of supporting port operators. In addition, all of our Southern California locations have the personnel, tooling and parts necessary to maintain our position as the industry leader in supporting Natural Gas powered trucks.

Beyond supporting the ports and further illustrating Kenworth's commitment to Natural Gas powered trucks, Kenworth prides itself on being the primary supplier of Natural Gas trucks to major fleets including UPS which, in late 2015, placed a single, multi-year order for nearly eight hundred (800) CNG tractors. These trucks continue to roll down the Kenworth factory line. Installation is routine, efficient and fully supported by both Kenworth and Cummins factory warranties.

The introduction of the new Cummins 12 Liter ISX12 G Near Zero Engine positions us to further support the Clean Air Action Plan (CAAP). These trucks can operate on up to 100% renewable Natural Gas (RNG), which results in significant greenhouse gas reductions. We have been taking orders for trucks equipped with this power plant for a number of months and will be delivering our first units in November of this year. Factory installation of the engines allows us to provide units to our customers in a very short period of time following the order date (currently 10-12 weeks).



September 18, 2017

Inland Kenworth is proud of our proven track record in the sales and servicing of alternative fuels vehicles to the ports and we look forward to supporting a large number of Near Zero CNG trucks moving forward.

Sincerely,

Chuck Peterman  
Director of Fleet Sales  
The Inland Group

cc:

Gene Seroka, Executive Director, Port of Los Angeles  
Mario Cordero, Executive Director, Port of Long Beach  
Rick Cameron, Managing Director Environmental Affairs & Planning, Port of Long Beach  
Mark Zucker, Vice President, The Inland Group  
Rob Vaughn, General Manager, Inland Kenworth – Carson  
Jeff Stevens, Director of Vocational & Medium Duty Sales, Kenworth Truck Company



Oswaldo Merino 17748 SkyPark  
Vice President Suite #100  
949-793-5959 Irvine, CA 92614  
omerino@pacifcenterorrisebank.com

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September 15, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach, CA 90815

Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

Subject: Financing New Trucks for Clean Air Action Plan

Dear Mr. Cannon and Ms. Tomley:

Proposed changes to the Clean Air Action Plan (CAAP) will require truck owners to retire their old trucks and purchase new trucks. Port trucks today are predominantly owned by independent contractors. Questions have been raised at various meetings about how an independent contractor will be able to finance the purchase of a new truck.

Pacific Enterprise Bank has doing business with independent contractor truck owners since 2010. We are a member of the California Capital Asset Program (CalCap), which is a California state program designed to encourage banks and other financial institutions to make loans to small businesses that have difficulty obtaining financing. We are happy to service the independent contractors with financing programs that are designed to be affordable. We have funded many successful loans with independent contractors and we stand ready to continue to provide this service. We are particularly excited about playing a role in cleaning the air by helping truck owners purchase new trucks.

Thank you for the opportunity to let you know that truck financing is available for independent contractors. I am available to answer any questions by contacting me at (949) 793-5959.

Sincerely,

A handwritten signature in blue ink, appearing to read "Oswaldo Merino".

Oswaldo Merino  
Vice President

cc:

Gene Seroka, Executive Director, Port of Los Angeles  
Mario Cordero, Executive Director, Port of Long Beach  
Rick Cameron, Managing Director Environmental Affairs & Planning, Port of Long Beach



September 15, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815



Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

Subject: Rush Truck Centers Support of RNG Low NOx Trucks for the Clean Air Action Plan

Dear Mr. Cannon and Ms. Tomley:

Rush Enterprises is the largest Peterbilt dealer in North America. We have been in business for more than 52 years. We have more than 100 locations nationwide, including 11 in Southern California, which are operated by our wholly owned subsidiary Rush Truck Centers of California, Inc. Rush Truck Centers' California locations employ almost 500 people in service, sales, parts and administration.

Rush Enterprises strongly supports the natural gas truck market. We have sold and serviced natural gas trucks for over 10 years. Our capabilities have grown with the marketplace, availability of natural gas engines and available models. Today, Peterbilt offers natural gas engines in several of its models. Rush Enterprises' conviction that natural gas trucks are part of an overall menu of market driven, economically viable and sustainable, green solutions for our customers led us to start Momentum Fuel Technologies, which designs, installs and services natural gas fuel systems on trucks and other vehicles. Coupling Peterbilt sales and services with the Momentum fuel systems gives Rush Enterprises unequalled infrastructure to support the continued growth of the natural gas truck market. Today's natural gas trucks are finding acceptance in the marketplace because the technology is immediately available and reliable, the trucks are affordable and the environmental and sustainability benefits are unmatched.

Our belief is that most, if not all, people and businesses want to contribute to improving the environment and become as "green" environmentally as possible. At the same time, businesses and municipalities' alike need to be green financially in order to compete in today's business and government budget climates. Without ultimate "subsidy free" economic feasibility, the adoption of environmentally sustainable alternatives to diesel engines will not occur. With at least 5 separate truck OEM's (Freightliner, Kenworth, Mack, Peterbilt and Volvo) supplying CNG powered heavy duty trucks today, the Ports of Los Angeles and Long Beach can make an immediate green environmental and green financial decision by choosing to implement natural gas trucks and near zero emission engines today. Doing so will improve the environment today and by putting more near zero emissions equipment in service. Most importantly, the people who live near these ports benefit now and not five years from now.

At the end of the day, it is about air quality. The newest ultra-low NOx 12 liter engine from Cummins Westport (CWI) achieves emissions levels that rival a battery electric truck. The arrival of this engine to market at the same time as the Clean Air Action Plan (CAAP) is being updated creates a unique opportunity that can benefit future generations. Rush Enterprises agrees with the Advanced Clean Trucks Now (ACT Now) Plan proposed by the California Natural Gas Vehicle Coalition that renewable natural gas powering the ultra-low NOx engine is the quickest and most affordable path to clean air at the ports.

#### **NOx Emissions**

The CWI 12 liter ultra-low NOx engine is being certified to the ARB's lowest alternative low NOx standard of 0.02 g/bhp-hr. This NOx level is so low that AQMD and CEC consider this to be equivalent to an electric battery truck that is charged by the grid. The NOx control technology is so efficient that a recent test by UC Riverside found that the NOx emissions in slow speed applications like port drayage are actually 0.002— 90% lower than the 0.02 certification level. The

significance of this finding cannot be understated. UC Riverside found that modern diesel engines in slow speed applications like port drayage emit five times higher than their certified emissions. Between the higher emissions of diesel engines and the lower emissions of the CWI engine, the CWI engine is 99% cleaner than diesel and on par if not better than electric.

#### **Diesel Particulate Matter (DPM) Emissions**

The CWI 12 liter engine has zero emissions of DPM. DPM emissions are completely eliminated. While it can be argued that modern diesel engines have control systems for DPM, the fact remains that these control systems can fail or malfunction due to age, improper maintenance or defeating. All of these issues go away by using natural gas engines.

#### **Greenhouse Gas (GHG) Emissions**

The case for using the CWI near zero engine is even more compelling by powering with Renewable Natural Gas (RNG). RNG is a sustainable, low carbon fuel with greenhouse gas (GHG) emission reductions that are equal to and even better than an electrical vehicle powered by the current electric grid. RNG is produced from the waste products that we generate, green waste that is diverted from landfills, and methane-producing waste from dairy farms and other agricultural operations. Rather than letting the resulting methane leak into the atmosphere and cause climate damage, the methane is captured and converted into a valuable fuel that directly replaces fossil fuels in transportation.

RNG can reduce GHG emissions by 70% to over 100% compared to diesel. RNG from dairy farms and some diverted green waste can have negative – subzero – carbon emissions. Consider the importance of this resource in fighting climate change. Every mile driven by an RNG truck is actually pulling GHG out of the atmosphere! No other technology, including an electric battery trucks directly powered by wind or solar, can approach these levels of GHG reduction.

Growing the RNG industry in California also means jobs and economic investment. According to ICF, transitioning California trucks to RNG fuel can create 130,000 jobs and foster \$14B in economic investment.

#### **Fossil Fuel Displacement**

California has a goal to replace fossil fuel with renewable fuels. RNG is an easy substitute fuel for fossil natural gas. Every gallon of RNG used in a truck is a direct displacement of a gallon of fossil fuel. In 2016, over 60% of the vehicular gas used in California was RNG and this total will now grow to over 90% as Metro transitions their bus fleet to RNG. Importantly, the infrastructure for distributing and supplying RNG already exists.

#### **Cost-Effectiveness Matters**

California simply cannot afford to chase every shiny object when it comes to environmental sustainability. The state needs affordable, practical and cost-effective solutions to our problems. Achieving the end goal at a lower cost means that the money saved can be used for other purposes. Zero-emission technologies like electric and fuel cell may someday play a role, but these technologies are inherently far more expensive than trucks with the CWI 0.02 near zero engine. The range can be expected to be two to four times more expensive just for the vehicle. The charging or fueling infrastructure adds even more costs. Some estimates are that charging infrastructure will cost dollar-for-dollar the cost of the vehicles deployed. This makes no economic sense. The ACT Now Plan will achieve better emissions reductions compared to the draft CAAP at 50% of the cost—saving our goods movement economy more than \$2B for truck replacements. The savings is far greater when also including the charging infrastructure.

#### **Market Readiness**

The CWI 12 liter engine has been on the market since 2013 and has been proven by fleets across America. The 0.02 near zero version of this engine will be in production in February 2018. This engine will be readily available in Peterbilt trucks in early 2018. This is not reinventing the wheel like electric battery and fuel cell trucks. The national service and support network already exists for this engine. Service shops are available. Technicians are trained and certified. Parts are readily available. Public and private fueling stations exist across America.

#### **Summary**

There are only benefits and no downside to relying on RNG-powered trucks to solve the problems of air pollution and climate damaging emissions while keeping goods moving:

- NOx Emissions ..... 99% lower than diesel, equivalent to an electric battery truck
- GHG Emissions..... 70% to over 100% (subzero) lower, better than an electric battery truck
- DPM Emissions ..... 100% reduction
- Fossil Fuel ..... 100% reduction
- Cost-Effectiveness ..... 50% less expensive than draft CAAP, saving \$2B
- Sales, Service and Support .... Already exist
- Fueling ..... Already exist
- Readiness..... 2018
- CNGVC ACT Now Plan..... Fully Support

I reiterate Rush Enterprises' support for the ACT Now Plan to use currently available and cost-effective technology to upgrade the port truck fleet over the next five years. With the technology available today, there is no reason or need to wait. I urge the Ports of Los Angeles and Long Beach to continue their visionary leadership and adopt a strong CAAP that reflects the ACT Now Plan. Rush Enterprises is committed to providing the sales and services needed for the program to succeed.

Updating the CAAP is no easy task. Rush Enterprises is here to support a strong CAAP and make the program a success. Please call me at 714-793-7730 if I can help in any way.

Choosing to use Natural Gas, today makes pragmatic "cents." Cost savings associated with the use of Natural Gas over other unproven technologies that are years away from full production and commercial availability are documented and verifiable. Press releases of an emerging technology cannot be viewed with the same impactfulness and immediacy as seeing 5 major truck OEM's with proven vehicles, service support, and millions of miles of history available today with near zero emission natural gas engines.

Please know that Rush Enterprises is here to support the ports efforts.

Sincerely,



Michael McRoberts  
Chief Operating Officer

cc:

- Gene Seroka, Executive Director, Port of Los Angeles
- Mario Cordero, Executive Director, Port of Long Beach
- Rick Cameron, Managing Director Environmental Affairs & Planning, Port of Long Beach

**Date:** September 18, 2017  
**To:** [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)  
**CC:** [louanne.bynum@polb.com](mailto:louanne.bynum@polb.com)  
[Mario.Cordero@polb.com](mailto:Mario.Cordero@polb.com)  
[Martinezcommissioners@portla.org](mailto:Martinezcommissioners@portla.org)  
[gene\\_seroka@portla.org](mailto:gene_seroka@portla.org)

**From:** Elena M. Asher, Assistant Director-Export Logistics  
**Subject:** Clean Air Action Plan (CAAP)

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In regards to the proposed Clean Air Action Plan (CAAP) proposal, I have some concerns/questions. Therefore, please find this letter addressing the same.

As I read the enclosed report, I see the article discussing LA/Long Beach (specifically), but I did not see any mention of Oakland. I am assuming that Oakland would be “next” on the list. Correct me if I am wrong about this assumption.

As some background about Dairy Farmers of America Inc. (aka-DFA), we currently export approximately 900 FEUs of our 2000 annual FEUs from the port of Oakland, CA (45% of our total exports). Contrarily, we are exporting approximately 150 FEUs of our 2000 annual FEUs from the ports of LA/Long Beach/San Pedro (8% of our total exports).

DFA is in the process of completing the construction of a new Garden City, Kansas plant this year (end of 2017) to service the dry dairy powder global dairy needs. This plant will be focused on exporting product to China and Vietnam.

Therefore, we are expecting (within the next 12-18 months) that our international business will expand by (at least) 1000 additional FEUs annually. **The product from this new Garden City, Kansas plant plans to route from the Kansas City rail ramps over LA/Long Beach/San Pedro to China and Vietnam.**

Therefore, we are certainly planning that our future use of the LA/Long Beach/San Pedro ports will greatly increase over what we are doing today.

Since we compete in the dry milk powder/commodity business, price is **extremely sensitive** to our customers. Many times, we lose business over pennies—as our dry dairy milk powder competitors in New Zealand and Europe are better-positioned from a total ocean transit time and cost perspective. Additionally, we simply do **not** have the margins to assume more charges from US ports and/or terminals related to the export process. We are already fighting over pennies and piling on more fees would (clearly) create an even greater disadvantage to US exporters while widening the existing advantages to our New Zealand and European competitors.

I am assuming that mandating “all electric” port/terminal operations would create a lot of additional charges which would (likely) be passed back to the BCO. I am all for continuous improvement while keeping the environment clean, but we **cannot** accept more fees that make our business less-competitive. Therefore, I would encourage innovation that would LOWER overall costs for US exporters. Otherwise, we are hurting US exporters—especially agriculture products. DFA wants to “feed the world” by providing healthy dairy proteins to emerging populations, but we cannot achieve this end—if our products become cost-prohibitive.





Please let me know if there are any questions/concerns regarding the information that I have provided. Thank you (in advance) for raising these concerns to the appropriate people.

Kind Regards,

A handwritten signature in blue ink, appearing to read 'E. Asher', with a long, sweeping underline.

Elena M. Asher-Assistant Director/ Export Logistics

[easher@dfamilk.com](mailto:easher@dfamilk.com) Tel: 816-801-6497



Clean Air Action Plan > 2017 Clean Air Action Plan Update

## San Pedro Bay Ports Release Draft of 2017 Clean Air Action Plan Update

Release of proposed CAAP kicks off two-month public review and comment period

July 19, 2017

The ports of Los Angeles and Long Beach today released the draft of their proposed 2017 Clean Air Action Plan (CAAP) Update. The document outlines a new set of aggressive near-term and long-term strategies for the nation's busiest harbor complex to further reduce harmful air pollution from all port-related sources, assist the state in meeting aggressive greenhouse gas reduction goals, and ultimately achieve zero emissions for trucks and terminal equipment.

**The document's release kicks off a public review and comment period that extends through Sept. 18.** Written comments may be submitted to [CAAP@cleanairactionplan.org](mailto:CAAP@cleanairactionplan.org) until 5 p.m. on the closing date. **The ports will also hold an Aug. 30 public workshop at Banning's Landing Community Center, located at 100 Water St. in Wilmington, starting at 5 p.m. for people to comment.** Harbor commissioners from both ports plan to hold a joint public meeting in November to consider the final draft.

"These ports are going where no port has gone before," said Port of Los Angeles Executive Director Gene Seroka. "Based on what we've already accomplished to promote healthy, robust trade through our gateway, we're ready to make history again, looking at a new array of technologies and strategies to further lower port-related emissions in the decades ahead."

"Working closely with all our partners has been crucial to our success. That same collaboration went into the development of the 2017 CAAP and will be indispensable going forward," said Port of Long Beach Executive Director Mario Cordero. "Since 2006, the Clean Air Action Plan has been a model for programs to reduce health risks and air quality impacts from port operations worldwide. We remain committed to being leaders in seaport sustainability."

The draft 2017 CAAP ushers in a new era of clean air strategies that seek to address the enormous challenges of reducing harmful emissions from port-related sources: ships, trucks, cargo handling equipment, locomotives and harbor craft. The strategies also reinforce the ports' commitment to sustainable operations that maintain and strengthen their competitive position in the global economy.

The draft 2017 CAAP Update incorporates feedback from nearly two years of extensive dialogue with industry, environmental groups, regulatory agencies and neighboring communities. The ports conducted multiple small-group meetings and a large public workshop prior to releasing a Discussion Document last November detailing their goals, priorities and strategies for public review and comment.

Since then, the ports have held more than 50 stakeholder meetings and another community workshop leading into today's release of the draft 2017 CAAP Update.

Updated strategies in the CAAP incorporate local, regional, state and federal standards and regulations, as well as anticipate clean air regulations under development by the California Air Resources Board. The CAAP also aligns with the vision and targets of state and local leadership, as identified in the California Sustainable Freight Action Plan adopted in 2016 and the aggressive joint zero emissions initiatives announced in early June by Los Angeles Mayor Eric Garcetti and Long Beach Mayor Robert Garcia.

Grouped under four categories, the 2017 CAAP's near-term and long-term strategies include:

### Clean Vehicles, Equipment Technology and Fuels

- Starting in 2018, phase in clean engine standards for new trucks entering the port drayage registries followed by a truck rate structure that encourages the use of near-zero and zero emissions trucks, with the goal of transitioning to a zero emissions drayage fleet by 2035.
- Reduce idling and support the state's efforts to transition terminal equipment to zero emissions by 2030.
- Update the Vessel Speed Reduction Program, expand the use of state-approved alternative technologies to reduce at-berth emissions, and encourage clean technology upgrades on ships to attract the cleanest vessels to the San Pedro Bay ports.

### Freight Infrastructure Investment and Planning

- Expand use of on-dock rail, with the long-term goal of moving 50 percent of all inbound cargo leaving the ports by rail.
- Develop charging standards for electric cargo handling equipment.

### Freight Efficiency

- Develop a universal truck appointment system for the entire complex with the goal of minimizing truck turn times.
- Create a voluntary Green Terminal Program to recognize terminal operators achieving high levels of freight movement efficiency.
- Continue to explore short-haul rail, staging yards, intelligent transportation systems and other supply chain efficiency improvements.

### Energy Resource Planning

- Develop infrastructure plans to support terminal equipment electrification, alternative fuels and other energy resource goals.
- Continue to develop and implement viable energy conservation, resiliency and management strategies.

The updated CAAP captures projects underway as well as future projects, including those that will require further study to determine how and when to demonstrate new technology. A roadmap for conducting feasibility assessments is among the supporting documents.

Supporting documents also include a preliminary analysis estimating the cost of implementing the 2017 CAAP at \$7 billion to \$14 billion. Given the magnitude of the investment, the draft plan calls for the ports to intensify their funding advocacy and increase collaboration with their partners to finance the new strategies.

The 2017 CAAP sets new clean air goals focused on reducing greenhouse gas emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. The plan carries over previous 2023 targets for cutting other primary pollutants aimed at reducing diesel particulate matter (DPM) 77 percent, sulfur oxides (SOx) 93 percent, and nitrogen oxides (NOx) 59 percent below 2005 levels.

The most recent emissions inventories show the ports have already surpassed the 2023 DPM and SOx reduction targets and are within striking range of the NOx target. The 2017 CAAP identifies the tougher measures needed to ratchet down harmful emissions to zero or near-zero levels.

## Update Documents

- Clean Air Action Plan 2017 Draft Document – Final
- Clean Air Action Plan 2017 Costing Report – Final
- Clean Air Action Plan 2017 Economic Considerations – Final
- Comments on Clean Air Action Plan Update Received as of Aug. 29, 2017
- Potential Emission Reductions from Select CAAP 2017 Strategies – Draft
- Feasibility Assessment Framework – Final
- Vessel Tier Forecasts 2015-2050 – Draft
- Clean Air Action Plan 2017 Fact Sheet (7-12-17)
- Clean Air Action Plan 2017 Presentation – Draft

### ← SHARE



### ABOUT CAAP

The San Pedro Bay Ports Clean Air Action Plan was enacted in 2006 by the ports of Los Angeles and Long Beach to significantly reduce the health risks posed by air pollution from port-related ships, trains, trucks, terminal equipment and harbor craft.

### TRANSLATE

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### NAVIGATION



September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes St  
San Pedro CA 90731

Heather Thomley  
Port of Long Beach  
4801 Airport Plaza  
Long Beach CA 90815

Via Email: [CAAP@cleanairactionplan.org](mailto:CAAP@cleanairactionplan.org)

Dear Mr. Cannon and Ms. Thomley:

The Los Angeles Gateway Chambers represents businesses located within the Los Angeles communities of Harbor City and Harbor Gateway, as well as several adjacent neighborhoods in the unincorporated area of Los Angeles County. Many of our members make their living in the goods movement and logistics industry and are therefore concerned with the latest update of the Clean Air Action Plan. (CAAP)

We believe the latest draft plan contains several flaws or omissions that may have unintended consequences to the financial viability and competitiveness of the Ports. As a member of the Los Angeles County Business Federation, we incorporate by reference their comments for a full discussion of our specific concerns. (see attached)

In addition, we believe that the latest draft plan creates a presumption that zero-emission (electrification) technology may be available, feasible and usable by all members of the goods movement supply chain. We do not believe, given the myriad of equipment and processes within the Ports, a single standard is appropriate. Drayage trucks, car-carriers and bulk handlers are very different vehicles and have different requirements based upon weight hauled, distance travelled and working hours.

Further, the infrastructure necessary for electrification would require exorbitant outlays of capital by some undefined funding source. We also believe that given the lifecycle of equipment, it would incentivize equipment users to skip deployment of near-zero technologies (natural gas and cleaner diesel), in order to amass resources to be able to afford zero-technology adoption-ironically *the adoption of a zero-technology standard could delay cleaner air in the near term.*

The other concern is the other regulatory agencies may adopt the CAAP as their own regulation, thus "backstopping" the CAAP update before its feasibility can be determined. We know that the California Air Resources Board has begun a rule-making process that will include the Ports. By adoption of this draft of the CAAP, the Ports may be enabling and encouraging litigation against the Ports and its tenants by both public agencies and third-party environmental organizations.

In closing, we assure you that the Los Angeles Gateway Chamber of Commerce supports the Ports in updating the Clean Air Action Plan. The CAAP has been wildly successful in reducing air emissions created by the operations at the Ports. It has done so by adopting feasible measures and by working with the industry not assure its success. We ask that the Ports adopt an update that continues in that tradition.

Sincerely,

A handwritten signature in black ink, appearing to read "Louis G. Baglietto, Jr.", written in a cursive style.

Louis G. Baglietto, Jr.  
Legislative Chair



September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**SUBJECT: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon:

The Long Area Beach Chamber of Commerce appreciates the opportunity to express our comments and concerns with the Draft Clean Air Action Plan 2017.

Our Chamber has served the community since 1891. The Chamber serves as a platform for businesses to provide leadership, education and advocacy to ensure that the Long Beach area thrives in the 21st century. Our vision is to create community consensus to support local, regional, and international business.

We understand the maritime, supply and logistics industries have partnered with the ports of Los Angeles and Long Beach for more than a decade to achieve significant reductions in pollutants and greenhouse gases. In fact, the Draft CAAP 2017 praises industry for its efforts to reduce air emissions at the ports. The Long Beach Chamber wholeheartedly support these efforts and look forward to seeing them continue long into the future.

Long Beach businesses will be significantly impacted by cost increases as a result of this plan. One in eight jobs in Long Beach are tied to the port and it is critical the Ports of Los Angeles and Long Beach remain competitive.

Following our review of the Draft CAAP 2017, we would like to express our concerns with the following:

- More information needs to be provided regarding the the commercial availability or affordability of identified technologies;
- The uncertainty of the draft plan's overall cost. We believe there needs to be more specificity on where, how, or when federal and state grant opportunities will become available;
- The absence of analysis regarding the Ports' future competitiveness if it were to implement the policy proposals.

In sum, we are concerned that the Draft CAAP 2017 would require businesses engaged in commerce with the ports of Los Angeles and Long Beach to bear the lion share of \$14 billion in costs with a large portion of these costs to be spent in the next 5 to 7 years.

If the Draft Clean Air Action Plan update is approved as is, we are deeply concerned that it will negatively impact Long Beach based businesses. Should you have any questions or need any additional information, please feel free to reach me by at 562-436-1251 or [rwgordon@lbchamber.com](mailto:rwgordon@lbchamber.com).

Sincerely,

A handwritten signature in black ink that reads "Randy Gordon". The signature is written in a cursive, flowing style.

Randy Gordon  
President/CEO

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero



Mr. Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Ms. Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Mr. Cannon and Ms. Tomley:

The proposed Draft Clean Air Action Plan (CAAP) 2017 was released by the Ports of Los Angeles and Long Beach in July 2017. The purpose of the CAAP is to provide a roadmap for emissions reductions from ships, trucks, cargo handling equipment, locomotives and harbor craft. The Draft CAAP proposes to require 100% use of only zero-emissions electric non automated cargo handling equipment at marine terminals by 2035.

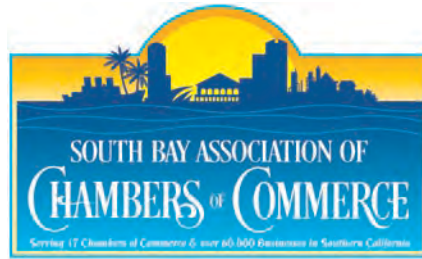
The Ports' estimates it will cost \$7 - 14 billion to implement the CAAP for technology that does not exist today. The Ports assume the technology will be developed, tested and be commercially available within the next 5 - 7 years. Industry estimates the cost utilizing existing, commercially available automated technologies is \$10 - \$18 billion. The additional cost to do business in our twin ports has not been determined along with potential loss of market share, job loss and increased costs for goods; there would likely also be an increase in pollution which does not need to be addressed in the CAAP but could be the end result of diverted cargo and the additional transportation of that cargo.

The Wilmington Chamber of Commerce conditionally supports the CAAP, providing it is amended to allow near zero technologies, which are 90% cleaner than current technology to be optional for Cargo Handling Equipment and a San Pedro Bay Port competitiveness action plan.

Best regards,

A handwritten signature in blue ink that reads "Dan Hoffman". The signature is written in a cursive, flowing style.

Dan Hoffman  
Executive Director  
Wilmington Chamber of Commerce



September 18, 2017

### **RE: Comments Regarding Clean Air Action Plan 3.0**

On behalf of the South Bay Association of Chamber of Commerce, a coalition of 17 chambers in the South Bay of Los Angeles County, we respectfully submit these comments.

First, I think it is important to acknowledge the efforts of port staff to conduct a complete and thorough outreach process. Without a doubt, this Clean Air Action Plan (CAAP) feels like a much more inclusive process engaging all stakeholders to ensure that all parties are heard.

Our organization has thoroughly reviewed the document and while we support the purpose of the CAAP to improve air quality and pave the way for more environmentally sustainable operations for decades to come, we have a few concerns for the ports to consider before final adoption of any CAAP.

#### **Competitiveness**

First and foremost, it is the mission of the twin ports to move cargo. Second to moving cargo is to do so in an efficient and sustainable way. Since 2006, competing ports have seen faster growth and have increased their market share as global trade has continued to grow. There are many contributing factors, however regulatory uncertainty and cost are undoubtedly a concern for importers and exporters using the San Pedro Bay Ports.

Above all, it is necessary to preserve our competitive advantages and make an effort to both reduce emissions while increasing market share. There are certain elements of this CAAP that could drive up cost to an extent that would make it hard for our region to compete in a global marketplace. It is essential to preserve commercial sustainability while improving environmental sustainability.

#### **Technology**

A primary concern threatening the global competitiveness of our ports is the current cost and availability of technological solutions. Currently, the port estimates that the replacement cost of equipment will be between \$7-14 Billion. This cost does not lineup with creating a competitive edge for the Ports of Los Angeles and Long Beach.

The lack of availability of near-zero emission (NZE) and zero emission (ZE) technologies that have been proven and are commercially viable is cause for concern. During the first CAAP, technology that was deployed was not fully tested and proved to be insufficient for port operations. This was exacerbated by the exorbitant cost and stringent deadlines.

We do applaud the ports addressing the need for pilot programs and establishing regular check-ins to diagnose the commercial viability of technology. Above all, we implore the ports to remain technology neutral and to allow industry to participate in pilot programs and remain flexible on the adoption milestones for NZE and ZE technologies. It is the industries using the technology that should decide which ones make the most sense for their respective business needs.

## **Efficiency**

Before implementing costly new technologies that are largely unproven, the ports need to create more efficiencies to current port operations. By moving cargo in a more efficient manner, there is the opportunity for both increased productivity and increased capacity within the same constructs we operate in today. This will help with both a reduction of emissions, as well as increased earning ability for companies operating in the port allowing for more available private capital to invest in new technology.

The Draft CAAP states several areas of needed improvement including increased on-dock rail, faster truck turn times, and the implementation of dynamic technology solutions such as portals. We encourage the continued effort to explore and adopt efficiency measures that help the short and long term success of the twin ports.

## **Funding**

The final area of concern is funding for the overall costs. The Draft CAAP identifies several areas of possible funding solutions including public and private monies. There is substantial concern where the \$7-14B will come from to fund much of this technological overhaul at the ports. There is no guarantee for state or federal funding, and private industry cannot foot this bill without passing the cost along to customers and consumers. This creates a great concern to the ability to maintain competitiveness.

One of the major successes of the first CAAP, was the amount of grant money made available for early adopters. The cost of the program was far less onerous than the current



Draft CAAP outlines, and roughly half of the investment came from public funding sources. To properly implement new technology, it needs to be available, affordable, and there needs to be incentives available for the early adopters who serve as the quality control and initial investors in new technology.

## **Conclusion**

In conclusion, we think that a balanced and cautious approach that allows for successful implementation of new technologies in a commercially viable method is necessary. The top priority of the ports should be to maintain competitiveness while implementing strategies to move cargo in a manner that is both more efficient and more sustainable. We ask that the ports work with industry to help develop and test new technology, and not to deploy new technology until it is both proven and the cost makes the technology commercially viable.

Thank you for the opportunity to comment on the Draft CAAP 3.0. We look forward to continued work in partnership with the ports to insure its success.

Thanks,

A handwritten signature in black ink that reads "Dan Hoffman". The signature is written in a cursive style with a large, stylized 'D' and 'H'.

Dan Hoffman  
SBACC Chair



September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

Subject: Clean Air Action Plan Comments and Recommendations

Dear Mr. Cannon and Ms. Tomley:

The California Natural Gas Vehicle Coalition (CNGVC) commends the Ports of Los Angeles and Long Beach (Ports) for their leadership in updating the Clean Air Action Plan (CAAP). The CAAP is a bold policy initiative that has resulted in real and impressive emission reductions over the past decade. These emission reductions have been accomplished through partnerships between stakeholders and the Ports involving cutting edge strategies and investments in cleaner technologies. Leadership in adopting the original CAAP 10 years ago is benefitting our communities today.

Today the Ports are at another crossroads. Harmful air pollution has been reduced, yet Southern California still has unhealthy air. The federal attainment deadline for the region looms just ahead in 2023. California is combatting climate change caused by emissions of greenhouse gases (GHG). These are critically important issues involving the health of people and our planet. The CAAP needs to get the right policies in place and not miss the opportunity at hand. Bold action taken today with strong leadership can again result in immediate and real emissions reductions to improve the health and quality of life in local communities while fighting climate change. Achieving healthy air and fighting climate change are why CNGVC urges the Ports to take more aggressive and immediate actions to clean up the port truck fleet. We offer the Advanced Clean Trucks Now (ACT Now) Plan as the bold initiative to achieve immediate and cost-effective emission reductions.

#### **The Advanced Clean Trucks Now (ACT Now) Plan**

The ACT Now Plan replaces all port trucks with cost-effective clean trucks over the next five years. Clean trucks are trucks that meet the ARB optional low NOx standard of 0.02 g/bhp-hr or are zero emissions, and reduce GHG emissions by 40% or more. The ACT Now Plan results in a new truck fleet with NOx emissions that are 99% cleaner than the current fleet of diesel trucks, eliminates diesel particulate matter, transitions away from fossil fuel, and cuts GHG emissions. These benefits are gained at a truck replacement cost that is less than half of the draft CAAP, saving over \$2 billion. Compared to the Draft CAAP, the ACT Now Plan:

- Reduces truck replacement costs by 50% - saving over \$2B
- Reduces overall total NOx by 72%
- Reduces overall total GHG by 38%
- Eliminates diesel particulate matter
- Replaces fossil fuel with renewable fuel

The ACT Now Plan is the lowest cost path to zero emissions. This lowest cost path to zero is critical for preserving port competitiveness and eliminating risks to goods movement. The Draft CAAP is a risky and uncertain plan. These risks and uncertainties are because the draft CAAP relies on future technologies and emission standards that do not exist today and have unknown costs. On the other hand, RNG trucks have sales, service, support and fueling resources and facilities that have been built up over the past 10 years and stand immediately ready for the fleet of clean trucks. The Cummins Westport 12 liter ultra-low NOx 0.02 engine will begin production in February 2018. The engine will be supplied in trucks from all of the major manufacturers: Kenworth, Peterbilt, Freightliner, Volvo and Mack trucks.

The ACT Now Plan is entirely consistent with SB1 while using incentive measures that were proven to work in the first Clean Trucks Program from 10 years ago. Just last week in Sacramento, the California Legislature approved a package of bills that provides \$895 million dollars to clean up mobile sources, targeting the diesel truck sector specifically. This allocation also includes the first of its kind direct funding for the ports. In order to maximize these resources, we need a strong plan to ensure that the California taxpayer is getting the clean air they deserve. The policies proposed in the draft CAAP should be accelerated and strengthened to achieve the 5 year transition to clean trucks:

#### Incentive Transition Program

1. Beginning July 1, 2018, require all newly registered trucks in the PDTR to meet the CARB Optional Low NOx Standard of 0.02 g/bhp-hr (0.02NZ).
2. Beginning July 1, 2018 or no later than 1 year from adoption of the CAAP, apply a rate on all containers hauled by diesel trucks that are not 0.02NZ or ZE, with the rate designed to incentivize transition to cleaner trucks while not diverting cargo from the San Pedro Bay Ports.
3. Beginning as soon as possible but no later than July 1, 2020, implement requirements that achieve a 40% reduction in GHG emissions.
4. Beginning January 1, 2023, apply the rate on all natural gas trucks that are not 0.02NZ or ZE.

#### Incentive Funding

1. Beginning in January 2018, offer incentive funding provided by the Ports and AQMD to assist with the purchase of 0.02NZ and ZE trucks that deploys 2,400 trucks over 2018 and 2019, in addition to trucks deployed under other incentive programs.
2. Apply funding of \$100,000 per 0.02NZ and ZE truck based on:
  - a. Cost-effectiveness of commercially proven technologies.
  - b. Technologies certified to meet the CARB Alternative Low NOx Standard of 0.02 g/bhp-hr or zero emissions.
  - c. Achieve at least a 40% reduction in well-to-wheels greenhouse gases compared to diesel.

The ACT Now Plan is further detailed in the submitted documents and the website ACTNowLA.org. Submitted also with this letter is a series of Topic Memos that address in detail the following topics that discuss why the Draft CAAP is a missed opportunity and how clean RNG trucks are a critically needed solution.

### **The Clean Air Action Plan Will Allow NOx Emissions to Increase**

The Draft CAAP is based upon faulty assumptions and flawed analysis. Once corrected, it is clear that NOx emissions from the drayage truck fleet will be allowed to significantly increase in the critical next five-year period.

### **Diesel is a Failed Strategy; the Draft CAAP is a Diesel-Based Plan**

Due to the failure of diesel engines to provide advertised air quality benefits, other leading cities and countries around the world have pledge to ban diesel in the next decade or two. Study after study has proven that in-use emissions of heavy-duty diesel port trucks have extremely high emissions of criteria pollutants that impact communities. Meanwhile, the Draft CAAP proposes to wait at least five years so that “clean diesel” “near zero” technology can be developed, made commercially available, and actually work! The last two decades have shown that “clean diesel” is an oxymoron. Non-diesel technology now exists to eliminate such impacts in the next five-years.

### **Renewable Natural Gas: A Critical Weapon in the Battle Against Climate Change**

Ultra low carbon renewable natural gas (RNG) is widely available in the market today; approximately 90% of the NGVs on the road in California today are fueled by RNG. There is no shortage of supply in the future; in fact, more RNG powered trucks on the road will only help facilitate California’s aggressive plans to fight climate change.

### **The Draft Clean Truck Plan is Inconsistent with Critical Local, Regional and State Air Quality Plans and Policies**

Communities throughout California are in dire need of relief from diesel truck emissions. The SCAQMD and CARB have repeatedly stated in their critical air quality plans that significant reductions in diesel truck emissions are immediately required: with the most critical reductions required by 2023 in order to meet federal air quality ozone attainment requirements to protect public health and to save lives. However, the Draft CAAP proposes to take no action for at least five years, and instead to wait until 2023 in order to deploy more diesel engines – i.e. a technology with a proven track record of failure in the last two decades. Taking no action until 2023 and relying on more diesel trucks – a proven failed strategy – is not a clean air action plan.

### **We Can Eliminate Port Drayage Truck Emissions by 2023**

Near zero emission natural gas trucks running on renewable natural gas are commercially viable and available today. Scientific data and analysis from leading California regulatory agencies confirms that criteria and GHG emissions from these commercially available trucks are equivalent to, if not lower than that what can be provided from electric trucks in the future. There is no need to wait for clean air; the technology is here today.

### **Technology Readiness: Key Component for Delivering Clean Air Today**

While zero tailpipe emission trucks by 2035 are a noble goal, there is no certainty that such a future can and will exist, especially given the current lack of commercial maturity in the electric truck market. On the other

hand, heavy-duty 0.02 natural gas trucks are commercially produced and sold by all leading truck manufacturers, are proven and in operation across North America, and are available to provide immediate air quality benefits in the communities most needing pollution relief, today. Ignoring this technology and opportunity to eliminate port drayage truck emissions in impacted communities is an irresponsible decision.

### **Carrots & Sticks Are the Key to Clean Air**

Dirty truck fees and financial incentives were the critical elements of the very successful first Clean Truck Program. These “levers” remain available to the Ports today, and are in no way impacted by SB 1.

### **How to Pay for Clean Air, Today (hint: we have the money to do this)**

California is fortunate to have at its disposal the most lucrative grant and incentive programs available for clean heavy-duty transportation technology. The resources required to fund the ACT Now Plan and eliminate emissions from the San Pedro Bay Port drayage truck fleet by 2023 are available. The political will to dedicate these resources to such a cause is the missing element.

### **Who We Are**

The California Natural Gas Vehicle Coalition represents the state’s natural gas vehicle industry and includes major vehicle manufacturers, utilities, heavy-duty engine manufacturers, fueling station providers, equipment manufacturers, and fleet users of natural gas vehicles. We are working together to advance natural gas as an alternative transportation fuel.

Thank you for this opportunity to provide comments and please feel free to reach out to me at [thomas@cngvc.org](mailto:thomas@cngvc.org) or at 888-538-7036.

Sincerely,



Thomas Lawson  
President, California Natural Gas Vehicle Coalition

### Submittals

The Advanced Clean Trucks Now Plan Infographic and Summary

### Discussion Documents:

- The Draft CAAP Will Allow NOx Emissions from Trucks to Increase
- Diesel is a Failed Strategy; the Draft CAAP is a Diesel-Based Plan
- The Draft Clean Truck Plan is Wholly Inconsistent with Critical Local, Regional and State Air Quality Plans and Policies
- We Can Eliminate Port Drayage Truck Emissions by 2023

California Natural Gas Vehicle Coalition  
Comments on the Draft Clean Air Action Plan  
September 18, 2017

- Technology Readiness: Key Component for Delivering Clean Air Today
- Renewable Natural Gas – A Critical Weapon in the Battle Against Climate Change
- Carrots & Sticks Are the Key to Clean Air
- How to Pay for Clean Air, Today (hint: we have the money to do this)
- Significantly Greater Air Quality Benefits for Half the Cost – ACT Now!

cc:

Gene Seroka, Executive Director, Port of Los Angeles

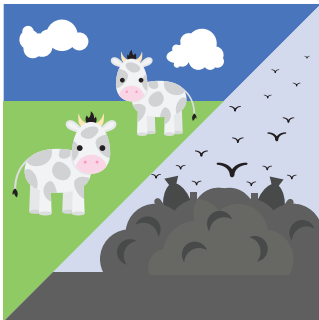
Mario Cordero, Executive Director, Port of Long Beach

Rick Cameron, Managing Director Environmental Affairs & Planning, Port of Long Beach

# THE ACT NOW PLAN

Replace all Dirty Diesel Truck with Clean Trucks Powered by Renewable Fuel over the Next 5 Years

## RENEWABLE FUEL



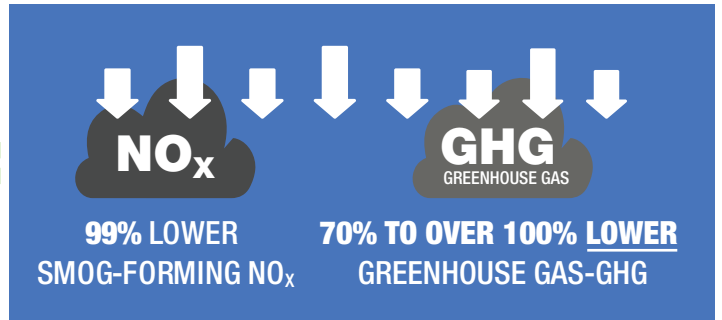
DAIRY FARMS, GREEN WASTE & LANDFILLS

## CLEAN TRUCK TECHNOLOGY



0.02 NEAR-ZERO EQUAL TO ELECTRIC

## CLEAN AIR & HEALTHY COMMUNITIES



NO DIESEL PARTICULATE MATTER & NO RELIANCE ON FOSSIL FUELS

## ACTION PLAN

- 2018**
  - New Trucks Must Meet **0.02 NZ & ZE Standard**
  - Fees Begin on Diesel Trucks That Don't Meet **0.02 NZ & ZE Standard**
  - POLA, POLB & AQMD Fund Grants for 1200 Trucks
- 2019**
  - POLA, POLB & AQMD Fund Grants for 1200 Additional Trucks
  - Additional Incentive Funding from State
- 2020**
  - Trucks Must Reduce GHG Emissions by **40%**
  - Additional Incentive Funding from State
- 2023**
  - Pre-2010 Diesel Trucks Banned by CARB

**50% LOWER COST THAN THE DRAFT CAAP SAVES OVER \$2 BILLION**

[www.ACTNowLA.org](http://www.ACTNowLA.org)

- ✓ Immediate & Cost Effective Emissions Reductions
- ✓ Jobs Creation and Preservation
- ✓ Port Competitiveness



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# Advanced Clean Trucks (ACT) Now Plan



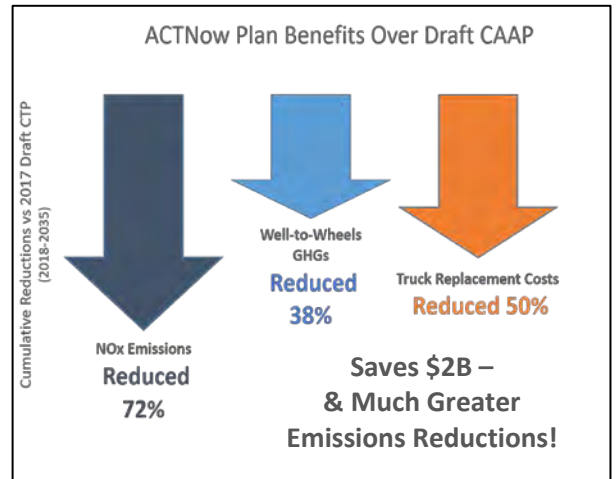
*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports, While Creating Jobs and Maintaining Port Competitiveness*

## What is the ACT Now Plan?

The ACT Now Plan replaces all dirty diesel trucks with clean trucks over 5 years, starting in 2018. The ACT Now Plan is technology neutral since all technologies that meet new standards are welcome. The ACT Now Plan is consistent with SB-1, with the recommendations from the LA Sustainable Freight Advisory Committee, and calls from the community, AQMD, and ARB for immediate emissions reductions. The ACT Now Plan is built upon 3 pillars: (1) immediate and cost-effective clean air; (2) jobs creation and preservation; and (3) port competitiveness.

## What are the benefits of the ACT Now Plan?

In only 5 years, emissions are reduced to levels equivalent to zero emissions. The ACT Now Plan will deliver far greater emissions reductions than the draft CAAP, at 50% of the cost! These immediate reductions are essential for improving community health and quality of life and combatting climate change. The lowest cost possible ensures that our Ports remain competitive and that new trucks are affordable.



## The Ports have greatly reduced emissions in the last 10 years. What is the urgency to reduce emissions further?

**Health:** The health of Southern Californians is at stake. Our region has the worst air quality in the nation. Decades of efforts to reduce emissions have made progress, but the job is not done. High rates of asthma, respiratory illness, and other diseases caused by air pollution are far too common. Nowhere are these impacts felt as acutely as in the communities around the Ports, along freeways and the Inland Empire. The Ports are the largest source of emissions in the region and diesel trucks are the largest source of air pollution. Finding solutions to port truck emissions is essential.

**Air Quality:** Our region faces a major Federal deadline in 2023 to demonstrate that we are on the path to clean air. Federal funding that helps our transportation system and infrastructure projects depends on showing progress. We cannot delay, our economy cannot afford to put this Federal funding at risk. The Olympics come to our communities in 2028. The world will be watching athletes perform in our venues and we owe these athletes clean air and reduced climate pollutants.

**Climate Change:** Climate change is a global threat that can't wait any longer for actions to reduce climate pollutants. Reducing climate pollutants at the local level is vital with the recent withdrawal of the U.S. from the Paris Climate Accord. We need to take action today; we cannot delay.



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### Why are the clean truck strategies in the Draft CAAP a missed opportunity?

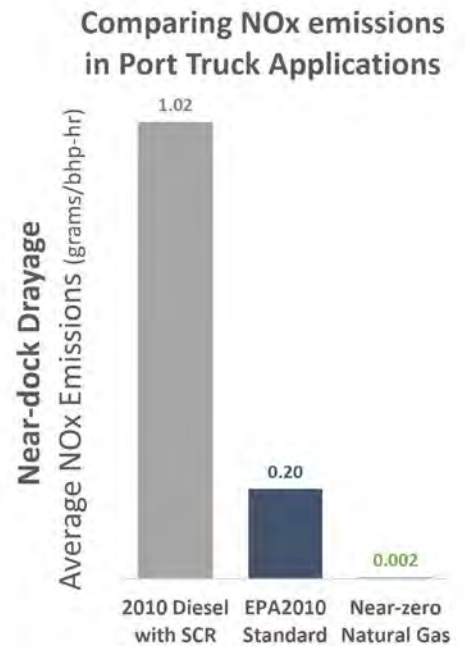
Under the Draft CAAP, actions to curb highly polluting diesel trucks are delayed until 2023, and diesel trucks will continue operating for at least the next 18 years. Due to increased cargo volumes coming to the Ports, and continued deterioration of in-use diesel engines, **the Draft CAAP will – unbelievably – allow NOx emissions to increase over the next five years.** While the Draft CAAP has the aspirational goal for zero emissions (ZE) trucks by 2035, this is 18 years into the future and doesn't do anything for people that are living today. Children born today will be adults before air is improved. Further, while the Draft CAAP goal is to transition to ZE trucks, there are many "off ramps" noted in the plan that could delay the transition. Consequently, the Draft CAAP will not reduce emissions fast enough, or cost effectively, and continues to rely on a known failed clean air strategy - diesel engines - for the next 18 years, or more. Instead of seizing the opportunity to immediately deploy clean trucks that are available today, the Draft CAAP proposes to allow NOx emissions to increase through 2023. Incredibly, the Draft CAAP also does not address GHG emissions from trucks; a notable failure given the desired climate leadership of the two mayors.

### Why is diesel a failed strategy for cleaning the air?

Scientific studies performed by the University of California, Riverside and University of West Virginia document that diesel truck NOx emissions are 5 times to 9 times higher than the EPA emissions standard in port and urban areas. These are the areas that directly impact people. The studies also found that "near zero" technology exists today that has in-use emissions that are 99% cleaner than diesel, levels comparable to a battery electric truck.

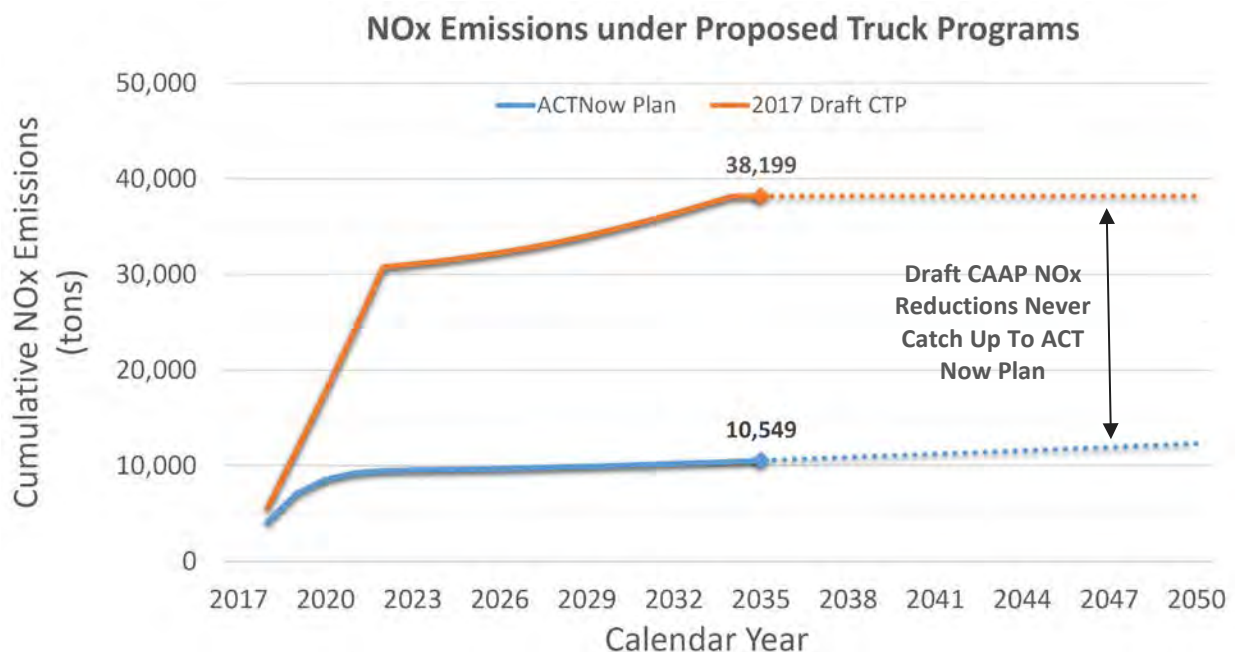
Diesel trucks emit diesel particulate matter, which is classified by CARB as a Toxic Air Contaminant. Heavy duty diesel trucks are the largest source of NOx pollution in our region. NOx causes smog resulting in asthma and other illnesses.

Diesel emissions have been a global air pollution disaster. Countries like China, France, Great Britain, Norway, and Holland, and the cities of Paris, Madrid, Athens, and Mexico City are working to ban diesel. Diesel truck and car manufacturers alike have been caught cheating government emissions requirements to better sell their product. The time has come to realize that diesel is yesterday's fuel and the future belongs to clean fuels.



### What does the ACT Now Plan propose that achieves immediate and cost-effective emissions reductions?

Through a combination of financial incentives to help buy clean trucks and fees on dirtier trucks, the ACT Now Plan will replace all diesel trucks with zero emission equivalent trucks in 5 years and thus deliver critical NOx reductions when and where they are most required. Cumulative NOx emissions reduced via the ACT Now Plan will be 360% greater than ever will be achieved by the Draft CAAP. Even with the 2035 ZE truck goals of the Draft CAAP, *the NOx reductions that can be*



achieved by the ACT Now Plan will never be surpassed; the ACT Now Plan will deliver NOx reductions immediately and at far greater levels than will ever be achieved by ZE trucks.

Financial incentives and fees were successful in modernizing the port truck fleet 10 years ago and will work again when properly designed. California also has more incentive money available today than it did 10 years ago to help accelerate the transition. The ACT Now Plan relies on voluntary measures of fees, exemptions, and incentives that are completely allowed under the State's transportation bill, SB-1. The ACT Now Plan policy proposals are:

### **Incentive Transition Program**

- Beginning July 1, 2018, require all newly registered trucks in the PDTR to meet the CARB Optional Low NOx Standard of 0.02 g/bhp-hr (0.02NZ).
- Beginning July 1, 2018 or no later than 1 year from adoption of the CAAP, apply a rate on all containers hauled by diesel trucks that are not 0.02NZ or ZE, with the rate designed to incentivize transition to cleaner trucks while not diverting cargo from the San Pedro Bay Ports.
- Beginning as soon as possible but no later than July 1, 2020, implement requirements that achieve a 40% reduction in GHG emissions.
- Beginning January 1, 2023, apply the rate on all natural gas trucks that are not 0.02NZ or ZE.

### **Incentive Funding**

- Immediately work as a regional stakeholder coalition to secure regional, state & federal incentive funding to increase the funding beyond that provided by the Ports.
- Beginning in January 2018, offer incentive funding provided by the Ports and AQMD to assist with the purchase of 0.02NZ and ZE trucks that deploys 2,400 trucks over 2018 and 2019, in addition to trucks deployed under other incentive programs.
- Apply funding of \$100,000 per 0.02NZ and ZE truck based on:
  - 1) Cost-effectiveness of commercially proven technologies.
  - 2) Technologies certified to meet the CARB Alternative Low NOx Standard of 0.02 g/bhp-hr or zero emissions.
  - 3) Achieve at least a 40% reduction in well-to-wheels greenhouse gases compared to diesel.

**Today's RNG Truck**



Proven, over 8,000 running  
12 liter, 35% bigger than original port trucks  
400 HP, 25% more powerful  
1,450 Torque, 45% stronger  
Over 1,000+ miles of range available  
Freightliner, Kenworth, Peterbilt, Volvo, Mack  
99% cleaner than diesel with 0.02NZ option  
70% to over 100%+ GHG reductions with RNG

**50% Lower Cost  
Saves Over \$2Billion!**



### ***How does the ACT Now Plan keep the ports competitive?***

The ACT Now Plan emphasizes cost-effectiveness to ensure that the Ports can continue to grow and capture market share without being burdened by excessive costs. The ACT Now Plan saves the trucking community \$2.3 billion, and delivers far greater emission reductions far more quickly than the Draft CAAP. The costs to transition initially to RNG-powered trucks are also low because RNG truck service and support shops and fueling station networks are already available in California that have been built up over the past 10 years since the first Clean Truck Program.

### ***How does the ACT Now Plan preserve and create jobs?***

RNG-powered trucks use the same drivers, technicians, mechanics, and fueling stations that are used for diesel trucks today. All of the existing jobs are preserved, although they are enhanced because of less air pollution and the opportunity to immediately work with modern clean technologies. RNG production is an opportunity for California to create up to 130,000 new jobs while replacing fossil fuel and combatting climate change.

# Advanced Clean Trucks (ACT) Now Plan



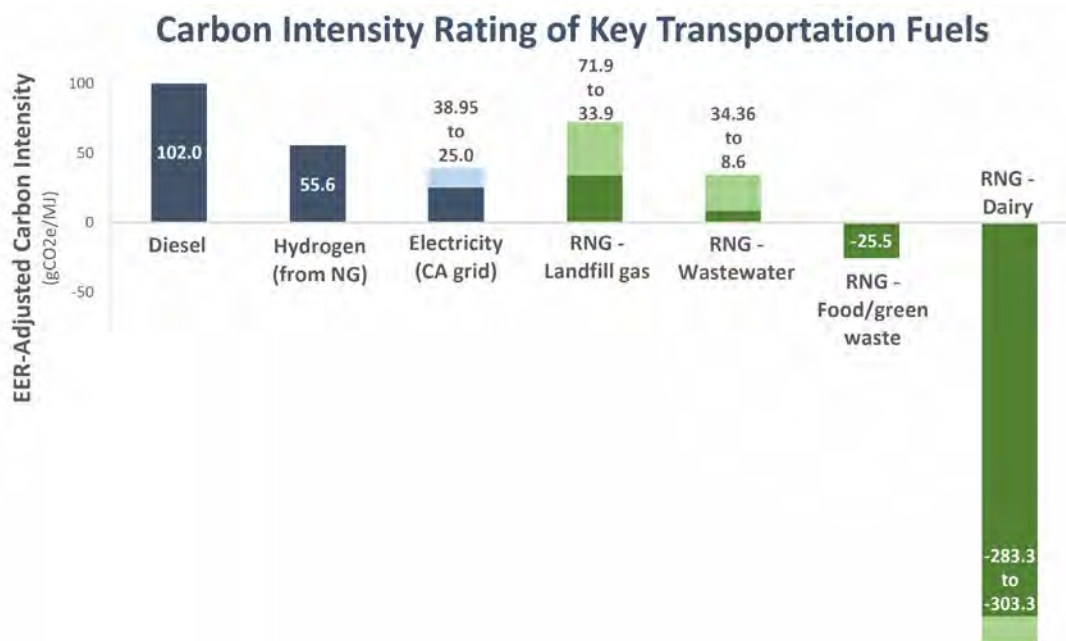
*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports, While Creating Jobs and Maintaining Port Competitiveness*

## **How does powering trucks with Renewable Natural Gas (RNG) dramatically reduce GHG Emissions?**

RNG is an ultra-low carbon source of renewable and sustainable fuel that is produced from organic waste. Biogas (a raw, freshly emitted and untreated gas) is collected rather than emitted into the air at landfills, wastewater treatment plants, food waste facilities and agricultural digesters (dairies, etc.). Capturing the biogas stops the climate damage from methane and instead produces a renewable fuel that replaces fossil fuel.

RNG has GHG emissions (referred to as “Carbon Intensities”) that are equivalent to and even far lower than using electricity from the California grid to power electric vehicles. RNG from dairy farms and some other sources actually have negative GHG impacts – “subzero” emissions!

Over 80% of vehicle natural gas dispensed in California is RNG. UC Davis estimates that we have the potential to produce 2 billion gallons of RNG per year in California, about 85% of the diesel fuel consumed by HD trucks. RNG is good for the environment and the economy. Jobs will be produced as RNG production plants are built and operated to decarbonize our energy. Based on a study by ICF, deploying trucks fueled by RNG produced in California can add up to 130,000 jobs and generate \$14B of economic activity. ([http://www.rngcoalition.com/s/ICF\\_RNG-Jobs-Study\\_FINAL-with-infographic.pdf](http://www.rngcoalition.com/s/ICF_RNG-Jobs-Study_FINAL-with-infographic.pdf))



## **Reducing truck emissions requires clean trucks, what help is available for buying clean trucks?**

Lessons were learned from the original Clean Trucks Program that will improve the transition this time and not repeat past mistakes. Incentive grants will reward early adopters of clean trucks. The grants reduce the overall cost of the truck and serve as a down payment. Commercial lenders, banks, and credit unions enrolled in the California Capital Asset Program (CalCAP) are able to finance the balance of the purchase costs with affordable payments and reasonable interest rates because of protections offered to the lender by CalCAP (<http://www.treasurer.ca.gov/cpcfca/calcap/>). There are also commercial truck leasing companies, the same companies that provide full service leasing services to major national fleets, that will lease trucks to operators and include truck maintenance in the package.

## **Where can I learn more?**

The ACT Now Plan website, [www.ACTNowLA.org](http://www.ACTNowLA.org), has detailed information about many of the topics presented in this summary such as the failure of diesel, the supply of RNG, and more. Signing up on the website will keep you informed of the CAAP updating process and encourage participation in the process. The ACT Now Plan is sponsored by the California Natural Gas Vehicle Coalition and the Renewable Natural Gas Coalition.

# Advanced Clean Trucks (ACT) Now Plan



*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports,  
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**Carrots & Sticks Are the Key to Clean Air**

**How to Pay for Clean Air, Today (hint: *we have the money to do this*)**

**Significantly Greater Air Quality Benefits for Half the Cost – ACT Now!**

*The ACT Now Plan by the California Natural Gas Vehicle Coalition replaces all diesel port trucks with cost-effective ultra-clean trucks over the next 5 years. To learn more, please visit [ACTNowLA.org](http://ACTNowLA.org).*

# Advanced Clean Trucks (ACT) Now Plan



*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports,  
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## The Clean Air Action Plan Will Allow Truck NOx Emissions to Increase

*The draft Clean Air Action Plan (CAAP) is based upon faulty assumptions and thus flawed analysis. Once corrected, it is clear that NOx emissions from the drayage truck fleet will be allowed to significantly increase in the critical next five-year period.*

The proposed Draft CAAP will allow NOx emissions to increase over the next five years (through 12/31/2022) and may provide little to no air quality benefits in the 2023 to 2035 timeframe. Critical deadlines for demonstrating federal air quality attainment are in 2023 and 2031; it is therefore untenable to put for a “clean air action plan” that will allow NOx emissions to increase in the period when they are most required. The structure of the Clean Truck Program elements combined with the increased level of activity (i.e. port volume) and continued deterioration of in-use diesel emissions (as defined by EMFAC) is the primary cause of this emissions increase. Without further definition of potential dirty truck fees, or any kind of commitment to provide incentives for zero and near zero emission trucks, the market will not respond in a manner consistent with the assumptions being made by the Ports in the Draft CAAP. The assumptions about market transition and thus emission benefits – as laid out in the Draft CAAP and accompanying documents – are unrealistic, inconsistent with industry practice and unsupported.

*The proposed Clean Trucks Program update is as follows:*

- *Beginning in early 2018, new trucks entering the Port’s Drayage Truck Registry must have a 2014 engine model year (MY) or newer.*
- *Beginning in 2023, or when the State’s near-zero-emission heavy-duty engine standard takes effect, new trucks entering the Ports Drayage Truck Registry must meet this near zero standard or better.*
- *Starting in 2023, or when the State’s near-zero-emission heavy-duty engine standard takes effect, all heavy-duty trucks will be charged a rate to enter the ports’ terminals, with exemptions for trucks that meet this near-zero standard or better*
- *Beginning in 2035, only trucks that meet zero-emissions or the equivalent will be exempt from the rate*

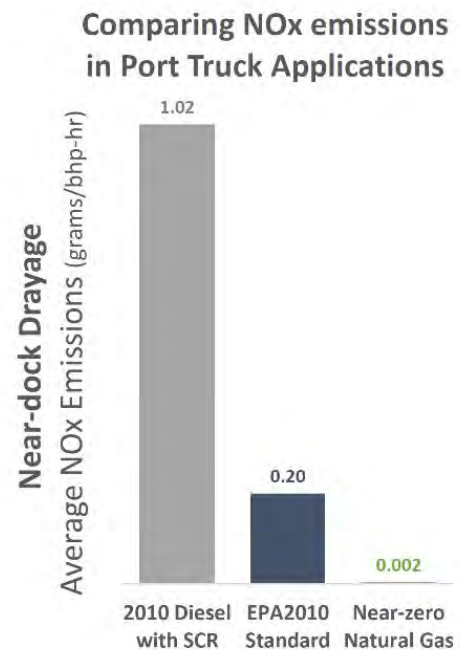
There are many challenges with each of the above elements.

**DRAFT CAAP CLEAN TRUCK PROGRAM ELEMENT: *Beginning in early 2018, new trucks entering the Port’s Drayage Truck Registry must have a 2014 engine model year (MY) or newer.***

- **WHY THIS WILL NOT PROVIDE AIR QUALITY BENEFITS:**
  1. The practice in the port drayage industry is to acquire used diesel trucks and operate these trucks for as long as possible. Port drayage does not have a regular truck replacement cycle that exists in other trucking applications, such as is suggested on page 31 of the Draft CAAP. Prior to the implementation of the first Clean Truck Program, the average asset life of a port

drayage truck was approximately 11 years<sup>1</sup>. This confirms that the port drayage market seeks to maximize the life of trucks and only replace trucks when the truck can no longer be repaired. New registrations in the PDTR are infrequent and the Ports have offered no data to the contrary. There is overcapacity in the current drayage fleet, therefore attrition will not necessarily result in a new truck registration in the PDTR, and the current fleet is capable of handling the growth the Ports have recently experienced. Thus, very few trucks with 2014 MY diesel engines will be entered into the PDTR in the coming years. Further, the most recently available data on container moves at the ports show that 2007-2013 MY trucks perform approximately the same number of moves per truck as 2014+ MY trucks.<sup>2</sup> There is no indication that these older trucks are reaching the end of their operational life. The adoption of the CAAP document, as currently drafted, will help to ensure that few, if any, trucks will be entered into the PDTR beginning in 2018.

2. Diesel powered 2014 MY engines do not necessarily have low emissions, particularly when used to power a drayage truck. Recent testing completed by the University of California CE-CERT of multiple 2014 MY diesel engines in a variety of duty cycles demonstrated NOx emissions are multiple times higher (generally 3x to 5x) than their EPA certification level when operating in a mode “comprised of short, low-speed accelerations between period of idle that coverage short distances (0.124 miles). Such stop-and-go type of driving tends to create high emissions when evaluated on a per mile or per unit of work done basis.”<sup>3</sup> Diesel powered 2014 MY engines are not much cleaner than the current trucks in the PDTR, including 2007-2009 MY engines which use in-cylinder emission control strategies rather than the exhaust-based SCR systems (found on 2010 MY and newer trucks) that have proven very ineffective in slow speed port drayage applications. While on-board diagnostic (OBD) equipment on 2014 MY trucks may help to reduce the overall level of in-use NOx emissions from diesel trucks operating in low speed applications, the emissions are still many times higher than implied by the U.S. EPA 2010 on highway standard.
3. This measure will therefore have little impact on emissions given the low number of new trucks expected to be registered in the PDTR and the documented ineffectiveness of 2014 MY diesel engines in providing lower emissions for such trucks. Therefore, little to no air quality benefits should be assumed in the 2018 to 2023 timeframe, which is a critical period for



<sup>1</sup> Port of Los Angeles and Port of Long Beach, Clean Air Action Plan Technical Report (p 58), 2006. [https://www.portoflosangeles.org/CAAP/CAAP\\_Tech\\_Report\\_Final.pdf](https://www.portoflosangeles.org/CAAP/CAAP_Tech_Report_Final.pdf)

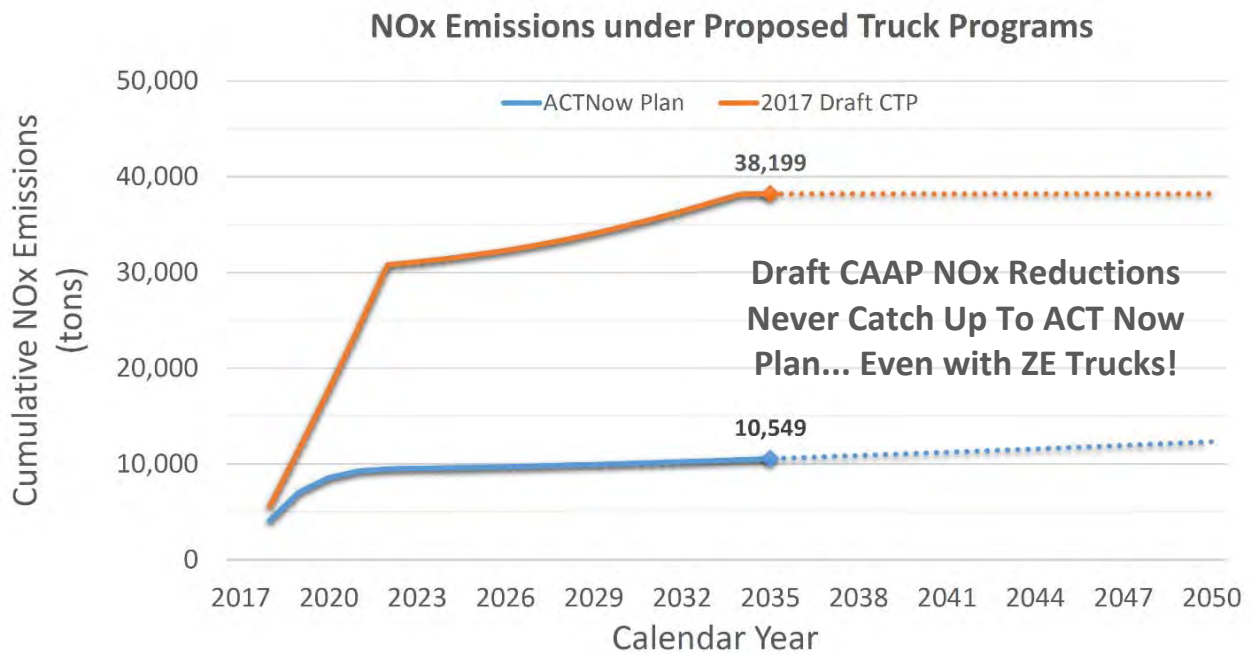
<sup>2</sup> [https://www.portoflosangeles.org/ctp/CTP\\_Monthly\\_Truck\\_Move\\_Analysis\\_March\\_2017.pdf](https://www.portoflosangeles.org/ctp/CTP_Monthly_Truck_Move_Analysis_March_2017.pdf)

<sup>3</sup> Durbin, T., Johnson, K., Karavalakis, G., Yang, J., University of California CE-CERT, “Heavy-Duty Chassis Dynamometer Test Program,” February 2017.



Southern California to achieve massive NOx emission reductions to meet federal air quality standards for ozone.

- FAULTY ASSUMPTIONS IN CAAP EMISSION MODELING:** The assumption that the current drayage fleet inventory of pre- and post-2010 MY trucks will shift to 31% pre-2010 and 69% 2010+ MY engines by 2020<sup>4</sup> is unreasonable. There are no measures in the Draft CAAP that would logically result in such a transition. Thus the 36% NOx reductions from the baseline assumed by the Draft CAAP cannot reasonably be expected to be achieved.
- ACT NOW – AN OPPORTUNITY FOR SIGNIFICANT EMISSION REDUCTIONS:** Via the immediate implementation of a dirty truck fee and availability of grants and incentive monies – as proposed in the ACT Now Plan – an estimated 14,000 new zero and near-zero emission trucks can be deployed between 2018 and 2023, thus resulting in 20,000 tons of actual NOx reductions in this period. These reductions are critical to achieve near term attainment deadlines and to protect public health. Further, these significant near-term NOx emission reductions will never be achieved by the plan laid out in the Draft CAAP, even with full implementation of the zero emission truck goals in 2035.



**DRAFT CAAP CLEAN TRUCK PROGRAM ELEMENT:** *Beginning in 2023, or when the State’s near-zero-emission heavy-duty engine standard takes effect, new trucks entering the Ports Drayage Truck Registry must meet this near zero standard or better.*

- WHY THIS WILL NOT PROVIDE AIR QUALITY BENEFITS:**

  - While this is an admirable goal, it is heavily predicated upon a number of factors completely outside of the Ports’ influence. This measure cedes local control of clean air initiatives to the State and federal government.

<sup>4</sup> Draft Final, Clean Air Action Plan Updates, page 34.

- a. It will require that CARB successfully develop a new Low NOx Emission Standard for heavy-duty trucks/engines. While CARB has signaled their intent, there are no guarantees that this will happen, particularly given the strong pushback that can be expected from the heavy-duty truck and engine manufacturers.
  - b. *If* CARB does successfully adopt a new Low NOx Emission Standard for heavy-duty trucks/engines, the new regulation must be approved by the U.S. EPA Administrator. Given the priorities of the current federal administration and existing political tensions with the state of California, it is far from certain that California's new emissions standard would be approved. Again, resistance from heavy duty truck and engine OEMs could significantly delay or undermine the approval of California's new emission standard.
2. If, however, CARB does secure EPA's approval for a new Low NOx Emission Standard for heavy-duty trucks/engines, there remain a number of significant hurdles to immediate commercial deployment and thus, clean air for communities impacted by port drayage trucks.
    - a. There is no guarantee that low emission engine product will become immediately available from OEMs in 2023. A new heavy-duty engine program typically will require at least five years of development. Currently, no heavy-duty truck/engine OEM is working on a low NOx engine development program and all major heavy-duty diesel engine manufacturers have strongly stated the difficulty and challenges of developing a heavy-duty diesel engine that can perform and be warranted at the 0.02 g/bhp-hr NOx level. It will take at least a year or two (if not more) for CARB to successfully adopt a new heavy-duty Low NOx Emission Standard and get approval from the U.S. EPA. Thus, development work will not likely commence until at least 2019, with commercial product being available in 2024 at the *absolute* earliest. Given the number of potential hurdles such an effort will likely face, not to mention anticipated push-back from the OEMs during the CARB rulemaking process, it is not unreasonable to think that this timeline could be extended by several years.
    - b. Timeline issues aside, there is no guarantee that the new heavy-duty Low NOx Emission Standard will be set at 0.02 g/bhp-hr, a level considered to be equivalent to a zero-emission truck, and a level already being achieved by today's certified natural gas engines. There is significant speculation that the CARB Low NOx Standard will likely be 0.05 g/bhp-hr, or maybe even 0.10 g/bhp-hr based on the technical challenges that diesel engines would face in meeting a 0.02g/bhp-hr standard.
    - c. A new diesel engine certified to a potential CARB Low NOx Standard of 0.05 to 0.10 g/bhp-hr, when operating in a low speed drayage duty cycle, will almost certainly not have in-use emissions at these levels. Recent CE-CERT testing data indicates that in-use emissions could be three to five times higher in such an application, thereby negating the perceived gains of a Low NOx standard and instead demonstrating in-use emissions similar to today's US EPA 2010 emission standard. Argonne National Laboratories also finds high in-use NOx emissions from 2010-compliant trucks in low-speed applications like drayage, indicating NOx emissions are four times higher than previously estimated.
    - d. Ultra-low NOx diesel engines will require a tremendous amount of additional after-treatment technology and other control strategies, thus making the truck/engine extraordinarily complex and expensive to develop, manufacture, support, and operate and maintain. They are also likely to be less fuel efficient and thus have a CO2 / GHG emissions penalty.
  3. Ultimately, the Draft CAAP proposes to cede local control over one of the largest sources of NOx emissions in Southern California to the State and federal governments. The strategy will

- require that many factors outside of the ports' control align, which will result in new, expensive, and complicated diesel engines being available for commercial sale in *at least* five (5) years from today. These engines will likely not have emissions much lower than today's diesel engine technology and far above that offered by natural gas engine technology already certified and commercially available today.
4. While leading global cities like Athens, Mexico City, Madrid, and Paris are drawing up plans to ban diesel by 2025, and countries such as Norway and Holland are planning to ban all gasoline and diesel powered vehicles by 2025 and the UK and France are planning the same by 2040; the Ports of LA and Long Beach are proposing plans to delay action on clean air strategies until *at least* 2023 so that diesel engine technologies can potentially catch up to the zero emissions offered by alternative fuel engines in the market today and in the forthcoming years. Zero and zero emission-equivalent technologies exist in the marketplace today and can immediately be deployed at scale; there is no reason to wait 5-10 years to perpetuate the use of diesel engine technology that will have higher emissions – potentially significant – than what is available today.
- **FAULTY ASSUMPTIONS IN CAAP EMISSION MODELING:**
    1. For the reasons noted above, it is extremely unlikely that any new low NOx engines will be ready for deployment by 2023. Thus, the assumptions that 59% to 85% of the trucks in the PDTR will be near-zero emissions by the end of 2023 (CY 2024) are almost certainly incorrect.
    2. If, however, new low NOx engines will be ready for deployment by 2023, it is still an incredible assertion by the Ports that, "...by 2024, as a result of the 2023 requirement for new trucks and the fee in 2023, near-zero emission trucks will comprise up to 85% of the drayage truck fleet."<sup>5</sup> Given the nature of the drayage truck business, it is certain that drayage truck drivers and companies will not replace existing vehicles sooner than required (i.e. when the fee kicks in). Therefore, this expected result of 85% of the drayage truck fleet being comprised of near-zero emission technology by 2024 would require 10,400 new trucks (~ 12,200 frequent and semi-frequent trucks in the inventory x 85%) be purchased and deployed in one year. The port drayage truck market does not have the financial capacity to make such a switch (an estimated \$2 billion expense), nor does California have such incentives available in a single year. Further, such an expectation to dramatically turnover the port drayage fleet will create significant risk to the continued reliable operation of the drayage truck system and the movement of cargo from the ports. For all of these reasons, the ACT Now Plan models a consistent turnover of the drayage fleet over a five-year period.
    3. In 2023, the CARB Truck & Bus Rule will force all 2007 MY through 2009 MY diesel engines off the road in California, thus impacting approximately 7,900 such units in the San Pedro Bay<sup>6</sup>. Given the structure of the Draft CAAP, and current uncertainties about any fee structure for dirty trucks in 2023, it can be assumed that the owners of the current inventory of 2007 MY through 2009 MY diesel (engine) trucks in the Ports will opt to replace their units in 2022 with ones powered by 2014 MY diesel engines (this will be analogous to the "pre buy" conditions seen in the heavy-duty truck market before a new emission standard takes effect), which will be able to run indefinitely in the Ports. Thus, in 2023, it can more reasonably be expected that the inventory of 2007 MY through 2009 MY diesel engines will be replaced by a similar number of 2014 MY diesel engines in advance of any new near-zero emission requirements. Given the relatively similarities in actual in-use emissions of (non-SCR equipped) 2007 MY

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<sup>5</sup> Draft Final, Clean Air Action Plan Updates, page 33.

<sup>6</sup> <http://www.polb.com/civica/filebank/blobdload.asp?BlobID=6591>

through 2009 MY diesel engines to 2010+ MY diesel engines equipped with SCR systems that tend not to work in port drayage applications, the relative impact on regional NOx emissions and thus ozone/smog will be negligible. NOx emissions would therefore be similar to a “No Action” scenario, which was not modeled by the Ports in the Draft CAAP.

- **ACT NOW – AN OPPORTUNITY FOR SIGNIFICANT EMISSION REDUCTIONS:** Instead of waiting until at least 2023 to develop new diesel engine technologies with likely higher emissions, the ACT Now Plan proposes a realistic and achievable plan to eliminate emissions from the port drayage truck fleet by July 1, 2023.

**DRAFT CAAP CLEAN TRUCK PROGRAM ELEMENT: Starting in 2023, or when the State’s near-zero-emission heavy-duty engine standard takes effect, all heavy-duty trucks will be charged a rate to enter the ports’ terminals, with exemptions for trucks that meet this near-zero standard or better**

- **WHY THIS WILL NOT PROVIDE AIR QUALITY BENEFITS:** It is impossible to determine potential air quality benefits at this time as the Ports have not given any information as to the structure and/or amount of the rate.
- **FAULTY ASSUMPTIONS IN CAAP EMISSION MODELING:** The analysis assumes that 61% to 87% of the port drayage truck fleet will be replaced in one year from 2023 to 2024 (or at least from 2021 through 2024 as the Ports’ modeling shows no penetration of near-zero emission trucks in CY 2020). This is an unrealistic assumption. For a host of reasons, this would present tremendous risk to the Ports and their customers. It would also cause a significant price spike in the drayage market in an extraordinarily short period of time.
- **ACT NOW – AN OPPORTUNITY FOR SIGNIFICANT EMISSION REDUCTIONS:** The ACT Now Plan lays out a reasonable, logical and legal approach to the coordinated implementation of dirty trucks fees and grants and incentives to allow for the structured transition of the drayage truck fleet to zero and zero emission equivalent technology by July 1, 2023. Clean air for our communities is the goal, and the concepts presented in the ACT Now Plan can reasonably and realistically achieve this important objective.

**DRAFT CAAP CLEAN TRUCK PROGRAM ELEMENT: Beginning in 2035, only trucks that meet zero-emissions or the equivalent will be exempt from the rate**

- **WHY THIS WILL NOT PROVIDE AIR QUALITY BENEFITS:** This requirement is in direct contradiction to the prior measure that will exempt near-zero emission trucks only when the State’s near-zero-emission heavy-duty engine standard takes effect. If the Ports’ approach to the prior element requires that the State have an emissions regulation tied to the fee or fee exemption, then the same should be required for zero-emission heavy-duty trucks in this measure. CARB is not expected to develop, nor has even talked about, a regulation that will require zero-emission heavy-duty trucks. Thus, without such a State-level requirement, the provisions of this measure can therefore only be considered to be void.

If, however, the Ports feel that they can apply a fee and provide exemptions for certain types of trucks without there being a corresponding CARB emissions regulation, then such a strategy should be implemented immediately in 2018 for zero and zero emission equivalent trucks that will be commercially available from a wide range of heavy-duty truck OEMs.

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- **FAULTY ASSUMPTIONS IN CAAP EMISSION MODELING:** The Draft CAAP completely ignores the billions of dollars of investment (potentially \$10 billion or more) that will be required to establish the charging / fueling infrastructure needed to support a fleet of 10,000 or more zero emission trucks<sup>7</sup>. Not only is there no recognition of such tremendous costs, but there is no consideration or discussion about how this infrastructure will be established, where it will be located, who will own and operate the required truck capable fueling stations, and related issues. Given the extremely significant implementation challenges and costs of such a plan – in addition to the billions of dollars of incremental investment required to purchase the zero emission trucks – it is unreasonable to think that this proposed measure can potentially become reality and thus achieve the emission reductions proposed.
  - **ACT NOW – AN OPPORTUNITY FOR SIGNIFICANT EMISSION REDUCTIONS:** The ACT Now Plan offers a far more cost-effective approach to realistically achieve significant near-term emission reductions using commercially available and viable technology. The ACT Now Plan proposes to virtually eliminate emissions from the San Pedro Bay Ports drayage truck fleet by July 1, 2023.

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<sup>7</sup> The Draft CAAP attachment, “Preliminary Cost Estimates for Select Clean Air Action Plan Strategies,” notes on page 3, “This analysis does not include cost estimates for fueling or charging infrastructure for heavy-duty trucks, which is likely to exist outside the Harbor Districts and throughout the region.”

# Advanced Clean Trucks (ACT) Now Plan



*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports, While Creating Jobs and Maintaining Port Competitiveness*

## Diesel is a Failed Strategy; the Draft CAAP is a Diesel-Based Plan

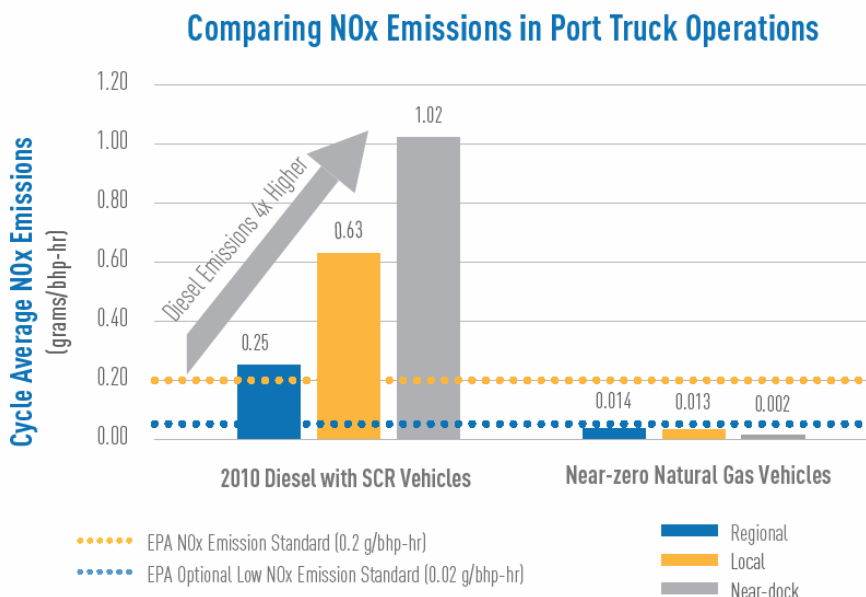
*Due to the failure of diesel engines to provide advertised air quality benefits, other leading cities and countries around the world have pledged to ban diesel in the next decade or two. Study after study has proven that in-use emissions of heavy-duty diesel port trucks have extremely high in-use emissions of criteria pollutants that impact communities. Meanwhile, the Draft CAAP proposes to wait at least five years so that so-called “clean diesel” technology can be developed, made commercially available, and to actually work! The last two decades have shown the “clean diesel” is an oxymoron. Non-diesel technology now exists to eliminate such impacts in the next five-years.*

Ultimately, countries around the world are recognizing that “clean” diesel is a failed strategy that cannot provide the air quality or climate benefits needed for health communities. From light-duty emission cheating scandals, to in-use emissions that are significantly higher “than advertised,” diesel is not synonymous with clean air no matter what “clean diesel” logo the diesel industry wants to slap on the technology. Paris, Madrid, Athens and Mexico City are working to ban diesel vehicles by 2025, Norway and Holland are planning to ban all gasoline and diesel-powered vehicles by 2025, and the UK and France are working to do the same by 2040. The Ports and cities of Los Angeles and Long Beach should not be putting forward a “clean air plan” that not only completely relies on diesel engine technology, but actually delays action on any kind of clean truck strategy for at least five years – if not more – in order that diesel engine technologies can try to catch up to the ultra-low emission alternative fuel technologies commercially available in the marketplace today, with additional commercialized technology expected in early 2018. Diesel is a failed strategy for achieving clean air, and any “clean air” plan that relies on diesel engine technologies will similarly be a failed strategy.

### **Why can't we rely on improved diesel technology to meet the CAAP goals?**

Today's drayage fleet is dominated by “clean” diesel trucks. Unfortunately, scientific studies continue to prove that these diesel engines are anything but clean. Based on their official certification standards, today's diesel engines should be 90% cleaner than engines produced prior to the original CAAP (prior to 2007). However, studies performed by the University of California, Riverside and West Virginia University have shown that diesel truck NOx emissions are 4 times to 9 times higher than the EPA emissions standard when diesel trucks are operated in port and urban areas. These multiple and repeated tests have all consistently shown that the complex emissions control systems needed to reduce diesel engine NOx to very low levels come at an unacceptable cost of high in-use NOx emissions.

These high emissions are not caused by malfunctioning engines but rather, they are caused by the combination of diesel emission control technologies and the low



speed operations that are characteristic of drayage trucks and many other vocations. A recent study of trucks across California performed by the University of California, Riverside found that these trucks spend as much as 87% of their time operating under conditions where their NOx emissions control system is ineffective. *This means that the cleanest diesel port trucks on the road today are hardly any cleaner, with respect to ozone forming NOx emissions, than the diesel trucks they replaced 10 years ago.*

While the California Air Resources Board is planning to establish new emissions standards and test requirements that could force diesel engines to achieve real NOx reductions in-use, those new standards are not expected before 2023 and will do nothing to address the existing fleet of high-emitting diesel port trucks. Even then, it is not clear how stringent this future standard will be or if it will be any more effective at controlling real world NOx emissions in drayage applications than the prior standard.

***Won't the Draft CAAP promote the adoption of zero-emission technologies starting in 2023?***

No. The Draft CAAP specifically delays the implementation of requirements to use cleaner technology until the California Air Resources Board adopts a new, lower NOx emissions standard for new engines. In effect, the CAAP waits for diesel engines to catch up to today's existing 0.02NZ and ZE technologies. With such a provision, drayage operators have no incentive to act early or move to any technology other than diesel until 2035. The consequences of this delay are another 18 years of diesel-based pollution from the drayage fleet impacting communities around the ports and throughout Southern California.

***Will 0.02NZ engines using natural gas really be any cleaner than diesel?***

Yes. Natural gas engines use a fundamentally different emission control strategy than diesel engines. The 0.02NZ engine has been shown to actually perform much better than its certified emissions levels in low-speed operations, including near-dock drayage. A University of California, Riverside study found that in the near-dock drayage test cycle, the 0.02NZ natural gas engine was up to 90% cleaner than its already ultra-low certification level. Compared to a modern diesel engine, the 0.02NZ natural gas engine was up to 99% cleaner.

As UCR reported when it emissions tested an 0.02NZ natural gas truck in 2016, the truck's "emissions were within the 0.02 g/bhp-hr certification standard for all the cycles tested." In the words of the investigators at UCR's College of Engineering Center for Environmental Research and Technology (CE-CERT):

*"New ultra-low emission natural gas heavy-duty vehicles met and were cleaner than their certification standards during a full range of duty cycles. This finding is in stark contrast to previously released CE-CERT data and a recently released report by the California Air Resources Board that found heavy-duty diesel trucks emitted higher levels of NOx than their certification standards in the same duty cycles. With the near-zero emission factors demonstrated for natural gas vehicles, it is expected that these vehicles could play an important role in providing much needed emissions reductions required for the South Coast Air Basin and California to reach federal air quality attainment standards*

*"When comparing the data of the cleanest available heavy-duty diesel vehicles versus the cleanest available heavy-duty natural vehicles, it is clear that natural gas vehicles provide unmatched reductions of smog-forming emissions. These near-zero emission natural gas vehicles are especially effective in applications that require low speeds, such as short-haul goods movement."<sup>1</sup>*

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<sup>1</sup> University of California, Riverside, Center for Environmental Research & Technology, "New Report Finds That Today's Heavy-Duty Natural Gas Engines Perform with Lower NOx Emissions than EPA Certification Standard, Providing Much Needed Emissions Reductions for California," February 1, 2017, <http://www.cert.ucr.edu/news/2017/2017-02-01.html>

# Advanced Clean Trucks (ACT) Now Plan



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## The Draft Clean Truck Plan is Wholly Inconsistent with Critical Local, Regional and State Air Quality Plans and Policies

*Communities throughout California are in dire need of relief from diesel truck emissions. The SCAQMD and CARB have repeatedly stated in their critical air quality plans that significant reductions in diesel truck emissions are immediately required: with the most critical reductions required by 2023 in order to meet federal air quality ozone attainment requirements to protect public health and to save lives. However, the Draft CAAP proposes to take no action for at least five years, and instead to wait until 2023 in order to deploy more diesel engines – i.e. a technology with a proven track record of failure in the last two decades. Taking no action until 2023 and relying on more diesel trucks – a proven failed strategy – is not a clean air action plan.*

As currently proposed by the San Pedro Bay Ports, the Clean Trucks Program (CTP) will allow ozone-forming NOx emissions from drayage trucks to actually increase over the next five years. This period of 2018 to 2023 is critical to attain health-based National Ambient Air Quality Standard (NAAQS) for ozone in the South Coast Air Basin. Under the draft CTP, and without any indication of future dirty truck fee amounts, highly polluting diesel trucks will be allowed to continue serving the port complex for the next 18 years, or longer. The draft CTP calls for transitioning to zero-emission drayage trucks by 2035, but there are many “off ramps” that could result in indefinite reliance on diesel trucks should this 2035 EV vision not materialize as planned.

The concepts presented in the draft CTP will perpetuate the reign of dirty diesel engines in the most impacted communities, when there is an immediately available opportunity to halt this air pollution assault. Instead, the draft CTP is structured to wait for future “clean diesel” technology to become available in 2023, or beyond. As scientific study after study has confirmed, modern diesel emission reduction control systems are not effective in port drayage applications. However, the Ports are proposing to wait five years for such technology to become available in hopes that it actually works as advertised this time. Meanwhile, technology that has been proven to operate at zero emission equivalent levels is commercially available today and can be deployed on a wide scale by nearly every large truck manufacturer in North America. Now is the time to take advantage of this opportunity; there is no reason to wait.

### SCAQMD: Focus on Existing NZE and ZE Technologies

*“The 2016 AQMP will strongly rely on a transition to zero- and near-zero emission technologies in the mobile source sector to meet the air quality standards. The plan will focus on existing commercialized technologies and energy sources and newer technologies that are nearing commercialization based on demonstration programs and limited test markets, including their supporting infrastructure.”*

*-SCAQMD, 2016 Air Quality Management Plan*

Under the proposed ACT Now Plan, major reductions in NOx and toxic air contaminants (especially diesel particulate matter) will be immediately achieved in order to protect human health to the greatest extent possible, and to help the region achieve its near-term air quality attainment goals. **The massive reductions that can be achieved under the ACT Now Plan will far exceed the reductions that will be achieved under the proposed CTP in 2035 when moving to zero emission technology.** There is no reason we have to wait until 2035 when greater and more immediate reductions can be achieved now.

In addition to the failure to reduce NOx and toxic air contaminants in the most critical next five years, the draft CTP offers no plans or commitments to reduce GHG emissions from heavy-duty trucks through 2035.



Immediate and significant GHG emission reductions are achievable in the next five years via the strategy proposed in the ACT Now Plan. Similar to how greater NOx emission reductions can be achieved via the ACT Now Plan compared to the Draft CAAP (not to mention in 5 years instead of 18), accelerated and more significant reductions of GHG emissions can also be achieved via the ACT Now Plan. Via the use of ultra-low carbon renewable natural gas (RNG) - such as now being produced and used by CR&R in Perris, CA - it is feasible that the ACT Now Plan, when fully implemented, can achieve greater GHG emission reductions than a 100% fleet of battery-electric trucks charged with 100% renewable energy. Significant and immediate GHG emission reductions can be secured today in parallel with critical NOx emission reductions; there is no reason to wait 18 years for such – and potentially fewer – reductions to occur.

CARB: Early Deployment of Clean Trucks is the Key to Meet Goals

*“Controlling emissions from heavy-duty trucks is the key to reducing criteria pollutants and meeting GHG targets. The key to reducing emissions is introducing technology early to allow the market to develop.”*  
 -CARB staff presentation, April 22, 2015

Political leadership at the local level can provide these benefits today via the strategy laid out in the ACT Now Plan.

**It is simply untenable for the CTP to enable NOx emissions from heavy-duty trucks to increase over the next**

**five years and for there to be no strategy to reduce GHG emissions.** The Ports should work aggressively to ensure that the cleanest technologies commercially available are able to deeply penetrate the heavy-duty fleet in the next 5 to 10 years in order that NOx and GHG emissions are reduced as much as possible and as quickly as possible – as has been repeatedly called for by the SCAQMD, CARB and others. The rapid deployment of commercially proven and available NZ truck technology and renewable fuel can achieve such goals. *Failure to take such action is completely inconsistent with, and contrary to, the key air quality policies and implementation strategies that have been adopted by other local, regional, state and federal agencies* (specific examples are highlighted below).

**California SIP and Mobile Source Strategy**

The California State Implementation Plan (SIP) and the Mobile Source Strategy (MSS) adopted by the California Air Resources Board (CARB) strongly emphasize the need to deploy the cleanest-available heavy-duty truck fuel-technology platforms as soon as they become commercially available. In fact, this is the cornerstone concept of the SIP and CARB’s MSS to achieve SIP goals and objectives.

**SCAQMD 2016 Air Quality Management Plan**

SCAQMD’s 2016 Air Quality Management Plan (AQMP) identifies incentives for “early deployment of zero and near-zero-emission technologies” as an essential strategy to attain NAAQS in the South Coast Air Basin. SCAQMD has noted that this includes “investments in technologies that meet multiple objectives - air quality, climate, toxics, and energy efficiency. Recognizing the critical importance of expediency and early deployments, the AQMP specifically calls out -- and strongly relies upon -- any “existing commercialized technologies” that can achieve near-zero or zero emissions.

SCAQMD: Amendment to AQMP Resolution, Approved 13-0

*WHEREAS, an accelerated deployment of current and emerging near zero-emission [heavy-duty] natural gas engine technologies will provide significant, cost-effective and near term benefits to regional and local air quality, energy supply security, and public health.*

*BE IT FURTHER RESOLVED, that the mobile source incentive programs outlined in the 2016 AQMP place priority on the most cost-effective technologies to reach short-term air quality goals such as current and emerging near-zero emission [heavy-duty] natural gas engine technologies.*

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**The CTP Does Not Provide “Bold” Local Leadership as Pledged by the Parent Cities and Mayors**

The draft CTP is completely inconsistent with and contradictory to the strong leadership shown by the two ports’ parent cities. There is little to no effort made to reduce GHG emissions from the port drayage fleet, which is contrary to Mayor Garcetti’s Sustainable City pLAN and leadership of the Mayors National Climate Action Agenda.

The draft CTP clearly hands control to state and federal agencies– namely CARB and EPA – to reduce the cause of climate change; a position that is the direct opposite of the promises made by both Mayors following the U.S. withdrawal from the Paris Climate Accord.

Just weeks before the 2017 CAAP Update was unveiled, Los Angeles Mayor Garcetti and Long Beach Mayor Garcia jointly committed to put forth and approve a revised CAAP that is **“bold in achieving a clear timeline and sets measurable milestones to help ensure near-term regional air quality attainment goals – including through zero and near-zero technologies.”** The draft CTP fails to live up to this requirement.

**The ACT Now Plan presents an opportunity for bold action that will result in the most cost-effective approach to eliminating diesel drayage truck emissions in the disproportionately impacted communities that most need the relief. Eliminating diesel truck emissions in these neighborhoods in the next five years is an incredible goal and one that our elected leaders should holistically and immediately support. Leaders cannot stand by a plan that instead allows diesel drayage truck emissions to increase in the next five years. The ACT Now Plan will provide the significantly greater NOx and GHG emissions benefit than the Draft CTP, and it will do so at half the cost.**

# Advanced Clean Trucks (ACT) Now Plan



*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports,  
While Creating Jobs and Maintaining Port Competitiveness*

## We Can Eliminate Port Drayage Truck Emissions by 2023

*Near zero emission natural gas truck running on renewable natural gas are commercially viable and available today. Scientific data and analysis from leading California regulatory agencies confirms that criteria and GHG emissions from these commercially available trucks are equivalent to, if not lower than that which can be provided from electric trucks in the future. There is no need to wait for clean air; the technology is here today.*

### ***Today's HD natural gas engines using RNG provide best-in-class environmental performance***

Commercially available heavy-duty natural gas engines provide environmental performance *that is equivalent to, or better than*, HDV technologies with zero tailpipe emissions (i.e., battery-electric vehicles [BEVs] and fuel cell vehicles [FCVs]). Fleets can now purchase medium-heavy and heavy-duty NGVs powered by proven and robust engine technology that emits smog-forming oxides of nitrogen (NOx) levels at least as low as the NOx contributions made by BEVs and FCVs operating in California. Moreover, when fueled with very-low-carbon intensity renewable natural gas (RNG), heavy-duty NGVs also represent best available control technology for reducing GHG emissions from heavy-duty trucks; in many cases, at levels that exceed that which can be achieved via a BEV charged from a solar panel!

### ***Natural gas engines now deliver smog-causing NOx emissions as low as heavy-duty battery-electric vehicles (or lower)***

The *engines* of the newest heavy-duty NGVs provide NOx emission levels so low that they are essentially equivalent to heavy-duty BEVs. This was demonstrated in a 2016 study by Gladstein Neandross & Associates, in conjunction with staff from the South Coast AQMD. The analysis compared the NOx emissions benefits of near-zero-NOx natural gas engines versus grid-related NOx emissions from charging a comparable heavy-duty BEV. The basic methodology used for this analysis, which was vetted with SCAQMD and the Electric Power Research Institute (EPRI), was recently updated to reflect the latest power-plant emissions factors (EPA's "eGRID" 2014 database). The updated analysis clearly shows that NOx grid emissions associated with charging a heavy-duty BEV are substantially higher than the 0.02g/bhp-hr NOx certification level of a near-zero-NOx heavy-duty NGV. This is due to the relatively high NOx emissions rates from today's power plants—particularly in regions that rely heavily on coal-based electricity generation. However, even in states like California where the average "grid mix" is fairly clean (due to higher reliance on clean renewable energy sources and natural gas power generation), HDV engines emitting at 0.02 g/bhp-hr NOx were found to compare very favorably to heavy-duty BEVs on NOx emissions.

#### Statement by California Energy Commission

*"By using both (RNG) and low NOx engines, natural gas trucks have the potential to reduce criteria pollutant and GHG emissions to levels near those of zero-emission BEVs and FCEVs."*

- California Energy Commission, [2017-2018 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program](#)

### ***Renewable natural gas fuel delivers "deep" GHG-reduction benefits***

It is the *fuel* side—RNG produced from many different renewable feedstocks and low-carbon pathways—that provides "deep" GHG-reduction benefits for heavy-duty NGVs (and meaningful progress towards meeting the State's Short Lived Climate Pollutant reduction strategy). RNG is an ultra-low carbon, renewable and sustainable fuel produced from organic waste. Biogas (a raw, freshly emitted and

untreated gas) is collected rather than emitted into the air at landfills, wastewater treatment plants, food waste facilities and agricultural digesters (dairies, etc.). This process to capture methane that would otherwise be vented or flared; thus significantly mitigating the climate damage it would otherwise inflict. Then, the captured biogas is upgraded to produce RNG, which displaces high-carbon-intensity fossil diesel fuel, or serves as a “drop-in” replacement (no changes required) for fossil natural gas.

As shown in the table, the “Carbon Intensity” ratings of numerous RNG pathways are equivalent to -- *and even far lower in some cases* -- than using electricity from the grid to power electric vehicles. RNG from dairy farms and some other sources actually have negative carbon intensity ratings, i.e., “subzero” GHG impacts! While many staunch zero tailpipe emission supporters claim that the concept of RNG is a “marketing scheme” and does not provide real, tangible benefits to the environment, such a position is 100% contrary to the robust science used by CARB to verify and validate these “carbon intensity pathways” as part of the California Low Carbon Fuel Program.

Key Transportation Fuel / Pathway	EER-Adjusted* Carbon Intensity (gCO <sub>2</sub> e/MJ)	Carbon Intensity Relative to Baseline
Diesel (conventional petroleum-based)	102.01	-
Compressed Natural Gas (fossil)	88.6	-13.1%
Hydrogen (SMR using 33% RNG)	55.6	-45.5%
Renewable Diesel (midpoint)	28.5	-72.1%
Electricity - California grid (midpoint)	31.0	-69.6%
RNG - Land Fill Gas (midpoint)	49.8	-51.2%
RNG - Wastewater (midpoint)	21.5	-78.9%
RNG (Food and/or Green Waste)	-25.5	-125.0%
RNG (Dairy Biogas)	-303.3	-397.3%

\*EER-adjusted" refers to accounting for the efficiency of the engine and drivetrain relative to the baseline fuel/engine pathway used in a heavy-duty vehicle

**Diesel technology, at its best, won’t be low enough on NOx emissions for California**

It is important to note that diesel-powered HDVs are not on a clear track to achieve the same ultra-low NOx certification level (0.02 g/bhp-hr) that heavy-duty natural gas engines have already attained. Today, the cleanest diesel engines are certified at a NOx level 10 times higher than the near-zero-NOx level of 0.02 g/bhp-hr. CARB has identified the 0.02 g/bhp-hr NOx level as being the cleanest tier of its Optional Low-NOx Standard (OLNS). However, CARB has also adopted two other OLNS tiers, at NOx certification levels of 0.10 g/bhp-hr and 0.05 g/bhp-hr. This raises the question as to what will happen when (as expected) CARB adopts a mandatory low-NOx standard. Since diesel engines don’t show signs of meeting the 0.02 g/bhp-hr NOx level, CARB could decide to adopt the mandatory standard at a level of either 0.10 or 0.05 g/bhp-hr NOx. These levels are 5.0 and 2.5 times higher, respectively, than the NOx certification level already met by “best-in-class” heavy-duty NGVs.

If and when this occurs, the San Pedro Bay Ports could respond by adopting a “dumbed down” CTP that does nothing to rapidly deploy commercially proven truck technology that’s equivalent or better than heavy-duty BEVs on NOx emissions. In effect, this shows the CAAP strategy for what it is: a effort to delay while diesel engines are allowed to catch up to today’s existing 0.02NZ and ZE technologies. With such a provision, drayage operators have no incentive to act early or move to any technology other than diesel until 2035. The consequences of this delay are another 18 years of diesel-based pollution from the drayage fleet, heavily impacting communities around the ports and throughout Southern California.

Finally, the ultimate flaw in this strategy is that, in real-world use, diesel trucks operated in port and urban areas can routinely emit four to nine times more NOx than their certification values. A recent UC-Riverside emissions study on trucks across California found that drayage trucks spend as much as 87 percent of their duty cycle under low-speed conditions where their NOx emissions control systems are ineffective. Argonne National Laboratories also finds high in-use NOx emissions from 2010-compliant trucks in low-speed applications like drayage, indicating NOx emissions are four times higher than previously estimated.

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Clearly, “clean” diesel is a failed strategy that cannot work at the Ports, no matter how much time is provided for the technology to “catch up.” This is likely why the I-710 project RDEIR/SDEIS (on page 2-22), “The air quality analysis presumes that no ZE/NZE truck would be diesel-powered.”

**Technology is commercially available today that can effectively eliminate dangerous levels of NOx and toxic air contaminants in the most impacted communities, while simultaneously helping to achieve significant GHG emission reductions – both of which can be achieved at levels at least equal to, if not greater than which can potentially be achieved in 2035 under a zero-emission truck plan.**

# Advanced Clean Trucks (ACT) Now Plan



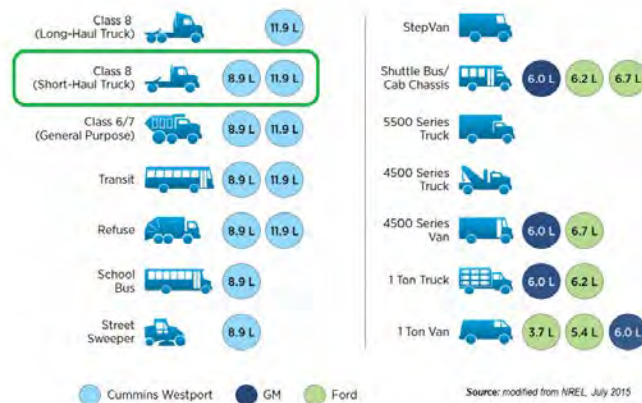
*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports, While Creating Jobs and Maintaining Port Competitiveness*

## Technology Readiness: Key Component for Delivering Clean Air Today

*While zero tailpipe emission trucks by 2035 are a noble goal, there is no certainty that such a future can and will exist, especially given the current lack of commercial maturity in the electric truck market. On the other hand, heavy-duty NZ natural gas trucks are commercially produced and sold by all leading truck manufacturers, are proven and in operation across North America, and are available to provide immediate air quality benefits in the communities most needing pollution relief, today. Ignoring this technology and opportunity to eliminate port drayage truck emissions in impacted communities is an irresponsible decision.*

### Road-proven natural gas trucks ready for action

Heavy-duty natural gas trucks are *commercially mature*, road-proven technology. This is clearly demonstrated by the tens of thousands of existing heavy-duty natural gas vehicles now operating throughout North America, and multiple models and configurations offered today by all major heavy-duty truck manufacturers (i.e. original equipment manufacturers, or "OEMs"). These HDVs use market-proven, technically mature natural gas combustion and fuel storage technologies. With the commercialization of the near-zero-emission 12-liter natural gas engine by Cummins Westport – which joins the previously available 9 liter engine – a **wide array** of heavy-duty vehicle applications can now be powered by near-zero-emission natural gas engines. As shown in the figure, this includes the Class 8 Short-Haul Trucks that make up the foundation of the San Pedro Bay Ports drayage fleet. Today, most heavy-duty natural gas trucks sold in North America utilize these CWI's 9-liter engine or its 12-liter engine. Each of the six major heavy-duty truck OEMs currently offers at least one natural gas-equipped model, and five of the six OEMs offer multiple models using both CWI engine platforms.



*Near-zero-emission heavy-duty natural gas engines are commercially available for a wide array of heavy-duty vehicle applications, including fully functional Class 8 drayage trucks.*

It is highly significant that many heavy-duty truck OEMs are now building, marketing, selling, and servicing heavy-duty NGVs. This provides a clear sign that these vehicles have achieved diesel-like commercial maturity. It is the mainstream heavy-duty OEMs that must ultimately adopt, embrace and invest in any truck fuel-technology platform before it can achieve true commercial status. This process takes many years and required exponentially growing investments by OEMs along the way. Only natural gas has reached—or even come close to reaching—this “critical mass” of OEM investments, product offerings, fueling station networks, training programs, incentive offerings, stakeholders, and vehicle deployments.

As a result, natural gas is solidly competing today with diesel as a mainstream HDV fuel. Heavy-duty NGVs are now displacing hundreds of millions of diesel gallons in California and across the U.S. No mainstream heavy-duty OEMs have announced plans to commercialize any other type of heavy-duty AFV technology. No other engine-fuel combination has achieved near-zero-emission status. No other type of alternative fueling stations exist that are specifically designed to accommodate HDVs, with the exception of proof-of-concept systems for transit bus demonstrations. No mainstream transportation fuel providers have announced commercialization plans to widely dispense any other type of heavy-duty alternative fuel.

### ***Natural Gas Drayage Trucks Worked Well for 1st CTP; the 12L NZ Engine is a Game Changer for New CTP***

Advocates for perpetuating diesel engines have claimed that first-generation natural gas drayage trucks rolled out during the initial CTP were not successful in drayage operations. This is simply not true. Of approximately 900 natural gas drayage trucks that were deployed in the 2008 timeframe under the initial CTP, more than 700 of these trucks are still making daily drays at the Ports today, nearly 10-years after they were first deployed. Thanks to incentives made available from the State and the Ports, independent owner-operators were able to lease these trucks for less than \$500 per month. When the price of diesel fuel climbed above \$4.00 per gallon, LNG was available at less than \$2.00 per DGE; consequently, these drivers were achieving major fuel cost savings. Even today, with diesel prices at record lows (adjusted for inflation), drivers of LNG drayage trucks continue to save money on fuel costs. And, it is very important to note that the first CTP successfully demonstrated to OEMs that there is a viable market for heavy-duty natural gas trucks produced in-house on their factory lines.



*The Freightliner Cascadia is just one heavy-duty Class 8 tractor suitable for drayage that can be purchased today with a CWI 12-liter natural gas*

It is true that the first wave of natural gas trucks with 9 liter CWI engines were underpowered for some drayage trucking applications. Fortunately, in late 2013, CWI introduced its 12-liter ISX12 G natural gas engine designed for larger HDV applications, including regional trucking at a full 80,000 lbs GCW. This product release was much anticipated by the trucking industry. The ISX12 G is rated up to 400 hp and 1,450 lb-ft torque, which is well suited for drayage, regional and even most line-haul trucking applications. Like the

#### Commercial Availability of Near-Zero Emission NGVs

*"The (near-zero-emission natural gas engine) technology for these (90 percent NOx) reductions is **(commercially) available**. The federal government needs to step up and require near-zero emission standards for all new trucks nationwide."*

**-SCAQMD Chairman William Burke**

*"There is a solution that **exists today** (heavy-duty NGVs) to improve air quality in my city and in the surrounding region. We must act now to encourage cleaner technology within the heavy duty transportation industry so that my child and the children of South Gate can breathe cleaner air."*

**-South Gate Mayor Jorge Morales**

*The ACT Now Plan by the California Natural Gas Vehicle Coalition replaces all diesel port trucks with cost-effective ultra-clean trucks over the next 5 years. To learn more, please visit [ACTNowLA.org](http://ACTNowLA.org).*

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smaller ISL G, the ISX12 G operates on 100 percent natural gas (including renewable natural gas) stored on the tractor as either CNG or LNG. The ISX12 G (and all CWI dedicated natural gas engines) are manufactured by Cummins, then made available as a factory-direct option from leading truck manufacturers that include Freightliner, Peterbilt, Kenworth, Volvo, and Mack. Today, there are more than 8,000 of these 12-liter natural gas engines powering heavy-duty truck fleets such as UPS, Frito Lay, Anheuser Busch, and dozens of other leading fleet operators. UPS, for example, buys 200 to 400 trucks with the CWI ISX12 G every year, with their 2018 trucks expected to be powered by near zero emission engines. UPS' annual investment in heavy-duty natural gas trucks and fueling infrastructure totals approximately \$100 million; an investment level that simply does not occur if the product does not operate flawlessly for a company of this size.

The CWI 12-liter natural gas engine will be certified to near-zero emission levels and ready for commercial sale in 2018 by nearly all leading truck OEMs. When running on renewable natural gas – as nearly 90% of California's NGVs do today – these trucks can immediately reduce criteria pollutant emission reductions in the San Pedro Bay Prots by 99% or more, and GHG emission reductions of 70% or more, which is equivalent to zero tailpipe emission trucks that the Port and Mayor are saying can wait until 2035. It is irresponsible to not move forward aggressively with these zero emission equivalent options that are commercially available, viable and cost-effective, today.



# Advanced Clean Trucks (ACT) Now Plan



*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports,  
While Creating Jobs and Maintaining Port Competitiveness*

## Renewable Natural Gas: A Critical Weapon in the Battle Against Climate Change

***Ultra-low carbon renewable natural gas (RNG) is widely available in the market today; approximately 90% of the NGVs on the road in California today are fueled by RNG. There is no shortage of supply in the future; in fact, more RNG powered trucks on the road will only help facilitate California's aggressive plans to batter climate change.***

### ***California Has an Ample, Growing RNG Supply for the Ports' Drayage Truck Fleet***

There is no question that sufficient supply of RNG will be available to meet demand from the Ports' drayage truck fleet as it switches over to heavy-duty 0.02NZ natural gas engine technology. More than 90 million DGE per year of RNG are now being used for transportation in California under the LCFS, surpassing the volume of fossil natural gas (about 55 million DGE per year). Increasing, this RNG will be produced in California. In 2015, a CEC report noted that there is "high" potential for in-state production of RNG for use in transportation applications.<sup>1</sup> Also in 2015, data were published by the California Biomass Collaborative (University of California, Davis) that estimated the annual RNG production potential for California to be approximately 2.1 billion diesel gallon equivalents (DGE).<sup>2</sup> A number of other studies and reviews have estimated robust potentials for the U.S. and/or California to produce RNG from biomass; these include:

- The American Gas Foundation "Biogas "Potential" study (2011)<sup>3</sup>
- The U.S. DOE's "Billion Ton Update" (2011)<sup>4</sup>
- Additional studies and assessments by the University of California, Davis<sup>5</sup>

To meet growing demand, the biomethane / RNG industry that supplies California is rapidly adding new on-line production capacity, including in-State facilities. According to the Coalition for Renewable Natural Gas (CRNG), the industry is currently on track to produce approximately 176 million DGE of RNG by the end of 2017. CRNG recently delivered 62 signed affidavits from member companies involved in building 24 new RNG-production projects. Of these 24 new projects, 18 are being constructed by proven RNG developers that are already producing the fuel under the California Low Carbon Fuel Standard (LCFS) program and/or federal renewable fuel standard (RFS) program. Six of the projects are being constructed by developers that are new to these credit programs. These new RNG projects will bring online an additional 74 million DGE of RNG that will be available to the transportation fuel market in 2018, therefore bringing the total transportation fuel supply of RNG to more than 250 million DGE (about 2.5 times the volume currently being used in California's transportation markets).

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<sup>1</sup> California Energy Commission, "Draft 2016-2017 Investment Plan for the Alternative and Renewable Fuel and Vehicle Technology Program," October 2015, <http://www.energy.ca.gov/2015publications/CEC-600-2015-014/CEC-600-2015-014-SD.pdf>.

<sup>2</sup> University of California, Davis & California Biomass Collaborative, "In-State Biomass Resources for Biogas and Hydrogen," Power Point presentation to the California Energy Commission, February 1, 2017, [http://docketpublic.energy.ca.gov/PublicDocuments/17-HYD-01/TN215727\\_20170201T140417\\_Instate\\_Biomass\\_Resources\\_for\\_Biogas\\_and\\_Hydrogen.pdf](http://docketpublic.energy.ca.gov/PublicDocuments/17-HYD-01/TN215727_20170201T140417_Instate_Biomass_Resources_for_Biogas_and_Hydrogen.pdf).

<sup>3</sup> American Gas Foundation, "The Potential for Renewable Gas: Biogas Derived from Biomass Feedstocks and Upgraded to Pipeline Quality," September 2011.

<sup>4</sup> U.S. Department of Energy, "U.S. Billion-Ton Update: Biomass Supply for a Bioenergy and Bioproducts Industry," August 2011.

<sup>5</sup> See for example Williams, R.B., B.M. Jenkins and S. Kaffka (California Biomass Collaborative), An Assessment of Biomass Resources in California, 2012 – Draft. Contractor Report to the California Energy Commission. PIER Contract 500-11-020.

This does not include nearly 81 million DGE of RNG that is currently still being delivered to various renewable portfolio standard (RPS)/electric power markets across North America. As these power contracts expire, it is very likely that some (if not all) of this RNG will be rerouted to California's lucrative transportation fuel market given the increased value of the RNG in this market.<sup>6</sup>

***Heavy-Duty Transportation is Critical to Achieving Methane and Black Carbon Reductions, and thus the State's SLCP Goals***

"Short-lived climate pollutants (SLCP) are warming compounds that stay in the atmosphere for a shorter period of time than carbon dioxide, including black carbon particles, methane, and some hydrofluorocarbon gases (HFC)."<sup>7</sup> According to the California Department of Resources Recycling and Recovery (CalRecycle), "actions to reduce short-lived climate pollutants are essential to address the many impacts of climate change on human health, especially in California's most at-risk communities, and on the environment."<sup>8</sup>

Replacing highly polluting heavy-duty diesel trucks with near zero emission natural gas trucks fueled with renewable natural gas offers one of the single best opportunities to significantly reduce both black carbon particles and methane emissions.

Heavy-duty diesel engines are the largest single source of anthropogenic black carbon in California, making up approximately 54 percent of the total inventory<sup>9</sup>. Therefore, reducing heavy-duty diesel exhaust emissions is a critical element of the State's SLCP mitigation plans; a goal that can very effectively be accomplished via the immediate and widespread deployment of near zero emission natural gas trucks.

In turn, these high fuel-consuming heavy-duty natural gas trucks can then create the market pull needed to drive continued investment and development of carbon-friendly renewable natural gas. Thanks to the financial credits available via the California LCFS program and/or federal RFS program, heavy-duty transportation provides an end-use market for captured methane that would otherwise be vented or flared to the atmosphere. Similar financial credits are not available in the federal RPS nor in other electricity markets in the U.S., thus, there is no market pull for RNG from the electrical power market. Transportation is the only opportunity to make use of this fuel, and thus drive investment in methane capture and utilization.

Without a growing RNG transportation fuel market, it will be extraordinarily difficult to achieve the goals of California's ambitious Short-Lived Climate Pollutant (SLCP) Reduction Strategy, and the requirements of SB 1383 to establish methane emission reduction targets in a statewide effort to reduce emissions of SLCPs in various sectors of California's economy. Simply put, without a robust transportation fuel market and the project financing opportunities created via the LCFS and RIN markets, there are little to no other outlets for captured methane.

California's heavy-duty transportation market is a critical component of the State's SLCP efforts to achieve its black carbon and methane emission reduction targets and **should therefore should also be a critical element of LA's and Long Beach's climate change mitigation plans**. The volume of trucks operating in the San Pedro Bay Ports provides not only a market maker opportunity for both near zero emission natural gas trucks and ultra-low carbon renewable natural gas – both of which can immediately provide the communities surrounding the ports and regional goods movement systems with zero emission equivalent

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<sup>6</sup> Personal communication to CNGVC from Johannes Escudero, CEO and Executive Director, Coalition for Renewable Natural Gas, August 2017.

<sup>7</sup> <https://www.arb.ca.gov/cc/inventory/slcp/slcp.htm>

<sup>8</sup> <http://www.calrecycle.ca.gov/Climate/SLCP/>

<sup>9</sup> <https://www.arb.ca.gov/cc/inventory/slcp/slcp.htm>

technology. **California, and communities importunately impacted by diesel emissions, do not have to wait until 2035 to realize such important benefits. Political leadership – at the local level – can provide these benefits today.**

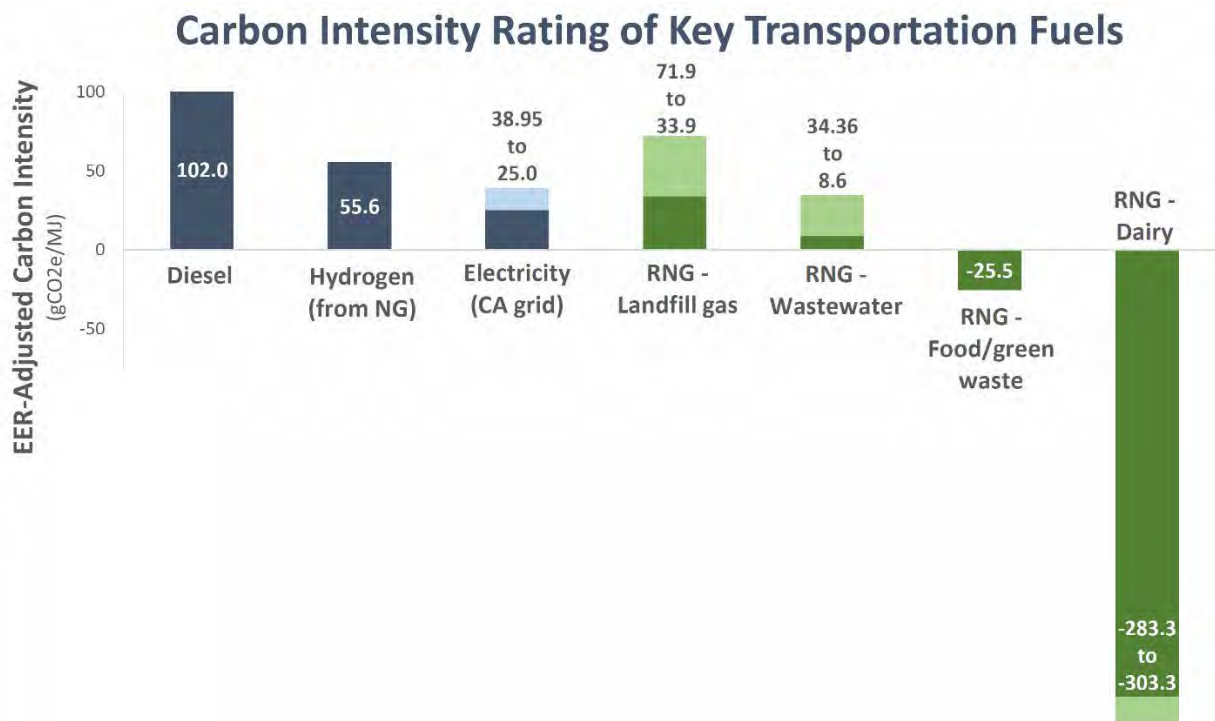
***Today’s RNG-Powered Trucks Can Pave the Way for Cleaner Electric Trucks in the Future***

The increase use of ultra-low-carbon RNG in California’s heavy-duty transportation sector will not only provide significant near-term greenhouse gas emission reductions, but will also be critical to the development of a robust renewable and low-carbon fuel resource that will be used by the battery and fuel cell electric trucks of the future. This is not an “either/or” proposition; there is 100% synergy between the goals to maximize deployment of these respective clean air technologies.

Even in 2030 with the full implementation of the California RPS, 50% of California’s electricity will come from (fossil) natural gas-powered generation. Likewise, more than 95% of hydrogen produced today in the United States is made via steam reformation of fossil and coal-derived natural gas. In both cases, there remains significant opportunity to reduce the carbon footprint of these fossil natural gas based fuels for electric trucks.

As battery and fuel cell electric truck technology continues to progress and proves more capable than natural gas-powered trucks in meeting a range of heavy-duty trucking needs in a cost-effective manner, the market will naturally transition to these technologies. At this transition occurs, the robust supply of RNG being used to fuel natural gas trucks can similarly be transitioned to supply the electrical power generation and hydrogen production markets, thus providing even lower emission battery and fuel cell electric trucks.

It is critical that the current market opportunity for commercially availability, operationally capable, and cost-effectiveness heavy-duty natural gas trucks be leveraged in order to increasingly develop a robust market for RNG fuel production and distribution. Such a market for RNG cannot be developed overnight at the time when battery and fuel cell electric trucks are ready for prime time; this growth can and must occur today and in the years to come.



*The ACT Now Plan by the California Natural Gas Vehicle Coalition replaces all diesel port trucks with cost-effective ultra-clean trucks over the next 5 years. To learn more, please visit [ACTNowLA.org](http://ACTNowLA.org).*

# Advanced Clean Trucks (ACT) Now Plan



*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports,  
While Creating Jobs and Maintaining Port Competitiveness*

## Carrots & Sticks Are the Key to Clean Air

***Dirty truck fees and financial incentives were the critical elements of the very successful first Clean Truck Program. These “levers” remain available to the Ports today, and are in no way impacted by SB 1.***

The Draft CAAP document falsely uses SB 1 as an excuse to explain why a more immediate and aggressive Clean Truck Program cannot now be developed. Because SB 1 will prohibit CARB from developing new truck standards and truck-focused regulations, the Draft CAAP makes the point that the Ports now cannot use the Clean Truck Program to accelerate new State truck regulations. This is a fictitious argument.

New State standards are not required for the Ports to use voluntary measures (i.e. grants, incentives and fees) to accelerate the deployment of the cleanest truck technologies in the harbor (i.e. zero and near zero emission technology that is certified and meets CARB’s Optional Low NOx Standard, or is zero emission). A combination of grant and incentive programs and “dirty truck fees” is all that is required to motivate the rapid transition to this cleaner truck technology. Such an approach does not require a truck ban, or a requirement to use a specific technology. Instead, the approach relies on the same voluntary-based approach as the first Clean Truck Program.

The following summary of the first Clean Truck Program is from page 9 of the Draft CCAP (underline added here for emphasis):

“The original CAAP Clean Truck Program (CTP) relied upon the power of the State of California CARB Drayage Truck Rule requiring all truck fleets at all ports and railyards throughout the state to turn over to 2007 US EPA compliant engines effective January 1, 2014. To motivate early voluntary truck industry action, the CTP offered millions in grants and incentives to help the trucking industry achieve early compliance by an advanced date of January 1, 2012. This strategy, together with a “dirty truck fee” disincentive for non - 2007 - compliant trucks, achieved a voluntary early fleet replacement by the industry several years in advance of state law.”

The respective Harbor Commissions in both the Ports of Los Angeles and Long Beach have the capability to immediately establish a dirty truck fee, as was done in the first Clean Air Action Plan. There are no legal restrictions on the establishment and use of such fees. The Ports routinely establish and collect fees on cargo for a variety of reasons. Of course, the level of the fee must not be too low as it will fail to motivate the market to move away from high emission trucks, and it must not be too high as this could motivate cargo diversion away from the San Pedro Bay Ports. The dirty truck fee should be established in order to drive a gradual, yet aggressive transition of the port drayage fleet to zero and near-zero emission trucks by July 1, 2023, as recommended by Mayor Garcetti’s Sustainable Freight Advisory Committee.

The Draft CAAP notes the importance of the CARB Drayage Truck Rule (which required 2007 EPA-compliant trucks, or newer, by January 1, 2014) as a means by which the Clean Truck Program could help accelerate the deployment of 2007 EPA-compliant trucks. However, it is important to note that the Clean Truck Program did not require the use of this technology by a certain date. Instead the Clean Truck Program used grants and incentives to encourage the voluntary deployment of clean trucks, and it used dirty truck fees as a motivation to replace older, higher polluting trucks. The same voluntary-based approach was very successful, as noted on page 33 of the Draft CCAP:

“Under the previous Clean Trucks Program, which imposed a fee on older trucks, roughly 90% of the trucks were replaced within three years with cleaner models while 10% chose to pay

the fee in the short term. Thus, this strategy could result in a significant turnover to near - zero - emissions trucks while giving fleet owners flexibility and ample time to plan for new purchases.”

It is this same voluntary-based approach that can and should be again today. Such an approach would be completely consistent with the language from the SB 1 bill in Section 43021 (b) (2), where it clearly states, “This section does not apply to...voluntary incentive and grant programs, including, but not limited to, those that give preferential access to a facility to a particular vehicle or class of vehicles.” The Draft CAAP even acknowledges this on page 9 when it states, “The [SB 1] language does not prohibit voluntary incentive and grant programs, including, but not limited to, those that give preferential access to a facility to a particular vehicle or class of vehicles.”

In sum:

- SB 1 has no impact on the Ports’ ability to use grants, incentives and dirty truck fees to encourage the drayage fleet to use significantly cleaner trucks (i.e. zero and near-zero emission technology).
- A truck ban is not required to transition the port drayage fleet to zero and near-zero emission technology; all that is required is incentives and dirty truck fees.
- Hundreds of millions of dollars in incentives are available to help transition to clean truck in California; political will and cooperation is required to dedicate such funds to zero and near-zero emission drayage trucks in Southern California.
- The Harbor Commissions in the Ports of Los Angeles and Long Beach have the capability to establish a dirty truck fee, as was done in the first Clean Air Action Plan. There are no legal restrictions on such fees. This can be done immediately.

To confirm the above points, CARB has repeatedly stated that SB 1 does not in any way impact the ability of the Ports from implementing an aggressive clean truck program.

In a spring 2017 SFAC meeting, it was noted by the CARB representative that SB 1 “...does not apply to the abilities of a port or an air district, indirect source rules, or CEQA mitigations measures and requirements.” It was also stated in the SFAC summary notes that, “ARB continues to encourage the ports and air districts to proceed with their respective clean truck program concepts. ARB does not want SB 1 to change the trajectory of such efforts as they are absolutely necessary for the State to achieve federal air quality standards.”

Following up these comments, CARB released a September 6, 2017 Discussion Paper on the *Implementation of March 2017 Board Direction on Reducing the Community Health Impacts of Freight Facilities*. Within this document, it provides the following Q&A (underline added for emphasis):

**Does SB 1 prohibit CARB, the air districts, or the seaports from adopting or implementing facility-based measures that reduce truck emissions?**

No. CARB and the air districts have the same indirect source authority as before the adoption of SB 1. Nothing in SB 1 precludes seaports from taking action to protect their communities from toxic pollution. Also, SB 1 does not prohibit CARB or the air districts from establishing entry requirements to specific types of facilities, nor does it prohibit seaports from establishing their own measures to accelerate the transition to a cleaner port truck fleet and to reduce emissions from trucks serving their facilities.

# Advanced Clean Trucks (ACT) Now Plan



*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports,  
While Creating Jobs and Maintaining Port Competitiveness*

## How to Pay for Clean Air, Today (hint: we have the money to do this)

*California is fortunate to have at its disposal the most lucrative grant and incentive programs available for clean heavy-duty transportation technology. The resources required to fund the ACT Now Plan and eliminate emissions from the San Pedro Bay Port drayage truck fleet by 2023 are available. The political will to dedicate these resources to such a cause is the missing element.*

### ***Paying for the ACT Now Plan***

With approximately 13,000 active trucks in the San Pedro Bay Port Drayage Truck Registry, and assuming a \$100,000 per truck incentive is to be offered, \$1.3 billion in incentives will be required to fulfill the total potential needs of the Incentive Program. When spread evenly over a six-year period (July 2018 to June 2023), this means approximately \$216 million per year will be needed over this period. While undoubtedly a large sum, the CNGVC believes that it is very feasible and cost effective to allocate funds of this magnitude for a clean air action plan that will effectively eliminate one of the largest sources of NOx, PM, toxic air contaminants and GHG emissions in the South Coast Air Basin.

Given the cost-effective nature of the proposed investment, it's not unreasonable to assume that approximately \$225 million per year could be aggregated among key public agencies to pay over six years for this aggressive and important plan. There is precedence for such allocations; each year, local, State, and Federal agencies spend \$600 to \$700 million in California on transportation technologies and fuels. In addition to the various existing sources of funds that are already set aside for this purpose, \$1.5 billion of California Cap & Trade funding is expected to be approved this fall for reducing NOx and GHG emissions in California, with more than \$500 million is expected to be specifically allocated towards heavy-duty clean transportation deployments, including specific funding for freight hubs and ports.

Clearly, there is no lack of available funds, especially considering this latest development involving new Cap & Trade funding. What is needed is strong political will and leadership, and a bold commitment to take the best, most cost-effective action. That action is to dedicate major resources to the proposed ACT Now Plan.

### ***Funding Precedence and Sources Exist for the Necessary Investments***

The CNGVC has researched and analyzed a range of local, state and federal incentive programs to determine the potential contributions needed to support this plan. Details on these are provided in the embedded table. In some cases – such as the local investment from the two Ports and AQMD – the annual contribution is suggested to come from the agency's general operating budget. Although the shipping

Type of Funding Program	Potential Funding / Yr	Specific Funding Source
Federal Government Investments	\$45 - \$70 million	DOE's Vehicle Technologies Office and EPA's DERA Program
Environmental Mitigation Trust Funds	\$32 million	Volkswagen Partial Consent Decree Settlement
Local Government Investment	\$25 million	SCAQMD and MSRC
Local Port Authority Investment	\$25 million	Port of Long Beach
Local Port Authority Investment	\$25 million	Port of Los Angeles
Local Port Authority Investment	\$25 million	Port Authority Truck Fees
HVIP/Other Heavy-Duty Pilot Projects	\$23 million	AB 1613 / ARB's Low Carbon Transportation Program (GGRF)
Alternative and Renewable Fuel and Vehicle Technology Program (ARFVTP)	\$10 million	AB 118 / California Energy Commission
<b>TOTAL</b>	<b>\$210 - \$235 million available each year</b>	

industry has experienced significant financial challenges and consolidation over the last eighteen months, the two Ports have continued to strengthen their financial position. An analysis of the reported financial data for both Ports shows that they hold a combined \$790 million in cash reserves, and improved their overall financial position by more than \$272 million in 2016.

Clearly, the Ports have the necessary resources to help incentivize modernization of the drayage fleet. Equally important to the Ports' funds, their strong financial anchoring will be crucial to leveraging additional local, state, and federal funds. Without their initial financial commitments, the Ports will potentially leave billions of dollars on the table from these other sources, that can and should be used to modernize the drayage fleet in Southern California to the cleanest available fuel-engine technologies.

**Building a Stakeholder Funding Coalition**

These examples show that the needed resources exist, and -- with the required political leadership and agreement of the parties -- could be allocated to the ACT Now Plan for the next several years. Accordingly, the CNGVC strongly supports the recommendation of the Mayor's Sustainable Freight Advisory Council (SFAC) "to further build and lead a coalition of businesses (including cargo owners, shipping companies, terminal operators and others), environmental, community, regulatory agency, and other stakeholders to advocate for this shared vision to the greatest extent possible." More specifically, the CNGVC recommends that such a coalition work with the Energy Commission, CARB, SCAQMD, and others to modify funding plans and annual budgets in coming years, so each can dedicate the necessary funds to the ACT Now Plan.

In addition to these potential funding sources, a number of others that could contribute to deployment of clean trucks have been identified in SCAQMD's 2016 Air Quality Management Plan (AQMP). These potential opportunities, summarized in the embedded table, represent new sources of funding that could help fund the ACT Now Plan concept. The CNGVC fully supports SCAQMD's statement in the 2016 AQMP that such programs should "place priority on the most cost-effective technologies to reach short-term air quality goals such as current and emerging near-zero emission [heavy-duty] natural gas engine technologies." This is exactly the strategy that the ACT Now Plan seeks to aggressively implement, with the two Ports leading the way with bold action.

Potential Funding Source	Potential Annual Funding for the South Coast Region
Cargo Container Fee (~11 to 12 Million Loaded TEUs @ \$35/TEU)	\$385 million
Expanded Motor Vehicle Registration Fees (~12 Million Registered Vehicles @ \$20/vehicle)	\$240 million
Mileage-Based User Fee (\$0.005/Mile Add-On to SCAG RTP/SCS Analysis)	\$1.04 billion
Gasoline/Diesel Excise Tax Add-On (~7.2 Billion Gallon @ \$0.01/Gal)	\$72 million
Crude Oil Sales Tax (~28.5 Million Barrels @ \$40/barrel with 10% Tax)	\$114 million
Property Tax (\$2.3 Trillion Secured and Unsecured Tax Roll @ 0.01%)	\$230 million
Retail Sales Tax Add-On (\$273 Billion Taxable Sales @ 0.1%)	\$273 million
<b>TOTAL</b>	<b>\$2.354 billion</b>

**Responsibly Utilizing Funds**

Modernizing the San Pedro drayage fleet must be done with limited resources, sweeping scope, and in accordance with many important policy goals. It will be imperative that all investments in cleaner truck technologies be allocated in the most cost-effective, technology- and fuel-neutral manner possible. Such a large and important funding program must leverage competitive market forces, by ensuring that incentive funds are open to all technologies that meet or exceed a 0.02 g/bhp-hr NOx standard.

*The ACT Now Plan by the California Natural Gas Vehicle Coalition replaces all diesel port trucks with cost-effective ultra-clean trucks over the next 5 years. To learn more, please visit [ACTNowLA.org](http://ACTNowLA.org).*

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In addition to the above incentives, there are a variety of other financial programs available to help drivers to replace their existing trucks with a new zero- or near-zero-emission truck. California has a specialized lending program, the California Capital Access Program (CalCAP<sup>1</sup>) available to independent owner operators. CalCAP typically funds 3,000 to 4,000 trucks per year and has the capacity to support the port truck deployments discussed in the proposed *ACT Now Plan*. Likewise, Small Business Administration financing is available, in addition to traditional lending opportunities offered by banks and equipment capital companies and captive financing available from truck dealers. To help less credit worthy drivers, the industry has relied on risk pools to help finance clean trucks, and full-service leasing remains options for fleets.

To help ensure that all investments maximize the emissions they reduce, the CNGVC recommends establishment of cost-effectiveness metrics that can guide investments by the San Pedro Bay Ports. The most important metric should be focused on the magnitude and expediency of achieving criteria pollutants reductions. Important second-tier criteria should include GHG emissions, petroleum displacement, and increased use of low-carbon renewable fuels. Consistent with the SFAC's recommendation, the Ports should *"require zero- and near-zero-emission trucks that receive funding to use a low carbon fuel that achieves at least a 40 percent well-to-wheels based carbon reduction from CARB diesel."*

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<sup>1</sup> <http://www.treasurer.ca.gov/cpcf/calcap/>



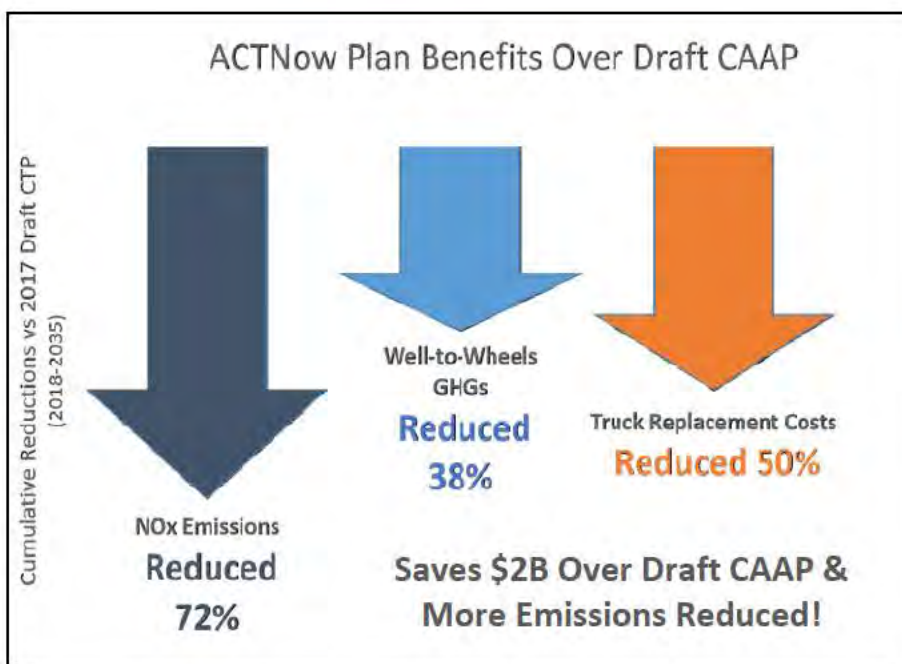
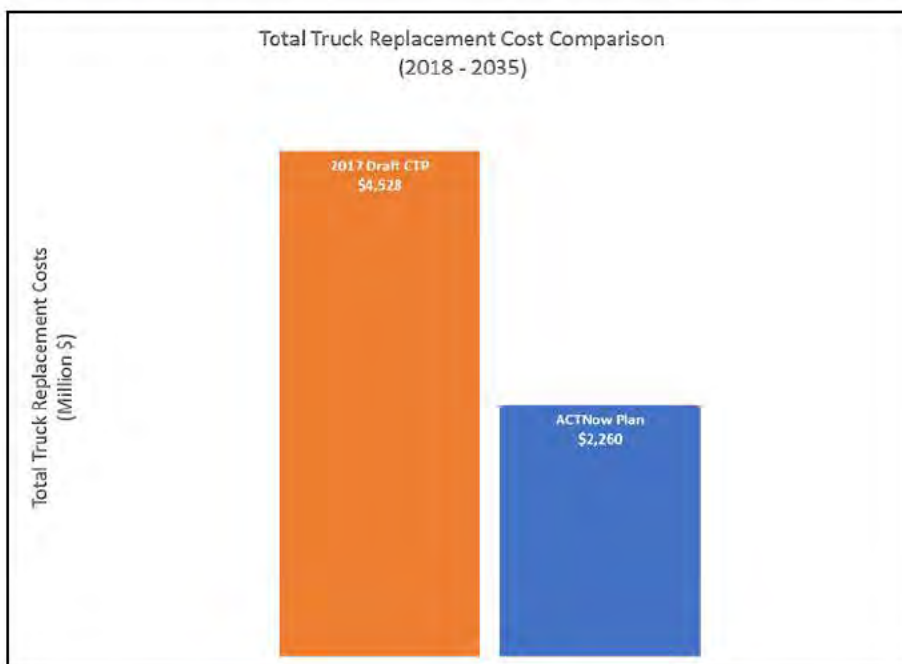
# Advanced Clean Trucks (ACT) Now Plan



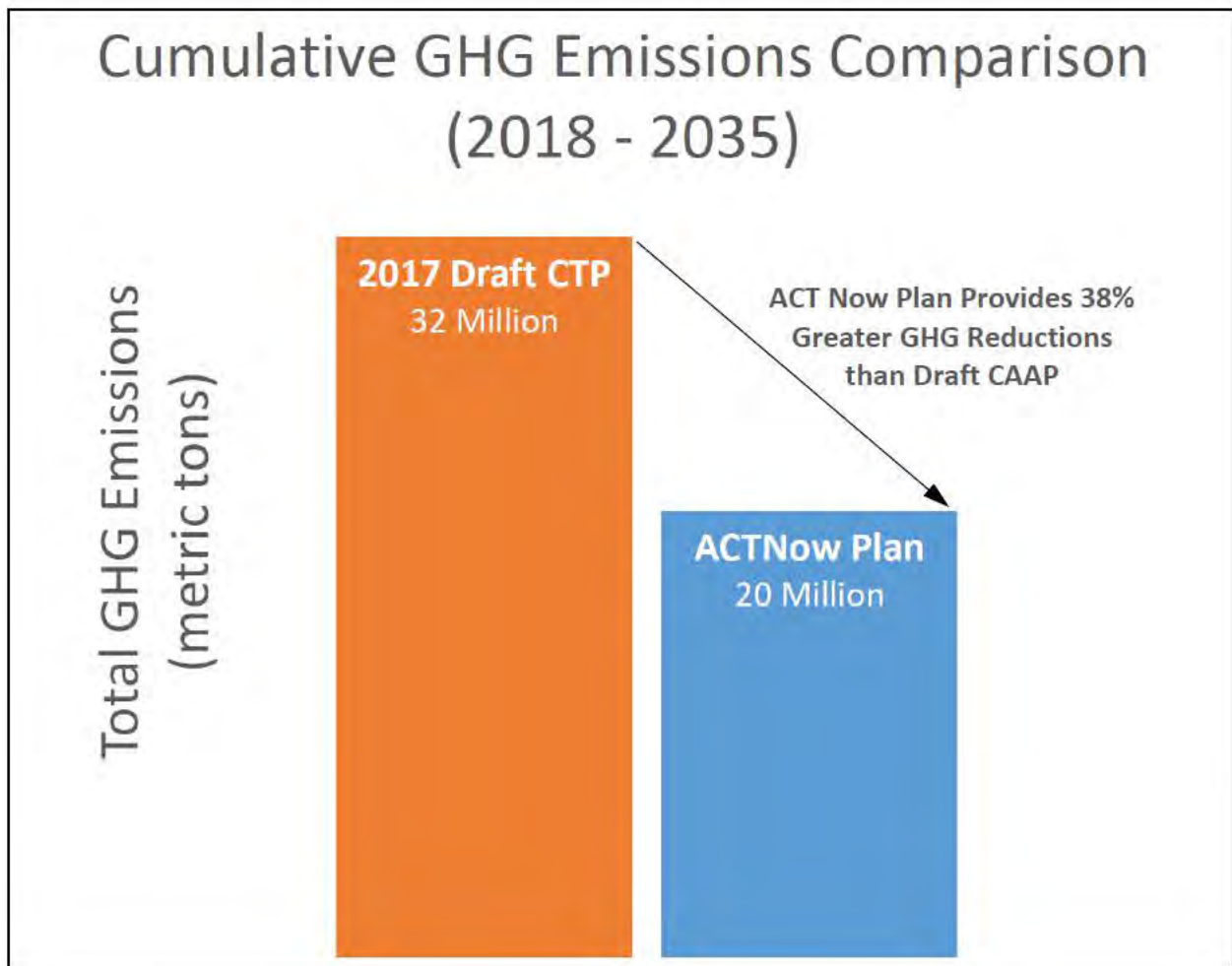
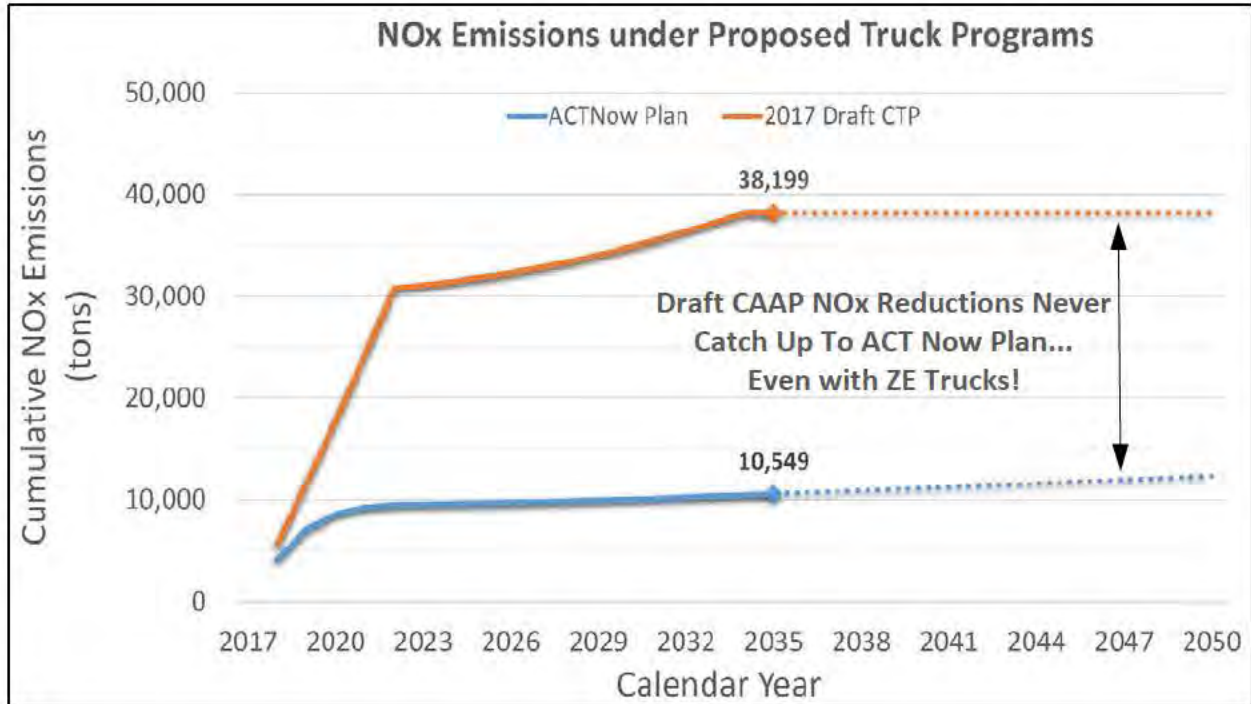
*A Plan to Deliver Immediate, Cost-Effective Clean Air at the Ports, While Creating Jobs and Maintaining Port Competitiveness*

## Significantly Greater Air Quality Benefits for Half the Cost – ACT Now!

*The ACT Now Plan will provide more NOx and GHG emission benefits than the Draft CAAP will achieve in the next 20 years, and this can be achieved for 50% of the cost! Why should we spend 100% more to have more pollution in the air? The \$2.3 billion not spent on a plan that will result in more emissions can be used to reduce emissions from other sources, such as ships, locomotives, harbor craft and cargo handling equipment. The ACT Now Plan is a more sensible and cost-effective investment that provides more immediate relief to impacted communities.*



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September 18, 2017

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731

Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

Subject: Draft Clean Air Action Plan

Dear Ms. Tomley and Mr. Cannon:

Clean Energy applauds the progress made by the Ports of Los Angeles and Long Beach (Ports) over the past 10 years since the introduction of the first Clean Air Action Plan (CAAP) that aimed to reduce harmful criteria air pollutants from port-related stationary and mobile sources. Past leadership by the port authorities, with hard work and investment by many stakeholders, has dramatically reduced diesel particulate matter (DPM) and made progress in other harmful criteria air pollutants. The success of the initial CAAP demonstrates what bold leadership can accomplish and sets a high bar for the upcoming CAAP document that will be voted on this November. Bold action taken today can put the San Pedro Bay Ports on the lowest cost path to zero emissions by immediately transitioning trucks over the next 5 years to ultra-low nitrous oxide (NOx) engines powered by renewable natural gas (RNG); a combination that can deliver up to 99% less NOx than today's cleanest diesel trucks on California's roads and up to 70% to more than 100% fewer greenhouse gas (GHG) emissions.

Much has changed over the past 10 years since the first CAAP was adopted. Container volume at the San Pedro Bay Port Complex is setting new records despite the fact that international shippers now have more ports of call options for delivering containers nationwide. Science has improved the understanding of diesel air pollution and its harmful effects on human health. Climate science has matured and raised global awareness of the need to reduce GHG emissions. Companies now have sustainability plans with quantifiable goals and objectives. The South Coast Air Quality Management District (AQMD) must achieve significant NOx reductions by 2023 and 2031 to meet federal ozone standards. Finally, California has set ambitious climate goals that must deliver low carbon fuels to market and reduce greenhouse gases by 2020, 2030 and 2050.

North America's leader in clean transportation

Meanwhile, the natural gas vehicle industry has evolved substantially over these past ten years. Clean Energy is proud to have played a key role with the San Pedro Bay Ports starting with the first Clean Trucks Program (CTP). Clean Energy partnered with the port authorities and helped deploy hundreds of LNG trucks with first generation heavy duty truck technology. Clean Energy was selected by the Ports to build the LNG fueling station that supported this first fleet of trucks. Clean Energy built the Boron LNG production plant to provide a nearby fuel supply to the Ports. Over the ten year period, Clean Energy and other companies built a comprehensive network of fueling stations throughout California and the US allowing trucks powered by natural gas to travel coast-to-coast and border-to-border. The service and support industry for natural gas trucks has also matured over this time. Natural gas capable service centers with experienced and trained technicians with parts supply are now readily available, especially throughout Southern California. The vehicle equipment supply chain has grown and innovated, expanding the choice of fuels to compressed and liquefied forms of natural gas and offering ranges that equal diesel trucks. Finally, heavy duty natural gas engine offerings are now available for all weight classes of trucks.

Above and beyond the maturing of the industry, there are two critical advances that are now propelling our industry to being the solution that is needed to eliminate harmful diesel fuel and its associated air pollution and GHG emissions: (1) renewable natural gas (RNG); and (2) ultra-low NOx engines.

#### **RNG**

RNG is ultra-low carbon fuel produced from organic waste at landfills, wastewater treatment plants, dairy farms, and green waste diversion facilities. RNG has a duo benefit for GHG emission reductions. First, methane that would otherwise leak into the atmosphere is captured, preventing the methane from contributing to climate change. Second, the captured methane is used as a fuel that displaces fossil fuel. RNG produced from landfills can deliver GHG emissions that are equivalent to the GHG emissions of an electric truck powered by the California grid. Even better, RNG can have negative – subzero – GHG emissions when produced from dairy farms and green waste diversion facilities. Subzero GHG emissions means a truck powered by RNG is actually reducing climate pollutants with negative carbon intensities. A solar or wind-powered truck can never match this level of performance regardless of efficiency advancements associated with the battery.

#### **Ultra-low NOx Engines**

Cummins Westport (CWI), with support from AQMD and CEC, has accomplished what was thought to be unachievable: a combustion engine with NOx emissions about the same as battery electric powered by the regional grid. This technology is certified to the CARB optional low NOx standard of 0.02 g/bhp-hr. The 9 liter version of this ultra-low NOx technology is already certified, in production, and being installed in refuse trucks, busses, concrete mixers, and local delivery trucks today. The pre-certification 12 liter version of this low NOx technology is operating around the US and in the Ports today as well. CARB certification is already underway for the 12 liter and commercial production is slated for February 2018. The engine will be supplied with Freightliner, Kenworth, Peterbilt, Mack and Volvo trucks – the same trucks that truckers buy. The ultra-low NOx engine reduces NOx by up to 99% compared to in-use diesel engines. These engines also eliminate toxic diesel particulate matter known to cause cancer and reproductive harm.

The significance of RNG powered ultra-low NOx engines is that it is a technology that can eliminate the damning health effects associated with dirty diesel with a cost-effective, commercial, and operationally viable solution. Further, this comes at a price tag that is estimated at half the cost of other competing technologies like battery electric and fuel cell trucks. Moreover, this low NOx engine and RNG fuel technology combination is available today to provide immediate relief to Port communities.

This is why Clean Energy supports the ACT Now Plan proposed by the California Natural Gas Vehicle Coalition. The ACT Now Plan replaces dirty diesel trucks with clean RNG powered trucks over the next 5 years. The ACT Now Plan embraces all clean technologies and encourages competition between all advanced clean truck technologies to deliver both consumer choice and lower prices in the marketplace. This is exactly what the Ports and the region needs and it will ultimately benefit both fleets and truck drivers.

All that said, the most proven technology to date is the ultra-low NOx engine powered by RNG. Understanding this point is a critical distinction between the ACT Now Plan and the draft CAAP. The draft CAAP sets a future goal of zero emissions but fails to accelerate the immediate adoption of the cleanest and most cost-effective technology available today. In essence, the draft CAAP heavily relies upon diesel trucks which is a flawed strategy based on what we now know about high in-use emissions from diesel. In contrast, the ACT Now Plan reaches up to a 99% NOx reduction goal within 5 years using existing and proven technology. Waiting for the future as proposed by the draft CAAP is risky in that it relies upon unknown and unproven future technologies that have yet to demonstrate a clear timetable for commercialization. Achieving up to 99% reductions immediately takes the future risk out of the CAAP, paves the way for port growth that is needed to maintain regional jobs and economic stimulus and can avoid the threat of an indirect source rule being implemented by either the state or regional air quality regulators.

Immediate reductions of air pollutants and carbon emissions are the most valuable reductions when considering the current situation. Despite progress over the past decades, air pollution in the greater Los Angeles region continues to be the most polluted in the nation and is unhealthy enough to threaten a Federal Implementation Plan upon our region as early as 2023. Millions of residents are exposed to air that is known to be unhealthful. Given the recent experiences of Hurricane Harvey and Irma, national disasters that impacted both port operations and waterways, combatting climate change cannot wait for far off future action – notably the draft CAAP has no measures to curb GHG emissions from trucks. The solution to heavy duty truck pollution and GHG emissions exists today. The draft CAAP misses this critical opportunity to deploy proven low carbon fuels that are readily available now to the industry.

The ACT Now Plan is the lowest cost path to an immediate zero emission outcome. This lowest cost path to zero is critical for eliminating existing diesel health impacts from truck pollution, preserving port competitiveness, and eliminating risks to the regional goods movement industry. The Ports and industry stakeholders at large have made clear the importance of recognizing the diversion threat posed by other ports. Yet, despite this diversion threat, the Draft CAAP proposes to subject the trucking industry to much higher costs than necessary – over \$2B in higher costs and that does not include the cost of charging infrastructure! Conversely, the ACTNOW plan offers

trucking companies and owner operators to purchase advanced clean truck technologies that would qualify for access to both Ports through 2035 because those trucks would achieve zero equivalent emissions, if not better, performance today.

The draft CAAP raised concerns that recently enacted law SB-1 prevents the Ports from adopting an aggressive CTP. Fortunately, the California Air Resources Board has issued strong guidance that states that SB-1 does not prevent the Ports from adopting measures similar to those in the ACT Now Plan. The measures are essentially the same that were highly successful in the original CTP: setting an emissions standard and imposing a fee upon trucks that do not meet said standard, and providing incentives to early adopters who comply with established standards by the CAAP.

Statewide truck incentive funding has recently been available at unprecedented levels to help truck owners replace their dirty diesel trucks with advanced clean trucks. The state legislature approved a cap and trade package that has since been signed by the Governor over the weekend that can provide up to \$570M for clean heavy duty vehicles. Additionally, there are VW settlement funds and other programs in the state that can help further support a strong CAAP for the San Pedro Bay Port Complex. It should also be noted that programs such as cap-and-trade are ongoing annual funds that can continue to support truck replacements as recommended by a recent LA Times editorial board article on September 13, 2018.

The benefits of the ACT Now Plan over the draft CAAP are what is needed to strike the right balance between clean air and competitive ports:

- Reduces truck replacement costs by 50% - savings are over \$2bb
- Reduces overall total NOx by 72%
- Reduces overall total GHG by 38%
- Eliminates diesel particulate matter
- Replaces fossil fuel with renewable fuel

Clean Energy therefore urges the Ports of Los Angeles and Long Beach to seize this incredible opportunity take a bold leadership position, eliminate dirty diesel now like so many other major cities throughout the world, support clean technologies, and take advantage of truck replacement incentive funding by ACTing Now.

Sincerely,



Todd Campbell  
Vice President, Public Policy & Regulatory Affairs

Attachments:

LA Times Editorial 9-12-17, Senate Pro Tem Kevin de Leon's Press Release 9-15-17, Governor's Press Release 9-16-17



cc:

Gene Seroka, Executive Director, Port of Los Angeles

Mario Cordero, Executive Director, Port of Long Beach

Rick Cameron, Managing Director Environmental Affairs & Planning, Port of Long Beach

# Los Angeles Times

## Editorial: Use California's cap-and-trade money to end diesel pollution

**The Times Editorial Board**

September 12, 2017, 4:00 AM

California has \$1.5 billion available this year to fight climate change, and many billions of dollars more coming in the years ahead, now that lawmakers have extended the state's cap-and-trade program through 2030. Needless to say, there are plenty of people, groups, businesses and governments that would love to get a piece of the pie.

A fire district in the Bay Area, for instance, wants cap-and-trade money to reopen fire stations closed due to lack of funding. Inglewood wants \$50 million for transportation infrastructure projects in its downtown redevelopment area. San Gabriel Valley leaders want money to build the Gold Line light-rail extension to Montclair. There are proposals to build farmworker housing, to pay for exhibits for the Columbia Memorial Space Center in Downey and to provide a free, electric shuttle in San Diego.

The list goes on. But here's the catch: The law requires that cap-and-trade money be spent on projects to reduce global warming. While legislators are always tempted to bring home the bacon for their constituents any way they can get it, they need to remember the underlying goal of this particular law. They should commit to programs that cut greenhouse gas emissions and deliver real reductions in local air pollution.

One way to do that is to dramatically reduce pollution from diesel engines. The state has long offered rebates to companies and public agencies to install cleaner equipment on old, dirty diesel trucks, buses, trains, cargo equipment and farm water pumps. But there has never been enough money to address the need or to significantly reduce the health risks of diesel pollution, particularly in communities near major highways and freight centers.

Cleaning up diesel exhaust would help cut black carbon, a potent climate change pollutant, *and* reduce soot and toxic air contamination in the state's most polluted communities. This dual approach — attack climate change and clean up local air pollution — was at the heart of this year's compromise to extend the state's cap-and-trade program.

Senate Democrats had initially [proposed](#) spending nearly \$1 billion over the next year to replace diesel trucks, buses and other vehicles with cleaner versions. A deal cut this week by [Gov. Jerry Brown](#) and legislative leaders proposes to spend less — about \$750 million — for programs to clean up diesel pollution. That's a good start, but lawmakers ought to commit to the longer-term goal of ending diesel pollution entirely.

<http://www.latimes.com/opinion/editorials/la-ed-cap-and-trade-20170912-story.html>



**FOR IMMEDIATE RELEASE:** Friday, September 15, 2017

**CONTACT:** [jonathan.underland@sen.ca.gov](mailto:jonathan.underland@sen.ca.gov)

## **Senate Passes California Clean Air Initiative**

*Historic Investment of Cap-and-Trade Dollars to Reduce Pollution*

**SACRAMENTO** – The Senate today passed budget trailer bills AB 109 and AB 134, making this the most historic investment of its kind to clean air across California and advance zero-emission technologies in the transportation sector. Senate Democrats this summer led in determining the spending priorities for the Greenhouse Gas Reduction Fund, with the primary focus on reducing carbon emissions and other air pollutants from the transportation sector.

The **California Clean Air Initiative** will invest the bulk of available discretionary revenue (the 40 percent of cap and trade revenue not previously allocated by statute) through incentives to replace old, high-polluting diesel engines in heavy trucks and buses; provide rebates to help low- and middle-income families purchase new and used zero-emission vehicles; and promote zero-emission car-sharing and agricultural van pool programs, among others.

“It’s time for California to put an end to the public health epidemic caused by diesel pollution that disproportionately harms the most vulnerable residents in our state,” **Senate Leader Kevin de León (D-Los Angeles)** said. “This plan offers the greatest positive impact for our air, without new regulations or requirements for affected industries – it’s a win-win.”

Last month, Senators joined a coalition of vehicle manufacturers and clean air advocates to [showcase a broad range of clean truck and bus technologies](#) on Capitol grounds, including battery electric, fuel cell, natural gas, and hybrid technologies used in transit and shuttle buses, heavy duty work trucks, and medium-duty delivery vehicles. Growing demand for cleaner-burning engines has spurred a wave of innovation in the state, with a new generation of vehicle manufacturers opening up or relocating in California in recent years.

“Investing in clean energy trucks, buses and port equipment means investing in California families, California workers and California companies,” said **Senator Ricardo Lara (D-Bell Gardens)**, who represents one of the nation’s busiest ports and truck-traffic corridors. “The data is indisputable. If we are going to significantly reduce greenhouse gases and air toxics, we have to address mobile sources. Cleaning up dirty diesel trucks, buses and freight equipment gives California the biggest bang for our buck and will lead to immediate improvements in the health of residents in our most polluted areas.”

“Thousands of California school buses still run on dirty diesel fuel,” said **Senator Nancy Skinner (D-Berkeley)**. “Ditching diesel and moving toward California-built zero and low emission vehicles is right for our kids and communities.”

“By providing electric vehicle rebates and transitioning to cleaner buses and trucks, we can continue to drive innovation in our state, strengthen our clean-energy economy and improve the quality of air that we all breathe.” **Sen. Bob Wieckowski (D-Fremont)**, Chair, Senate Environmental Quality Committee.

“As a pediatrician, I see children with asthma and other respiratory and cardiovascular diseases which are caused or exacerbated by exposure from pollutants in the air they breathe,” said **Dr. Richard Pan (D-Sacramento)**, State Senator representing the Sacramento region. “With the deployment of the largest fleet of electric buses in the country by Twin Rivers Unified School District in my Senate district, students will be exposed to fewer pollutants riding to and from school, and we need to increase funding in this clean technology so all Californians will benefit.”

The Legislature’s Clean Air Initiative is the single largest investment in clean air in state history, with nearly \$900 million to phase out dirty diesel engines, promote clean trucks and buses, and expand access to electric vehicles for middle- and low-income families. This ambitious proposal is a win-win for business and public health; it delivers the greatest emissions reductions and air quality improvements, without adding a single new regulatory burden for industry.

California is also using revenue collected from polluters to make historic investments in forest management and fire prevention (\$225 million), sustainable agriculture (\$165 million), wetlands restoration, recycling and energy efficiency. All told, this \$1.5 billion proposal is a comprehensive investment to improve and preserve California’s quality of life and public health.

A detailed breakdown of proposed spending is below:

**2017-18 Cap and Trade Spending Plan**  
**40% Discretionary Portion**  
(millions of dollars)

Investment Category	Program	Amount
Air Quality (diesel reduction, low carbon transportation)	Carl Moyer Program, AQIP	\$250
	Agricultural Diesel Engine Replacement & Upgrades	85
	Clean Vehicle Rebate Project	140
	Freight Hubs/Ports: Zero Emission Freight Equipment Pilot Commercial Deployment Projects	140
	Clean Buses and Trucks	180
	Enhanced Fleet Modernization Program, School Buses & Transportation Equity Projects	100
	<i>Subtotal, Air Quality</i>	<i>(\$895)</i>
Air Quality Related, Local Action	AB 617 State and Local Implementation Costs	\$12
	Technical Assistance to Community Groups	5
	Transformative Climate Communities	10
	<i>Subtotal, Air Quality-Related and Local</i>	<i>(\$27)</i>
Sustainable Agriculture	Methane Reduction	\$99
	Energy Efficiency	60
	Renewable Energy	6
	<i>Subtotal, Sustainable Agriculture</i>	<i>(\$165)</i>
Sustainable Forests	Fire Prevention and Healthy Forests	\$200
	Local Fire Response/Emergency Fire Protection	25
	<i>Subtotal, Sustainable Forests</i>	<i>(\$225)</i>
Short-Lived Climate Pollutants, Carbon Sequestration, Greening	Recycling Infrastructure	\$40
	Urban Forestry	20
	Urban Greening	26
	Wetlands Restoration	15
	<i>Subtotal, Short-Lived Pollutants, Sequestration, Greening</i>	<i>(\$101)</i>
Climate Adaptation & Resiliency, Research	Low Income Weatherization	\$18
	Natural Land Adaptation	20
	Coastal Adaptation	6
	Research	11
<i>Subtotal, Adaptation, Resiliency, Research</i>	<i>(\$55)</i>	
Off-the-top Accounting	SRA backfill (40% share of costs)	\$32
<b>Total</b>		<b>\$1,500</b>

**#CACleanAirInitiative**

###



Office of Governor  
**Edmund G. Brown Jr.**



FOR IMMEDIATE RELEASE:  
Saturday, September 16, 2017

Contact: Governor's Press Office  
(916) 445-4571

## **Governor Brown Signs Legislation**

SACRAMENTO – Governor Edmund G. Brown Jr. today announced that he has signed the following bills:

- AB 109 by Assemblymember Philip Y. Ting (D-San Francisco) – Budget Act of 2017.
- AB 129 by the Committee on Budget – Education finance.
- AB 130 by the Committee on Budget – Health and human services.
- AB 131 by the Committee on Budget – Taxation.
- AB 133 by the Committee on Budget – Cannabis Regulation.
- AB 134 by the Committee on Budget – Budget Act of 2017.
- AB 135 by the Committee on Budget – Transportation.

For full text of the bills, visit: <http://leginfo.legislature.ca.gov>

###

**Governor Edmund G. Brown Jr.**

State Capitol Building  
Sacramento, CA 95814

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September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Submitted via: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

Subject: Comments on the Draft Clean Air Action Plan (CAAP)

Dear Mr. Cannon and Ms. Tomley:

The Coalition for Renewable Natural Gas (RNG Coalition) thanks the Ports of Los Angeles and Long Beach for your efforts to update the Clean Air Action Plan (CAAP). We commend your ongoing leadership in pursuit of improving California's air quality by transitioning your fleets from diesel to cleaner burning domestic fuels. The RNG Coalition provided comments on the initial draft of the CAAP in February. Since that time, ICF, the University of California – Riverside (UCR), and others - including ourselves - have released findings detailing the environmental and economic benefits of Renewable Natural Gas (RNG). Those findings are summarized in the following comments that document:

1. RNG supply is and will be available to fuel port trucks and other vehicles in California;
2. RNG is the lowest carbon fuel available and will help the Ports and California fight climate change;
3. California benefits from the transition to ultra-low NOx engines powered by RNG;
4. Fueling with RNG will create high paying California jobs and improve the State's economy.

### **Who We Are**

The RNG Coalition shares your goal of cleaner air for all residents, and as such, we have commented on previous versions of the CAAP. We are a national non-profit industry association based in California that represents members from the entire value chain of renewable natural gas (RNG) production and distribution in North America. The RNG Coalition advocates for increased development, deployment, and utilization of RNG so that present and future generations will have access to this domestic, renewable, clean fuel and energy supply. Together, RNG Coalition member companies produce over 90% of the cellulosic biofuel generated annually under the Federal Renewable Fuel Standard (RFS), including 98% or more of the RNG transportation fuel registered under the program in each of the past three years.

### **RNG Transportation Fuel Supply Is and Will Be Available**

According to CARB, over 60% of the natural gas consumed as a vehicle fuel in California was RNG. LA Metro recently awarded a contract to begin using RNG for the Metro bus fleet. This new consumption will push RNG to over 80% of the market in California. RNG supply is available to meet 100% of the California market, plus all of the port trucks working in Los Angeles and Long Beach, plus expansion of RNG trucks throughout the state.

In our comments to the previous CAAP update, we responded to the notion raised by some stakeholders that there may not be adequate supply of RNG transportation fuel available in the near future to fuel the port authority's fleets. We responded by presenting data to the contrary, which consisted of RNG project and fuel production volume data submitted to the RNG Coalition directly by RNG producers throughout the country.

**The RNG industry is ready and able to supply the port authority's fuel needs.**

The RNG Coalition would like to take this opportunity to present you with updated primary source information on RNG volumes that industry companies are planning to produce from a growing number of RNG project facilities in the United States.

The table below consists of primary source data on RNG production. This information is derived from data communicated to RNG Coalition staff directly by Executives of the companies that produce our country's RNG supply. The data represent what these companies are planning to produce in 2017 and in future years.

Together, this data comprises the best information available on the upcoming production of RNG transportation fuel. RNG Coalition staff updates the data multiple times each year to communicate it to the U.S. Environmental Protection Agency (EPA) as a primary data source for the annual Renewable Volume Obligation (RVO) rule under the Renewable Fuel Standard. This data is recent. It was updated in August and submitted to the EPA on August 31<sup>st</sup> as part of public comments to the 2018 RVO Proposed Rule.

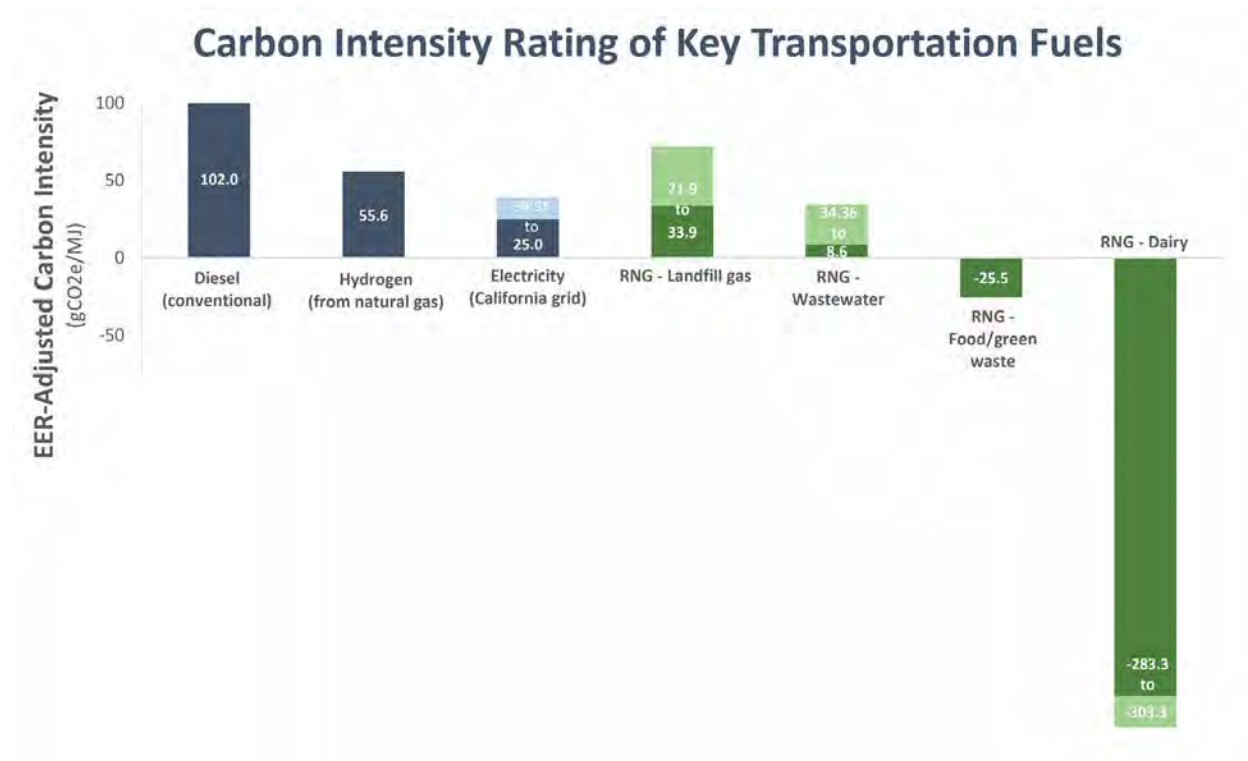
Year	RNG Transportation Fuel Production (EGE / DGE)	Total RNG Transportation Fuel Production Facilities
<b>2015 (actual)</b>	<b>140 million / 81.2 million</b>	<b>26</b>
<b>2016 (actual)</b>	<b>176 million / 102.1 million</b>	<b>37</b>
<b>2017 (planned)</b>	<b>252 million / 146.2 million</b>	<b>61</b>
<b>2018 (planned)</b>	<b>417 million / 241.9 million</b>	<b>76</b>

Currently, the RNG industry is on track to produce approximately 146 million diesel gallon equivalents (DGE) of RNG by the end of 2017. Accompanying the RNG Coalition's comments to EPA's 2018 RVO Proposed Rule, the RNG Coalition delivered 69 signed affidavits from RNG production companies. These companies are involved in adding 32 RNG projects that are under construction, recently completed, and/or pending final pathway approval by the EPA. These RNG projects will make an additional volume of 95.7 million DGE of RNG available to the transportation fuel market in 2018, for a total transportation fuel supply of nearly 242 million DGE of RNG. The planned increases in RNG production volume alone are enough to fuel the entire fleet of Los Angeles and Long Beach port trucks. This does not include nearly 47 million DGE of RNG that is still delivered to various power markets across North America. As these power

contracts expire, it is very likely that some if not all of this volume will be rerouted to the transportation fuel market as well.

**RNG is the Lowest Carbon Transportation Fuel Available and Will Help the Ports and California Fight Climate Change**

RNG has a lower Carbon Intensity (CI) value than diesel fuel, and depending on the feedstock, RNG can have a lower CI value than electricity. Typical RNG feedstocks include landfill gas, wastewater, food/green waste, and dairies, and when not used to produce RNG, these feedstocks go to landfills, are flared or are otherwise wasted. The ports can achieve unparalleled carbon reductions by powering their trucks with RNG. As shown in the graphic below, two pathways (food/green waste and dairies) have subzero CI values. The Fair Oaks Dairy is a model for RNG production from dairy waste; in June, their RNG project received a CI value of -280 from the Air Resources Board. The dairy produces nearly 2 million DGE of RNG from 11,500 cows and power their fleet of 42 trucks 100% with RNG,<sup>1</sup> and their model is being replicated by others.



**California Benefits from a Transition to Ultra-low NOx Engines Powered by RNG Transportation Fuel**

The Ports of the Los Angeles and Long Beach have the opportunity to power 100% of the port trucks with RNG. By 2023, area port employees and LA metro residents can realize the environmental and clean air benefits of 12,000 port trucks that run on clean burning renewable natural gas engines and 120 million DGE of RNG fuel per year.

<sup>1</sup> <http://energy-vision.org/>

The benefits of using RNG in heavy duty vehicles are strengthened when those vehicles are equipped with Low NOx engines. According to research completed by UCR's Center for Environmental Research & Technology (CE-CERT), Near Zero engines demonstrated decreased emissions at lower speed duty cycles; in the port drayage application, emissions were found to be 0.002 g/bhp-hr – 90% below the optional low NOx standard and 99% lower than the 2010 emission standard. Further testing also indicated that typical drayage truck operations produce exhaust temperatures too low for the diesel emission control systems to effectively reduce NOx emissions more than 70% of the time. Testing of OBDII-compliance diesel trucks in transient duty cycles characteristic of surface street driving yielded emission levels four times greater than the certification.

CE-CERT's testing of the Near Zero RNG engine found emissions for every duty cycle to be far less than the Air Resources Board's optional low NOx standard. Testing indicated that trucks with the Near Zero engine operating in short-drive applications and in congested areas had emissions that even improved with more demanding duty cycles.

### **Fueling with RNG will Create California Jobs and Improve the State's Economy**

RNG transportation fuel makes up over 60% of all the transportation fuel powering California's natural gas vehicles. This number is anticipated to increase to 90% by 2018 according to a study recently completed by the University of California, Davis. California is on the cusp of an RNG project development boon that will result in further growth in RNG production not included in the supply volumes presented above. Through working closely with California's natural gas pipeline utilities, RNG industry companies are reaching agreements to inject RNG into the state's pipeline network. Just last month, SoCalGas introduced a downloadable toolkit for renewable gas producers and developers interested in interconnection projects.

Considering California's wealth of organic agricultural waste, MSW, and wastewater resources, many other projects will follow, sustainably using the state's wastes to produce RNG in-state. California produces enough organic waste to generate 2 billion gallons of low carbon transportation fuel. Converting organic waste to RNG creates up to 6 times as many jobs as fossil fuels, most notably in construction, manufacturing, maintenance, engineering, and environmental services.

Using RNG trucks throughout California can create 130,000 high paying jobs, with an average income of \$68,500, which is more than twice the median salary of California's current workers. Dedicated investments RNG projects would generate \$14 billion in economic activity in by 2030, with 23,000 jobs and \$2 billion in southern California alone. These economic benefits are described further in a recent study we are attaching to these comments, which was authored by ICF and includes research completed by the University of California - Davis, the American Gas Foundation, and the U.S. Department of Energy.

The RNG industry is positioned to continue ramping up production in the coming years. RNG projects being developed and under development are on track to increase the number of facilities producing RNG transportation fuel to over 75 in total by the start of 2019, and to more than double the domestic supply of RNG fuel between 2016 and the end of 2018. Increasingly fueling the port fleets with RNG and Near Zero emission engines provides GHG benefits on par or better than any other fueling method available. Additionally, a further commitment to fueling port fleets with RNG provides an opportunity to contribute

to job creation in California and growth of the state's economy through new in-state RNG project development.

We appreciate the opportunity to submit comments for the CAAP regarding the economic benefits and supply of RNG. Should you have any questions please contact me at (916) 588-3033 or at [marcus@rngcoalition.com](mailto:marcus@rngcoalition.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Marcus D. Gillette". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Marcus D. Gillette  
Director of Public & Government Affairs  
Coalition for Renewable Natural Gas

cc:

Gene Seroka, Executive Director, Port of Los Angeles

Mario Cordero, Executive Director, Port of Long Beach

Rick Cameron, Managing Director Environmental Affairs & Planning, Port of Long Beach

Enclosures:

ICF RNG Jobs Study

ICF RNG Jobs Study Infographic

ICF RNG Jobs Study Press Release

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# Economic Impacts of Deploying Low NOx Trucks fueled by Renewable Natural Gas

Final

May 2017

Submitted to:  
California Natural Gas Vehicle Coalition  
Coalition for Renewable Natural Gas

Submitted by:  
ICF

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## Executive Summary

California is dealing with a challenge that is three-fold: reduce air quality pollutants, cut greenhouse gas emissions that drive climate change and reduce petroleum consumption. Heavy-duty truck transportation is a major contributor to the issues that comprise this challenge: They are a major source of criteria air pollutant emissions and greenhouse gas emissions; and more than 95 percent of the trucks on California roads currently use petroleum-based diesel fuel. Despite progress towards addressing these challenges, more aggressive strategies are required to achieve California’s overlapping objectives. Renewable natural gas (RNG) produced in California and used in heavy-duty trucks outfitted with low NOx engines is one of these strategies.

The potential for the combination of low NOx trucks powered by RNG presents a compelling economic opportunity, and represents one of the few opportunities to develop a sustainable and robust alternative transportation fuel industry in California. ICF employed IMPLAN, an input-output model, to quantify the economic impacts of deploying low NOx natural gas trucks fueled by California produced RNG.

- This analysis considers low NOx natural gas trucks deployed through 2030 in various applications and vehicle classes. The number of trucks considered in the analysis is linked to one of two strategies:
  - Low NOx trucks deployed at the San Pedro Bay Ports in Southern California.
  - Low NOx trucks deployed in the California Air Resources Board’s mobile source strategy.
- The California renewable natural gas production facilities are based on an illustrative portfolio of projects from landfills, wastewater treatment plants, dairies, and biomass resources (such as agricultural residues or forestry and forest product residues). ICF assumed that renewable natural gas is produced and upgraded for pipeline injection, and ultimately used as a transportation fuel.

Table 1 below summarizes the results of our analysis.

**Table 1. Economic Contributions of Low NOx Trucks using RNG Produced in California**

Economic Parameter	Port Trucks	Statewide Low NOx RNG Trucks, Market Share			Aggressive Scenario
		25%	50%	75%	
Trucks Deployed	17,000	172,000	344,000	516,000	516,000
RNG Produced (M DGE)	174 MDGE	526 MDGE			1,910 MDGE
Capital Expenditures (\$M)	\$2,703	\$15,718	\$27,326	\$38,934	\$43,163
Total Employment	23,459	80,981	107,594	134,206	233,892
Jobs Multiplier	1.99	2.02	2.03	2.03	2.08
Income per Worker	\$68,960	\$68,830	\$68,660	\$68,560	\$67,950
Total Value Added (\$M)	\$2,512	\$8,657	\$11,483	\$14,308	\$24,618
Output Multiplier	1.83	1.82	1.81	1.80	1.84

In the statewide scenario, where 172,000—516,000 low NOx natural gas trucks are deployed and more than 500 million diesel gallon equivalents of RNG is produced in California, we observe the following:

- The deployment of natural gas trucks, natural gas fueling infrastructure, and California RNG production will produce a total of 81,000—134,000 cumulative jobs to California’s economy from 2018—2030.
- These jobs have an expected labor income of nearly \$68,500 per job created, more than twice the median salary in California today. These jobs are created in sectors such as construction, fabrication and manufacturing, engineering services, waste management, and service industries (e.g., restaurants).
- For every job created through investment in low NOx natural gas trucks, natural gas fueling infrastructure, and renewable natural gas production facilities, about 2.0 jobs are created in supporting industries (indirect) and via spending by employees that are directly or indirectly supported by these industries (induced).

ICF’s economic modeling results provide quantitative insights into the potential for low NOx trucks powered by renewable natural gas produced in California. It is important to understand how this opportunity fits into a broader context related to economic growth and alternative transportation fuel production and consumption. Most importantly, there are few comparable opportunities to develop a robust alternative transportation fuel production industry in California. Low NOx trucks powered by California-produced renewable natural gas have the potential to displace 1 billion diesel gallon equivalents annually. This is the type of aggressive strategy that will help California meet the challenge of reducing air quality pollutants, greenhouse gas emissions, and consumption of petroleum-based fuels, while also making a significant contribution to a growing economy.

## I. Introduction

California is dealing with a challenge that is three-fold: reduce air quality pollutants, including pollutants that cause smog<sup>1</sup> and toxic air contaminants; reduce greenhouse gas (GHG) emissions that drive climate change;<sup>2</sup> and reduce petroleum consumption.<sup>3</sup> Heavy-duty truck transportation is a major contributor to criteria air pollutant emissions (including diesel particulate emissions), and GHG emissions; and more than 95 percent of the trucks on California roads currently use petroleum-based diesel fuel. Progress has been made through regulatory action and technology advancement: New standards have helped reduce criteria pollutant emissions from diesel engines and recently promulgated federal phase two standards for medium- and heavy-duty vehicles will improve fuel efficiency and reduce GHG emissions. Despite these advances, more aggressive strategies are required to achieve California's overlapping objectives. In fact, South Coast Air Quality Management District has determined that the South Coast Air Basin will fail to meet federal health-based air quality standards even if every diesel truck meets the US Environmental Protection Agency's (EPA) most restrictive standard for diesel truck emissions.

Renewable natural gas used in heavy-duty vehicles can significantly reduce criteria air pollutant emissions, GHG emissions, and petroleum consumption. With regard to criteria air pollutants, the natural gas industry has been bolstered by the certification of the Cummins Westport ISLG engine at levels 90 percent below the current NOx limit of 0.2 g/bhp-hr—a standard set by the US EPA. This certification achieves compliance with the California Air Resources Board's (CARB) optional low NOx standard of 0.02 g/bhp-hr. Compliance with 0.02 g/bhp-hr is referred to as "low NOx" in this study. Cummins Westport is set to release a larger engine, the ISX12G, with similar prospects for low NOx certification by January 2018. Further, a recent report from University of California Riverside<sup>4</sup> indicates that these engines are actually out-performing their certification standards during a full range of duty cycles; consider this in contrast to previous findings that heavy-duty diesel trucks are emitting *higher* levels of NOx than their certification standards in the same duty cycles.<sup>5</sup>

The majority of research shows that conventional natural gas use in trucks can reduce GHG emissions by 10—20 percent.<sup>6</sup> More recently, however, the GHG reduction potential of natural gas as a transportation fuel has been amplified by the emergence of renewable natural gas (RNG, biomethane or upgraded biogas). RNG can be produced by capturing methane (CH<sub>4</sub>)—a short lived climate pollutant that

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<sup>1</sup> Both the San Joaquin Valley and South Coast Air Basin are working to attain federal health-based air quality standards for ozone in 2023 and 2031.

<sup>2</sup> Senate Bill 32 (Pavley, 2016) legislates a 2030 GHG emissions reduction target of 40 percent below 1990 levels.

<sup>3</sup> Governor Brown has established the goal of reducing petroleum consumption by 50 percent by 2030 as one of his pillars of climate change. See <https://www.arb.ca.gov/cc/pillars/pillars.htm>.

<sup>4</sup> Johnson, K.; Jiang, Y.; and Yang, J. Ultra-Low NOx Natural Gas Vehicle Evaluation: ISL G NZ, November 2016. Available online at [http://www.cert.ucr.edu/research/efr/2016%20CWI%20LowNOx%20NG\\_Finalv06.pdf](http://www.cert.ucr.edu/research/efr/2016%20CWI%20LowNOx%20NG_Finalv06.pdf).

<sup>5</sup> Miller, W.; Johnson, K.; Durbin, T.; and Dixit, P. In-Use Emissions Testing and Demonstration of Retrofit Technology, Final Report Contract #11612 to SCAQMD December 2013.

<sup>6</sup> The California GREET model used by the California Air Resources Board in the regulation of the Low Carbon Fuel Standard Program reports a default carbon intensity of fossil compressed natural gas of about 78 g/MJ. After accounting for an EER of 0.9 for spark-ignited engines compared to diesel engines, and a carbon intensity of 102 g/MJ for diesel fuel, fossil CNG yields a benefit of 15%.

has a global warming potential 84 times higher than carbon dioxide on a 20-year time scale.<sup>7</sup> The methane that is captured comes from organic waste resources, and would otherwise be flared or escape fugitively into the atmosphere. RNG can also be made from the biogas produced from the gasification of organic waste and then “methanized” to convert that raw biogas to biomethane.

RNG currently accounts for about 60 percent of the natural gas used in the transportation sector in California. The majority of this RNG is coming from out-of-state, and is captured from landfills. In California, several projects focused on converting organic waste to transportation fuel have been developed in the past few years, including projects in Riverside County, Sacramento, and South San Francisco. These projects are converting food and yard waste, food processing waste, landfill gas and other organic material to RNG that is used to power garbage trucks, school buses, transit buses and other heavy-duty vehicles. The recent passage of SB 1383 (Lara, 2016) and approval of CARB’s Short Lived Climate Pollutant (SLCP) Strategy,<sup>8</sup> which are focused on reducing the emissions of black carbon (soot) and methane, and fluorinated gases, positions California over the next 10—15 years to harness significant in-state resources to capture biogas and produce RNG for transportation fuel and pipeline injection.

The potential for the combination of low NOx trucks powered by RNG presents a compelling economic opportunity for California. ICF reviewed a variety of deployment scenarios to assess the economic impacts in California, as outlined in the following subsections. This analysis focuses on the production of RNG for use as a transportation fuel; which includes upgrading and conditioning the fuel for injection into the common carrier pipeline. ICF notes that RNG does not have to be injected into the pipeline, and there are cases where the fuel is used on-site. There are also cases where the RNG is trucked from the production facility to the end-use customer without being injected into or transported via a pipeline. However, this report considers a more expanded role of RNG as a transportation fuel, which we assume will ultimately require significant volumes be injected into the pipeline for delivery to natural gas trucks in various applications around the entire state.

## Low NOx Truck Deployment

ICF developed multiple scenarios to illustrate the impacts of low NOx RNG truck deployment in California, linked to two sources:

- **Port Truck Scenario.** ICF was provided a low NOx RNG truck deployment scenario at the San Pedro Bay Ports, courtesy of the California Natural Gas Vehicle Coalition (CNGVC).<sup>9</sup>
- **Statewide Scenarios.** ICF reviewed the truck populations and corresponding fuel consumption of the mobile source strategy that CARB developed for the State Implementation Plan (SIP).<sup>10</sup> More

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<sup>7</sup> Methane has a global warming potential 25 times higher than carbon dioxide on a 100-year time scale.

<sup>8</sup> CARB, Short-Lived Climate Pollutant Reduction Strategy, March 2017. Available online: [https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final\\_slcp\\_report.pdf](https://www.arb.ca.gov/cc/shortlived/meetings/03142017/final_slcp_report.pdf)

<sup>9</sup> Advanced Clean Trucks (ACT) Now Plan, A Plan for Near-term Clean Air, Economic Investment and Job Creation, and Increased Port Competitiveness, available online: [http://cngvc.org/wp/wp-content/uploads/2017/02/ACT-Now-Plan-FINAL\\_02-17-2017.pdf](http://cngvc.org/wp/wp-content/uploads/2017/02/ACT-Now-Plan-FINAL_02-17-2017.pdf)

<sup>10</sup> CARB, Mobile Source Strategy, May 2016. Available online at: <https://www.arb.ca.gov/planning/sip/2016sip/2016mobsrsrc.pdf>.

specifically, ICF retrieved the truck populations by vehicle class (linked to EMFAC) from the VISION modeling.<sup>11</sup> In that analysis, low NOx trucks are deployed in 32 different vehicle classes, using gasoline, diesel, and natural gas—about 900,000 trucks in total, consuming about 3.34 billion diesel gallon equivalents (DGE) of fuel in 2030. Of these low NOx trucks, about 4.5 percent are identified as natural gas trucks, consuming an equivalent percentage of total fuel (on an energy equivalent basis). ICF worked with stakeholders to identify the vehicle classes for which natural gas vehicles could capture a larger share of the truck market. This subset of truck classes totals about 690,000 trucks and 2.73 billion DGE by 2030. ICF developed scenarios in which low NOx natural gas trucks accounted for 25 percent, 50 percent, and 75 percent of this market.

ICF also estimated the new natural gas fueling infrastructure that would be required to support the expansion of the natural gas truck market. We assumed that the average station would manage a throughput of about 1—1.5 million DGE of fuel annually, with that number increasing with the market to account for saturation of stations and the potential for larger capacity stations to come online. ICF estimates that 130 new fueling stations and between 500—1,500 stations would be required in the Port Truck Scenario and each of the Statewide Low NOx Truck Scenarios, respectively. Consider, by contrast, that as of 2015 there were more than 4,000 retail diesel outlets in California selling about 1.6 billion gallons of diesel fuel; these include stations that have only 1—2 diesel pumps and are not necessarily dedicated diesel retail fueling outlets. It also does not account for non-retail outlets (which dispense an additional 1.2 billion gallons of diesel fuel according to the Board of Equalization’s (BOE) taxable sales estimates).

Table below summarizes the number of low NOx natural gas trucks deployed in each of the scenarios considered, the fuel consumption (in units of million DGE, MDGE), and additional fueling stations required.

**Table 2. Low NOx Natural Gas Truck Deployment Scenarios**

Truck Deployment Scenario	Statewide Market Share of Low NOx Trucks	No. of Trucks	Fuel Consumption	Additional CNG Fueling Stations
Port Truck Scenario	n/a	17,000	174 MDGE	130
Statewide Truck Scenarios	Low	172,000	680 MDGE	512
	Medium	344,000	1,365 MDGE	1,023
	High	516,000	2,047 MDGE	1,535

## RNG Production in California

RNG is produced over a series of steps depending on the type of organic waste being processed. At landfills and wastewater treatment facilities, the raw biogas must be collected and purified for pipeline injection or on-site transportation fuel use. Food, yard, construction, and wood waste must be collected and separated from recyclables and other parts of the urban waste stream, delivered to an anaerobic

<sup>11</sup> *Ibid.*

digestion or gasification facility,<sup>12</sup> then purified and compressed for on-site fueling or injection into the pipeline for transmission and delivery to a dedicated end-use customer. Dairy, agricultural, and forest waste must also be collected and converted to biogas through anaerobic digestion or gasification and then either purified or converted to biomethane for use on-site or injection into the pipeline. There are several studies that have assessed the availability of in-state, renewable waste streams and feedstock resources that can be developed to produce RNG. These studies typically consider RNG production from feedstocks such as landfill gas (LFG), wastewater treatment plants (WWTPs), municipal solid waste (MSW), animal manure (e.g., from dairies), agricultural residues, and forestry and forestry product residues. Table 3 below summarizes the RNG production potential from various feedstocks (shown in units of MDGE) from multiple studies, including work by the University of California, Davis,<sup>13</sup> the American Gas Foundation (AGF),<sup>14</sup> and the Department of Energy's Billion Ton Study (DOE BT).<sup>15</sup>

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<sup>12</sup> Biomass-to-gas conversion takes place via anaerobic digestion or thermal gasification. Anaerobic digestion is the process whereby microorganisms break down organic material in an environment without oxygen, and the gaseous products of that process contain a large fraction of methane and carbon dioxide. Thermal gasification describes a broad range of processes whereby carbon-containing feedstocks are converted into a mixture of gases referred to as synthetic gas or syngas. The process occurs at high temperatures (650—1,350 °C) and varying pressures.

<sup>13</sup> An Assessment of Biomass Resources in California, 2013 DRAFT for the California Energy Commission under Contract 500-11-020, March 2015. Available online: [http://biomass.ucdavis.edu/files/2015/04/CA\\_Biomass\\_Resource\\_2013Data\\_CBC\\_Task3\\_DRAFT.pdf](http://biomass.ucdavis.edu/files/2015/04/CA_Biomass_Resource_2013Data_CBC_Task3_DRAFT.pdf). Additional information from Decarbonizing the Gas Sector: Why California Needs a Renewable Gas Standard, Bioenergy Association of California, November 2014. Available online: [http://www.bioenergyca.org/wp-content/uploads/2015/03/BAC\\_RenewableGasStandard\\_2015.pdf](http://www.bioenergyca.org/wp-content/uploads/2015/03/BAC_RenewableGasStandard_2015.pdf)

<sup>14</sup> American Gas Foundation (AGF), The Potential for Renewable Natural Gas: Biogas Derived from Biomass Feedstocks and Upgraded to Pipeline Quality (September 2011).

<sup>15</sup> U.S. Department of Energy (DOE), Billion Ton Update: Biomass Supply for a Bioenergy and Bioproducts Industry.

**Table 3. Summary of RNG Production Potential in California**

Feedstock	RNG Production Potential in CA (MDGE)				
	UC Davis	AGF <sup>a</sup>		DOE BT <sup>b, c</sup>	
		low	high	low	high
Agricultural Residue	243	33	83	241	264
Animal Manure	152	68	228	18	81
Fats, Oils and Greases	50	n/a	n/a	n/a	n/a
Forestry and Forest Product Residue	635 <sup>d</sup>	38	96	72	118
Landfill Gas	409	223	446	n/a	n/a
MSW, food, leaves, grass	95	61	183	95	111
MSW, lignocellulosic	313			81	139
WWT Gas	59	0.3	0.8	n/a	n/a
<b>Total Potential</b>	<b>1,956</b>	<b>424—1,306</b>		<b>507—712</b>	

a. The low and high values in the AGF study represent what the study refers to as *non-aggressive* and *aggressive* scenarios. The low/non-aggressive scenario assumes roughly 5-25% (depending on resource) of biomass is processed into RNG. The high/aggressive scenario assumes 15-75% (depending on resource) of biomass is processed into RNG.

b. The DOE BT study did not estimate yields of biogas. The focus of the study is on the *feedstock* rather than the *finished fuel*. ICF used conversion efficiencies from the UC Davis work to estimate the tBtu of finished fuel (in this case, biogas) based on the feedstock potential reported in the DOE BT study.

c. The low and high values from the DOE BT study represent the available feedstock assuming a price of \$40/ton in 2015 and a price of \$80/ton in 2030.

d. It is highly likely that this estimate is considerably lower than what might be available today. This estimate was developed prior to California’s current Tree Mortality Crisis. Consider, for instance, that in November 2016 the US Forest Service confirmed that the number of dead trees in California since 2010 now exceeds 100 million.

ICF also considered pathways outlined via the SLCP Strategy prepared by CARB; although the SLCP Strategy is not explicitly a resource assessment, it provides a useful overview of various paths forward for RNG production in California. For instance, the strategy document outlines pathways for the anaerobic digestion of dairy manure and municipal solid waste:

- For dairy manure, the SLCP Strategy envisions two pathways: de-centralized or centralized production of RNG. In the former, it is assumed that around 540 dairies install digesters on-site for RNG production and subsequent pipeline injection. In the latter, it is assumed that the feedstock (i.e., manure) from the same 540 dairies is transported to 55 centralized RNG production facilities (referred to as clusters) in the state, where it is subsequently conditioned for and injected into the nearest common carrier pipeline.
- For MSW, the SLCP Strategy outlines a strategy to divert 4.7 million wet tons annually of organic waste to 47 new facilities (processing 100,000 tons per year at each facility).

Given the many opportunities for in-state RNG production, ICF worked with the project team to develop an illustrative in-state RNG production profile that reconciles total production potential with what is likely to actually be produced, based on consideration of factors such as criteria for developer interest, including the ability to obtain project financing. The project team agreed upon an illustrative scenario whereby RNG was produced in California from 50 landfills, 100 wastewater treatment plants, and 200



dairies. It is important to emphasize that this scenario is illustrative and not intended to be a definitive portfolio of RNG projects in California. ICF also modeled three scenarios from the SLCP Strategy document: RNG production from centralized manure management at dairies, decentralized manure management at dairies, and the anaerobic digestion of the organic fraction of MSW at new facilities.<sup>16</sup>

Lastly, ICF notes that the next generation of RNG production facilities will likely focus on thermal gasification of biomass e.g., agricultural residue or forestry and forest product residues. While these feedstocks account for a significant portion of the long-term potential for RNG production in California, they are not explicitly considered in the illustrative in-state RNG production profile nor the scenarios taken from SLCP Strategy. There remains considerable uncertainty surrounding the deployment timeline of thermal gasification facilities designed to produce synthetic gas suitable for upgrading to vehicle fuel. There are several smaller thermal gasification projects deployed in California, typically for use in electricity generation or combined heat and power applications. The California Energy Commission and Placer County have supported a successful demonstration project to gasify forest waste, and then converted the raw biogas to transportation fuel.<sup>17</sup> However, there are not currently any thermal gasification facilities that are dedicated to producing RNG as a transportation fuel. For illustrative purposes, ICF considered the economic impacts of deploying one thermal gasification facility capable of processing 1,000 tons per day (tpd) of biomass.

Table 4 below summarizes the RNG production profiles considered in the economic analysis. The far right column includes the maximum potential for each feedstock, based on the studies reviewed previously in Table 3.

**Table 4. Scenarios Considered for RNG Produced in California**

Scenarios	Feedstock & Description	No. of Digesters	RNG Produced	RNG Potential, Maximum
Illustrative In-State RNG Production Profile	Landfill Gas	50	224 MDGE	446 MDGE
	Wastewater Treatment Plants	100	248 MDGE	467 MDGE
	Dairies	23	54 MDGE	228 MDGE
SLCP Strategy	Dairies, Centralized Manure Management	55	110 MDGE	228 MDGE
	Dairies, Decentralized Manure Management	543		228 MDGE
	MSW, Organic Fraction	47	147 MDGE	408 MDGE
Thermal Gasification	Illustrative, 1,000 tpd processing capacity	1	19 MDGE	878 MDGE

<sup>16</sup> These scenarios are not included in this report.

<sup>17</sup> California Energy Commission, Grant Agreement Number ARV-10-023. More information available online at <http://www.energy.ca.gov/drive/projects/ARV-10-023.html>

## II. Economic Modeling Methodology

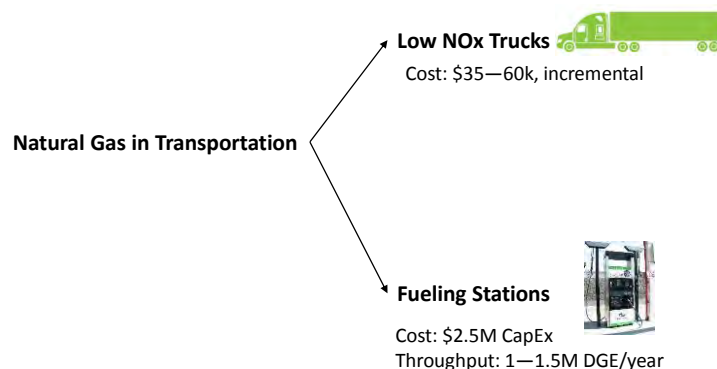
### IMPLAN Model Overview

In this analysis, the economic impacts were calculated using the IMPLAN<sup>18</sup> (IMpact analysis for PLANning), Version 3.0 input-output model. IMPLAN is developed and maintained by the Minnesota IMPLAN Group. The IMPLAN model is a static input-output framework used to analyze the effects of an economic stimulus on a pre-specified economic region; in this case, the State of California. IMPLAN is considered static because the impacts calculated by any scenario by the model estimate the indirect and induced impacts for one time period (typically on an annual basis). More information is available in the [Appendix](#) regarding the IMPLAN model.

### Modeling Inputs

ICF considered the following cost elements associated with the deployment of low NOx natural gas trucks and in-state RNG production, as show in Figure 1 and Figure 2 below. In the case of natural gas, we included the incremental costs of purchasing a low NOx NG truck relative to a conventional diesel truck, ranging from \$35,000—60,000 per truck. We also accounted for the capital expenditures required to deploy compressed and liquefied natural gas fueling stations with a throughput of 1—1.5 million DGE annually and a cost of \$2.5 million.

**Figure 1. Natural Gas: Truck and Fueling Station Investments Considered**

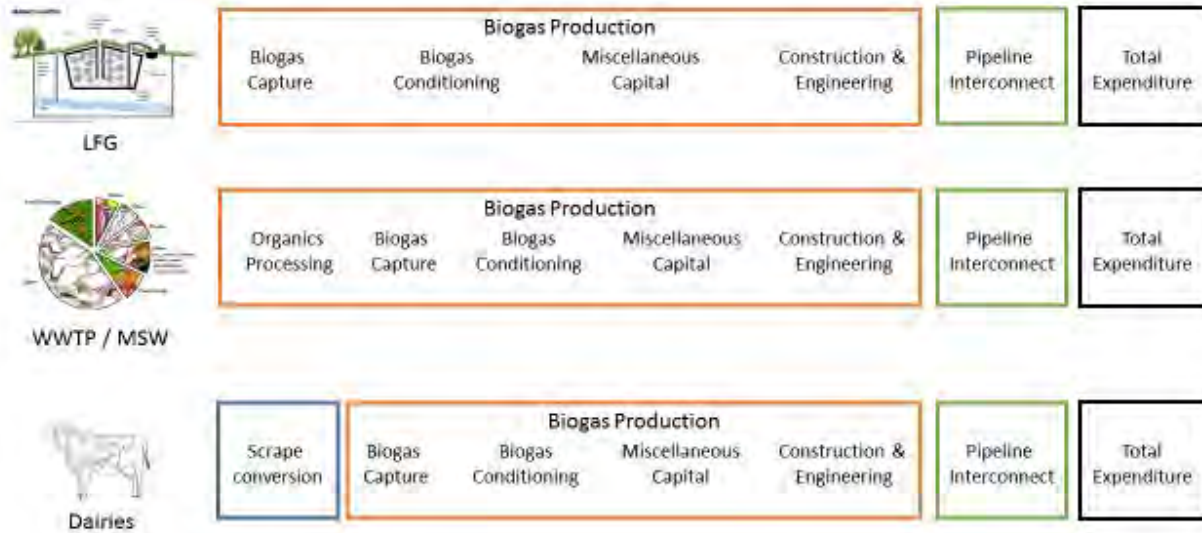


In the case of RNG production, we accounted for the multiple expenditures including digester equipment, biogas conditioning equipment, miscellaneous support equipment, and construction/engineering costs; as well as pipeline for utility interconnection. In the case of dairy digesters, we also estimated the capital expenditures associated with scrape conversion, a mitigation measure identified in the SLCP Strategy document. Scrape conversion is a dairy manure management strategy, yielding lower methane emissions than the most common practice today, which is lagoon storage of flushed manure. CARB reports the cost for conversion at \$350 per milking head.

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<sup>18</sup> IMPLAN was developed by the Minnesota IMPLAN Group (MIG). There are over 1,500 active users of MIG databases and software in the United State as well as internationally. They have clients in federal and state government, universities, as well as private sector consultants. More information is available at [www.implan.com](http://www.implan.com).

**Figure 2. In-State RNG Production Steps Considered in Analysis**



In each case, we also included the annualized cost of operating and maintaining refueling stations, digester-related equipment, and pipelines.

ICF estimated the costs for each RNG pathway by developing illustrative facilities for each feedstock type (as shown in Table 5 below). For landfills, we reviewed data from the Landfill Methane Outreach Program (LMOP) and developed a profile of California landfills based on the amount of biogas captured. For wastewater treatment plants, we reviewed facility data available via the US EPA to estimate the amount of biogas throughput at each facility. Lastly, for dairy digesters, we developed a cluster-approach akin to the one developed for the SLCP Strategy, whereby dairies cluster to develop centralized manure management systems to achieve a larger biogas production scale. Table 5 below includes the assumed biogas throughput for illustrative facilities by RNG production facility type (four landfills, three wastewater treatment plants, and four dairy digesters), in units of standard cubic feet per minute (SCFM).

**Table 5. Illustrative RNG Production Facilities Considered, by Feedstock Type**

Feedstock Type	Illustrative Facility			
	A	B	C	D
<b>Landfill Gas</b>				
Throughput (SCFM)	840	1,680	2,880	4,800
Share of Facilities	35%	25%	15%	25%
<b>WWTPs</b>				
Throughput	525	1,167	2,917	n/a
Share of Facilities	40%	50%	10%	n/a
<b>Dairy Digesters</b>				
Throughput	615	910	1,035	1,320
Share of Facilities	20%	35%	40%	5%

ICF developed the modeling inputs on a modular basis, so that the results could be considered in different combinations. In order for this modular approach to apply, ICF tested and confirmed the following two hypotheses.

- First, ICF assumed that the IMPLAN model outputs would scale linearly with model inputs.
- Second, ICF assumed that the IMPLAN model outputs do not have any non-linear interactions resulting from combining truck deployment scenarios and RNG production scenarios.

ICF also considered potential negative impacts to the refinery industry. Although reducing petroleum consumption can correlate with improved energy independence, security and increased fuel diversity, decreased petroleum consumption will also have direct negative impacts on the refining industry. ICF broadly categorizes these negative impacts into two areas: 1) lost refinery margin and 2) reduced refinery margins as a result from having to export product. To estimate the impacts, ICF assumed that there were lost margins on 50 percent of those crude runs that are assumed to be displaced entirely as a result of the natural gas consumption linked to each scenario.<sup>19</sup> ICF assumed that the remaining 50 percent of crude runs representing the reduction in gasoline and diesel consumption in California are exported, rather than displaced entirely. For these exports, ICF assumed a corresponding decrease in revenue in the export markets because of increased freight costs and competitiveness on pricing.<sup>20</sup>

<sup>19</sup> These margins were estimated based on an ICF analysis of the 3-2-1 crack spread for California-based refiners (estimated at about \$15/barrel)

<sup>20</sup> ICF estimates this at a cost of \$5/barrel.

### III. Economic Impacts of Deploying Low NOx Trucks Fueled by RNG Produced in California

The economic impacts of low NOx natural gas truck deployment and RNG production are characterized by employment, labor income, value added, and industry output impacts.

- **Employment** is reported in terms of annualized job-years. The employment numbers are broken down by direct, indirect, and induced. We also present an employment metric referred to as a **jobs multiplier**, which is the sum of job-years (included direct, indirect, and induced) divided by the direct job-years. This is an indicator of the type of employment activity statewide that is generated by investment in a technology. We also present **labor income** and **labor income per worker**. The latter is a coarse estimate of the value of jobs created by the corresponding investment. Lastly, we report the estimated number of jobs (not job-years) created per RNG production facility developed in California.
- **Economy-wide Impacts.** We present several metrics measuring the impacts to California's economy, including value added and industry output.
  - **Value Added** measures the value of goods and services and is a measure comparable to net measurements of output such as gross state product (GSP).
  - The **output multiplier** mirrors the **jobs multiplier** and represents the total industry activity (including direct, indirect, and induced) divided by the direct industry activity. This is an indicator of the type of industry activity statewide that is generated by investment in a technology.

Table 6 below summarizes the results for the combination of the various truck scenarios—port trucks and 25 percent, 50 percent, and 75 percent of the low NOx truck market—with the Illustrative California RNG Production Profile (with 50 landfills, 100 WWTPs, and 200 dairies). For the Port Truck Scenario, the Illustrative California RNG Production Profile was scaled to match the renewable natural gas required to fuel the port trucks.

**Table 6. Summary of Economic Impacts: Low NOx RNG Trucks using California Produced RNG**

Economic Parameter	Port Trucks	Statewide Low NOx RNG Trucks, Market Share		
		25%	50%	75%
Capital Expenditures (\$Millions)	\$2,703	\$15,718	\$27,326	\$38,934
Trucks & Fueling Infrastructure	\$1,348	\$11,608	\$23,216	\$34,824
RNG Production	\$1,355	\$4,109		
<i>Landfill gas</i>	\$206	\$625		
<i>WWTP</i>	\$805	\$2,442		
<i>Dairy Digesters</i>	\$344	\$1,042		
Employment (job-years)				
<i>Direct</i>	11,802	40,051	53,062	66,072
<i>Indirect</i>	4,634	16,723	22,438	28,153
<i>Induced</i>	7,023	24,207	32,094	39,980
Total	23,459	80,981	107,594	134,206
Jobs Multiplier	1.99	2.02	2.03	2.03
Labor Income (\$M)	\$1,618	\$5,574	\$7,387	\$9,201
Income per Worker	\$68,960	\$68,830	\$68,660	\$68,560
Jobs/Digester	26	26		
Statewide Activity				
Total Value Added (\$M)	\$2,512	\$8,657	\$11,483	\$14,308
Output Multiplier	1.83	1.82	1.81	1.80
The values are shown as cumulative over the analysis period (2018-2030). ICF notes that by reporting these numbers cumulatively, we may be double-counting jobs. Consider, for instance, a single job created for years 2026—2030 as a result of economic activity modeled in the analysis. That single job will yield 5 job-years, one for each year in the analysis.				

It is difficult to compare job creation across industries, especially without knowing in explicit detail the input parameters and boundary conditions applied in other studies utilizing input-output models. For instance, one study notes that there are 188,500 direct jobs and 468,000 total jobs linked to the oil and gas industry.<sup>21</sup> The 18 petroleum refineries accounted for 12,760 direct jobs or about 710 jobs per facility. A study of the liquid biofuel industry estimate about 300 jobs per ethanol facility producing 50

<sup>21</sup> Oil and Gas in California: The Industry and Its Economic Contribution in 2012, LAEDC, April 2014, [http://laedc.org/wp-content/uploads/2014/04/OG\\_Contribution\\_20140418.pdf](http://laedc.org/wp-content/uploads/2014/04/OG_Contribution_20140418.pdf)

million gallons per year and 267 jobs per biodiesel facility producing 30 million gallons per year.<sup>22</sup> By comparison, the 26 jobs per RNG production facility in California may seem modest to these more established industries. However, when normalizing for the size of these production facilities, RNG production in California compares more favorably:

- California RNG production facilities would generate about 8.5—11.2 jobs per MDGE of transportation fuel.
- The petroleum refinery industry yields about 1.6 jobs per MDGE of transportation fuel.
- The ethanol and biodiesel industries yield about 9.8 and 9.9 jobs per MDGE of transportation fuel, respectively.

Despite the differences in potential and nuances associated with RNG production in California from various feedstocks, our modeling results suggest that there are only modest differences with regard to economic impacts. Similarly, deploying more low NOx trucks and supporting fueling infrastructure increases the economic activity, by increasing spending. However, this spending has little impact on parameters such as income per worker and output multiplier.

The estimated income per worker (a proxy for salary) compares favorably with California's median household income and median individual's earnings, as reported in 2015 by the American Community Survey at \$61,820 and \$31,300, respectively.<sup>23</sup> For every job that is created via investment in natural gas trucks, fueling infrastructure, and in-state RNG production, our results indicate another two jobs will be created in supporting industries (indirect) and via spending by employees that are either directly or indirectly supported by these industries (induced).

The economic multipliers for natural gas trucks and RNG production in California—around 2.0 and 1.8 for the employment multiplier and the output multiplier, respectively—compare favorably with other industries. For instance, in a previous study, ICF reviewed the economic potential of innovative crude production technologies<sup>24</sup>—solar steam generation and solar photovoltaics deployed at oil fields—and we reported output multipliers in the range of 1.53—1.74 and a jobs multiplier of 2.56—2.73. A study by the Los Angeles Economic Development Council on the oil and gas industry in California<sup>25</sup> indicates an output multiplier of 1.19 and a jobs multiplier of 2.48.

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<sup>22</sup> Farming Fuel, Ethanol and Biodiesel Impacts in Missouri, 2007. Available online  
[https://www.missourieconomy.org/pdfs/farming\\_fuel\\_brochure.pdf](https://www.missourieconomy.org/pdfs/farming_fuel_brochure.pdf)

<sup>23</sup> U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates.

<sup>24</sup> The Impact of Solar Power Oil Production on California's Economy, ICF, 2015. Available online:  
<https://www.icf.com/perspectives/reports/2015/solar-powered-oil-production-california-economy>

<sup>25</sup> Oil and Gas in California: The Industry and Its Economic Contribution in 2012, LAEDC, April 2014, [http://laedc.org/wp-content/uploads/2014/04/OG\\_Contribution\\_20140418.pdf](http://laedc.org/wp-content/uploads/2014/04/OG_Contribution_20140418.pdf)

### Summary of Economic Contributions

**Direct:** Impacts of capital expenditures to deploy low NOx trucks and produce RNG and the employees hired by the corresponding industries.

**Indirect:** Impacts that stem from the employment and business revenues motivated by the purchases made by the industry and any of its suppliers.

**Induced:** Impacts generated by the spending of employees whose wages are sustained by both direct and indirect spending.

ICF also developed a scenario that pushed the upper limit of RNG production in California (as shown in the previous table), with an in-state production volume of around 1,900 million DGE. ICF increased the production potential of each RNG feedstock and introduced 46 thermal gasification facilities capable of processing agricultural residues and forestry residues. This RNG production scenario is paired with the upper limit of the truck deployment scenario, which reaches 75 percent of the low NOx truck market by 2030. Table 7 below summarizes these results.

**Table 7. Economic Impacts of Aggressive Low NOx Trucks fueled by California RNG**

75% Market Share + Max In-State RNG Production			
Capital Expenditures (\$Millions)	\$43,163	Employment	233,892
Trucks & Fueling Infrastructure	\$34,824	<i>Direct</i>	112,718
RNG Production		<i>Indirect</i>	52,139
<i>Landfill gas</i>	\$1,250	<i>Induced</i>	69,035
<i>MSW / WWTP</i>	\$4,273	Jobs Multiplier	2.08
<i>Dairy Digesters</i>	\$2,815	Labor Income (\$M)	\$15,893
<i>Thermal Gasification</i>	\$10,388	Income per Worker	\$67,950
		Jobs/Digester	34
Statewide Activity			
Total Value Added (\$M)	\$24,618		
Output Multiplier	1.84		

The IMPLAN model includes more than 500 industry sectors; Table 8 below highlights the sectors that experienced the highest employment impacts in all scenarios. These sectors have been grouped broadly into three categories: trucks and fueling infrastructure, RNG production facilities, and indirect and induced sectors. As noted previously, the indirect and induced sectors are those that are impacted by direct investments in the deployment of low NOx natural gas trucks fueled by RNG produced in California.



**Table 8. Industry Sectors with Highest Increased Employment**

Economic Grouping	IMPLAN Sectors
Trucks & Fueling Infrastructure	<ul style="list-style-type: none"> <li>• Construction</li> <li>• Metal tank manufacturing</li> <li>• Vehicle parts manufacturing</li> <li>• Heavy-duty truck manufacturing</li> </ul>
RNG Production Facilities	<ul style="list-style-type: none"> <li>• Repair &amp; maintenance of commercial equipment</li> <li>• Construction</li> <li>• Waste management</li> <li>• Metal tank manufacturing</li> <li>• Architectural and engineering services</li> <li>• Environmental and technical consulting services</li> <li>• Truck transportation</li> </ul>
Indirect & Induced Sectors	<ul style="list-style-type: none"> <li>• Wholesale trade</li> <li>• Real estate</li> <li>• Restaurants</li> <li>• Building services and management services</li> <li>• Accounting services</li> <li>• Hospitals</li> </ul>

Our economic modeling results provide quantitative insights into the potential for low NOx trucks powered by RNG produced in California. However, it is important to understand how this opportunity fits into a broader context related to economic growth and alternative transportation fuel production and consumption. Most importantly, there are few comparable opportunities to develop a robust alternative transportation fuel production industry in California like the one outlined in this analysis. There are a handful of ethanol production facilities in California, with the potential to expand incrementally their existing production capacity. And efforts to build a new facility have been planned for nearly a decade without breaking ground.<sup>26</sup> The biodiesel industry produces about 40 million gallons at 9 facilities in California, with modest expansion plans.<sup>27</sup> Renewable diesel is imported to California from locations as far afield as Singapore and Louisiana; there is at least one company pursuing production of renewable diesel from waste grease in California, with a capacity of 30 million gallons per year.<sup>28</sup> By comparison, low NOx trucks powered by California-produced RNG have the potential to stand-up an industry capable of producing and consuming upwards of 1 billion diesel gallon equivalents annually.

<sup>26</sup> The California Ethanol and Power, LLC was reportedly in the permitting stage of building a sugarcane ethanol plant in Imperial County in 2008; [http://www.californiaethanolpower.com/media/managed/newspdfs/Ethanol\\_from\\_sugar\\_cane\\_in\\_Valley\\_IV\\_Press\\_1.pdf](http://www.californiaethanolpower.com/media/managed/newspdfs/Ethanol_from_sugar_cane_in_Valley_IV_Press_1.pdf).

<sup>27</sup> Based on information provided by the California Biodiesel Alliance, <http://www.californiabiodieselalliance.org/>.

<sup>28</sup> UrbanX Renewables reports that they are hoping to produce renewable diesel fuel in the 4<sup>th</sup> quarter of 2017.

## Appendix

### Background on Low NOx Natural Gas Truck Deployment

EMFAC vehicle classes in which low NOx natural gas trucks were deployed.

EMFAC Vehicle Class	EMFAC Description	%Fuel
T6 Public	Medium-Heavy Duty Public Fleet Truck	0.4%
T6 CAIRP Small	Medium-Heavy Duty CA International Registration Plan Truck (GVWR<=26000 lbs)	0.2%
T6 CAIRP Heavy	Medium-Heavy Duty CA International Registration Plan Truck (GVWR>26000 lbs)	0.1%
T6 Instate Small	Medium-Heavy Duty instate Truck (GVWR<=26000 lbs)	10.9%
T6 Instate Heavy	Medium-Heavy Duty instate Truck (GVWR>26000 lbs)	4.4%
T6TS	Medium-Heavy Duty Truck (Gasoline)	2.6%
T6 OOS Small	Medium-Heavy Duty Out-of-state Truck (GVWR<=26000 lbs)	0.1%
T6 OOS Heavy	Medium-Heavy Duty Out-of-state Truck (GVWR>26000 lbs)	0.0%
T6 Utility	Medium-Heavy Duty Utility Fleet Truck	0.1%
T7IS	Heavy-Heavy Duty Truck (Gasoline)	0.5%
T7 Public	Heavy-Heavy Duty Public Fleet Truck	0.9%
T7 CAIRP	Heavy-Heavy Duty CA International Registration Plan Truck	12.8%
T7 Utility	Heavy-Heavy Duty Utility Fleet Truck	0.1%
T7 NNOOS	Heavy-Heavy Duty Non-Neighboring Out-of-state Truck	15.1%
T7 NOOS	Heavy-Heavy Duty Neighboring Out-of-state Truck	5.2%
T7 Other Port	Heavy-Heavy Duty Drayage Truck at Other Facilities	0.4%
T7 POAK	Heavy-Heavy Duty Drayage Truck in Bay Area	0.9%
T7 POLA	Heavy-Heavy Duty Drayage Truck near South Coast	6.0%
T7 Single	Heavy-Heavy Duty Single Unit Truck	4.5%
T7 Tractor	Heavy-Heavy Duty Tractor Truck	13.6%
T7 SWCV	Heavy-Heavy Duty Solid Waste Collection Truck	0.9%
T7 SWCVng	Heavy-Heavy Duty Solid Waste Collection Truck	1.4%

## IMPLAN Model Description

In this analysis, the economic impacts were calculated using the IMPLAN<sup>29</sup> (IMPact analysis for PLANning), Version 3.0 input-output model. IMPLAN is developed and maintained by the Minnesota IMPLAN Group. The IMPLAN model is a static input-output framework used to analyze the effects of an economic stimulus on a pre-specified economic region; in this case, the State of California. IMPLAN is considered static because the impacts calculated by any scenario by the model estimate the indirect and induced impacts for one time period (typically on an annual basis).

The modeling framework in IMPLAN consists of two components—the descriptive model and the predictive model.

- The **descriptive model** defines the local economy in the specified modeling region, and includes accounting tables that trace the “flow of dollars from purchasers to producers within the region”.<sup>30</sup> It also includes the trade flows that describe the movement of goods and services, both within, and outside of the modeling region (i.e., regional exports and imports with the outside world). In addition, it includes the Social Accounting Matrices (SAM) that trace the flow of money between institutions, such as transfer payments from governments to businesses and households, and taxes paid by households and businesses to governments.
- The **predictive model** consists of a set of “local-level multipliers” that can then be used to analyze the changes in final demand and their ripple effects throughout the local economy. IMPLAN Version 3.0 uses 2008 data and improves on previous versions of model by implementing a new method for estimating regional imports and exports - a trade model. This new method of estimating imports looks at annual trade flow information between economic regions; thereby allowing more sophisticated estimation of imports and exports than the traditional econometric RPC estimate used by the previous, Version 2. Additionally, this new modeling method allows for multi-regional modeling functions, in which IMPLAN tracks imports and exports between selected models allowing the users to assess how the impact in one region can impact additional regional economies.

The IMPLAN model is based on the input-output data from the U.S. National Income and Product Accounts (NIPA) from the Bureau of Economic Analysis. The model includes 440 sectors based on the North American Industry Classification System (NAICS). The model uses region-specific multipliers to trace and calculate the flow of dollars from the industries that originate the impact to supplier industries. These multipliers are thus coefficients that “describe the response of the economy to a stimulus (a change in demand or production).”<sup>31</sup> Three types of multipliers are used in IMPLAN:

- Direct—represents the impacts (e.g., employment or output changes) due to the investments that result in final demand changes, such as investments needed to deploy trucks and fueling infrastructure or install RNG production facilities.

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<sup>29</sup> IMPLAN was developed by the Minnesota IMPLAN Group (MIG). There are over 1,500 active users of MIG databases and software in the United State as well as internationally. They have clients in federal and state government, universities, as well as private sector consultants. More information is available at [www.implan.com](http://www.implan.com).

<sup>30</sup> IMPLAN Pro Version 2.0 User Guide.

<sup>31</sup> Ibid.

- Indirect—represents the impacts due to the industry inter-linkages caused by the iteration of industries purchasing from industries, brought about by the changes in final demands.
- Induced—represents the impacts on all local industries due to consumers’ consumption expenditures arising from the new household incomes that are generated by the direct and indirect effects of the final demand changes.

The total impact is simply the sum of the multiple rounds of secondary indirect and induced impacts that remain in California (as opposed to “leaking out” to other areas). IMPLAN then uses this total impact to calculate subsequent impacts such as total jobs created and tax impacts. This methodology, and the software used, is consistent with similar studies conducted across the nation.

## Inputs and Model Parameters

The direct economic impacts presented in the report are based on the investments required to deploy low NOx natural gas trucks and RNG production in California. ICF modeled the impacts over the period 2018—2030.

## Output

Whenever new industry activity or income is injected into an economy, it starts a ripple effect that creates a total economic impact that is much larger than the initial input. This is because the recipients of the new income spend some percentage of it and the recipients of that share, in turn, spend some of it, and so on. The *total spending impact* of the new activity/income is the sum of these progressively smaller rounds of spending within the economy. This total economic impact creates a certain level of value added (GSP), jobs, called the *total employment impact*, and also tax revenue for state and local governments.

Due to the static nature of the IMPLAN model, the employment impacts must be presented in terms of annual job-years as the model calculates the annual impact of an annual investment. It is likely that once the job is created, it will be sustained, however to ensure that the impact is not overstated; it is conservatively assumed that the job impact is annual. The annualized GSP and tax impacts can be accrued over the program’s duration to identify the total impact of the investments in low NOx trucks powered by California produced RNG. These dollar values represent the investments that were placed into the economy each year aggregated over time.

## List of Abbreviations and Acronyms

CARB	California Air Resources Board
CNG	Compressed natural gas
CNGVC	California Natural Gas Vehicle Coalition
DGE	Diesel Gallon Equivalent
EPA	Environmental Protection Agency
GHG	Greenhouse Gas
I-O Model	Input-Output Model
LCFS	Low Carbon Fuel Standard
LFG	Landfill Gas
MIG	Minnesota IMPLAN Group
MSW	Municipal Solid Waste
NAICS	North American Industry Classification System
NOx	Oxides of nitrogen, a criteria air pollutant
RNG	Renewable natural gas
SCAQMD	South Coast Air Quality Management District
SCFM	standard cubic feet per minute
SIP	State Implementation Plan
SLCP	Short Lived Climate Pollutant
WWTP	Wastewater Treatment Plant



## NEWS RELEASE

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### **New Study Shows Renewable Natural Gas in Transportation Can Create Up to 130,000 Jobs and Generate Nearly \$14 Billion in Economic Benefits for California**

*Converting Waste to Power Trucks Will Fuel California's Economy*

LONG BEACH, Calif., May 1, 2017—A new [jobs study](#) reveals that deploying trucks fueled by renewable natural gas could create up to 130,000 new jobs and add \$14 billion to California's economy. The 'RNG Jobs Report' examines the economic potential of fueling heavy-duty trucks with renewable natural gas produced in California, instead of being powered by petroleum-based diesel. The study was released jointly today by the Coalition for Renewable Natural Gas (RNG Coalition) and the California Natural Gas Vehicle Coalition (CNGVC) at the Advanced Clean Transportation (ACT) Expo, the nation's largest alternative, clean-fleet trade show.

A switch to renewable natural gas trucks could quickly help California achieve its air quality, greenhouse gas emissions, and climate change-related goals, the two coalitions say. More than 95 percent of the trucks on California roads currently use petroleum-based diesel fuel and are a major source of particulate, nitrogen oxide (NOx) and GHG emissions. In Southern California, the heavy-duty trucking sector is the single largest source of NOx emissions, which combine with other pollutants to form both ground-level ozone and fine particulates, also known as PM2.5. Those pollutants are responsible for a wide range of health impacts from exacerbating asthma to

premature deaths. In fact, the ports and related goods-movement activity emit more than 35 percent of all smog-forming pollutants in the region.

Renewable natural gas (RNG or Biomethane) is produced from methane captured as organic materials decompose in renewable waste streams, including from dairies, agriculture, landfills, and wastewater treatment plants. By capturing and converting methane for use as a substitute or blended fuel, transportation companies and fleets can reduce their greenhouse gas (GHG) emissions by as much as 70 percent. The latest heavy-duty renewable natural gas engines reduce NOx emissions by 90 percent, according to the U.S. Environmental Protection Agency.

“This study affirms what we have been advocating—increased production, deployment and utilization of RNG not only realizes significant benefits for our environment, but for our economy as well,” said Johannes Escudero, Chief Executive Officer of the RNG Coalition. “Our industry is eager to develop new projects, create additional employment opportunities and supply the heavy-duty truck sector in California with renewable natural gas—the lowest carbon-intense transportation fuel commercially available.”

“We recognize the importance of ensuring not only we clean up our air,” said Thomas Lawson, CNGVC President, “but that when evaluating alternative solutions, we also consider the impact on our economy. This study shows that renewable natural gas deployed in natural gas vehicles, will not only improve our air quality, but serve as an economic engine for all Californians, too.

“As an air quality advocate, I see green jobs as the best jobs. It’s good to see renewable natural gas add green jobs to our economy,” said Dr. Joe Lyo, South Coast Air Quality Management District board member and president and CEO of the Coalition for Clean Air, a Los Angeles-based environmental non-profit.

The newest heavy-duty natural gas engines are well-suited for transit and refuse applications, and big enough to haul freight. As large as 9 liters with 320 horsepower, the engines are certified by the California Air Resources Board at “near-zero” emissions levels, equivalent to a 100 percent battery truck. A 12-liter near-zero engine with 400 horsepower, specifically designed for heavy-duty trucks, is slated for production later this year.

The study, produced by ICF, reflects options to deploy low NOx natural gas trucks in various applications and vehicle classes through 2030. The number of trucks considered is linked to one of two strategies:

- Low NOx trucks deployed at the San Pedro Bay Ports in Southern California.
- Low NOx trucks deployed in the California Air Resources Board’s mobile source strategy.

As shown in the chart below, switching to natural gas trucks fueled by RNG at the two San Pedro Bay Ports in Southern California would add more than 23,000 jobs and \$2 billion in economic benefits. A state-wide solution that includes the Air Resources Board’s mobile source strategy would result in up to 134,000 jobs and \$14 billion in economic benefits.

Economic Parameter	Port Trucks	Statewide Low NOx RNG Trucks, Market Share		
		25%	50%	75%
Capital Expenditures (\$M)	\$2,703	\$15,718	\$27,326	\$38,934
Total Employment	23,459	80,981	107,594	134,206
Total Value Added (\$M)	\$2,512	\$8,657	\$11,483	\$14,308

For every job created through direct investment in the trucking and goods movement sector powered by California-produced renewable natural gas, two more jobs will be created. The study estimates that these are high-paying jobs, with estimated labor income more than double California’s current median income. The jobs and economic activity from investments in a natural gas trucks powered by in-state renewable natural gas support California’s diverse economy, supporting various levels of skilled workers in sectors including construction, fabrication, vehicle manufacturing, engineering services, waste management, and service industries. The full study is available here.

###



The RNG Coalition represents and provides the policy platform, advocacy and education voice for the renewable natural gas industry in North America. Its diverse membership includes each sector of the RNG industry: waste collection, waste management & recycling companies, renewable energy developers, engineers, financiers, gas/power marketers, gas/power transporters, manufacturers, technology & service providers, environmental advocates, research organizations, organized labor, law firms, consultants, utilities and individual ratepayers. Together, RNG Coalition members advocate for the increased development, deployment and utilization of renewable natural gas so that present and future generations will have access to this domestic, renewable, clean fuel and energy resource.

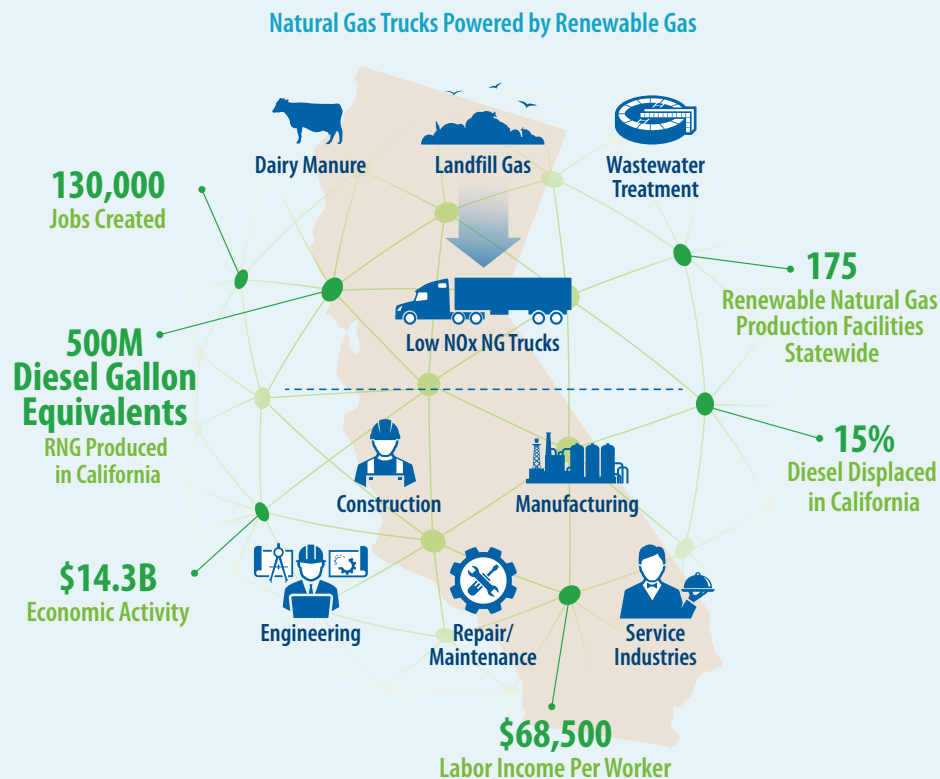
#### About the California Natural Gas Vehicle Coalition

The California NGV Coalition is an association of natural gas vehicle and engine manufacturers, utilities, fuel providers and fleet operators serving the state. Its members are united in the belief that wider adoption of clean-running NGVs—a proven technology in use worldwide—is key to helping California reduce greenhouse gas emissions, air pollution and petroleum dependence. The Coalition is the industry’s premier advocacy organization in California, supporting new initiatives, providing up-to-date information on NGV technology and market developments, and working with legislators and regulators to develop policies that will increase alternative fuel and vehicle use. The Coalition also advises stakeholders on testing and demonstration programs and helps NGV-related businesses break into the California market.

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# Low NOx Engines and Renewable Natural Gas Fuel the Economy

Renewable natural gas (RNG) produced in California and used in heavy duty trucks outfitted with low NOx engines can **drive economic growth and create jobs while helping achieve environmental goals.**



A new report by ICF finds that low NOx trucks fueled by renewable natural gas produced in California will drive economic growth in multiple market segments, help create jobs with competitive salaries, and make significant contributions to California's economy.

- Dedicated investments in deploying low NOx trucks powered by renewable natural gas could **create up to 134,000 jobs**, and provide up to **\$14 billion of added economic value** by 2030.
- The ICF report considered a Port Truck Scenario and several Statewide Truck Scenarios, deploying 17,000 and 172,000—516,000 low NOx trucks fueled by RNG, respectively.
- By taking advantage of waste streams—from landfills, wastewater treatment plants, and dairies—ICF estimates that a modest investment scenario could yield more than **500 million diesel gallon equivalents** of renewable natural gas produced at **175 facilities around the state** (which is just a fraction of the in-state production potential for RNG). That is enough renewable natural gas to **displace 15% of the petroleum-based diesel fuel** consumed in California.
- ICF finds that the sectors experiencing the highest job creation include construction, manufacturing, repair and maintenance of equipment, engineering services, environmental consulting services, and service industries (e.g., restaurants, accounting services, etc.).
- ICF reports that the average labor income per job created is about **\$68,500—more than twice the median salary of California's current workers.**



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## **SEA\LNG public response to Ports of Long Beach and Los Angeles draft CAAP 2017 Update**

SEA\LNG applauds the Ports of Long Beach and Los Angeles ongoing initiatives to reduce harmful emissions from their terminals and port-related operations. However, we are surprised to see no mention in their draft CAAP 2017 Update of the potential role that LNG (liquified natural gas) could play as a marine fuel in addressing the ports' emission reduction goals, particularly with seven (7) LNG powered container ships, operated by Matson, Pasha and Tote, expected to call on the Southern California ports in the coming few years. As you know, other Global operators are also seriously considering LNG as an environmentally superior maritime fuel.

LNG offers the shipping industry a credible, safe, competitive and environmentally beneficial fuel. Compared to existing alternatives and other unproven technologies, LNG provides a means to address key environmental needs today. It is in use now and has proven itself to be an effective and safe marine fuel.

LNG emits zero sulphur oxides (SOx) and virtually zero particulate matter (PM). Compared to existing heavy marine fuel oils, LNG emits 90% less nitrogen oxides (NOx) and using current best practices and appropriate technologies to minimise methane leakage, offers the potential for up to a 25% reduction in GHGs. This is considering current technologies which we believe will be enhanced over time and ultimately lead to greater reductions. Advancements in dual fuel technology and propulsion, enhanced control systems and future use of gas turbine technologies present further opportunity for increased GHG reductions.

Over the longer term, the possible addition of renewable natural gas into the energy mix could offer additional environmental benefits. We are already seeing progressive ports like Rotterdam explore its potential. Ultimately, LNG-fueled vessels and bunkering infrastructure could potentially provide a zero-emissions pathway for shipping; an incredibly important opportunity that we and many others believe must be vigorously pursued.

The environmental benefits of LNG as a marine fuel are increasingly being recognised by the shipping industry, ports and port communities world-wide. Of the world's top ten bunkering ports all, except for the Ports of Long Beach / Los Angeles, either already offer LNG bunkering or have firm plans to do so by 2020. For example, Singapore, which accounts for the biggest volume of marine fuel bunkers, is piloting truck-to-ship LNG bunkering and has a goal of being fully LNG bunker-ready by 2020. In Rotterdam, the world's second biggest bunker port, LNG via truck-to-ship, tank-to-ship and ship-to-ship bunkering is already available, and as noted above, the port is starting to explore the use of renewable natural gas as part of its LNG bunkering service offering and strategy.

In the U.S. the Port of Jacksonville has pioneered LNG bunkering in support of the world's first dual-fueled container vessels which entered service in late 2015 for TOTE Maritime in the trade between the U.S. and Puerto Rico. To date the Tote vessels have completed hundreds of safe bunkering operations. Many other U.S. and Canadian ports

have well advanced plans to provide LNG bunkering. In addition to these individual developments, working arrangements have been set up between various international ports such as the Port of Rotterdam, Yokohama Kawasaki International Port, MPA of Singapore, Port of Vancouver, Port of Ningbo-Zhoushan and many others to collaborate on the development of LNG as a marine fuel in their respective ports.

LNG bunkering in Southern California would enable Long Beach / Los Angeles to attract the cleanest vessels in the US and global shipping fleet to the San Pedro Bay ports. Given Long Beach / Los Angeles' significance as a major international shipping hub, you could play a key role in facilitating the IMO's (International Maritime Organisation) initiatives to reduce global emissions from the shipping sector, particularly in its introduction of a global sulphur cap of 0.5% for marine fuels from 2020.



## Shell North America LNG LLC

Shell Trading  
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18 September 2017

Via email: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)

### Ref: Draft 2017 Clean Air Action Plan Update

Shell North America LNG LLC (Shell) welcomes the opportunity to comment in response to this year's update of the Clean Air Action Plan (CAAP). For the avoidance of doubt, please note that this response is not confidential.

- It is notable that the proposals incorporate two new emissions targets:
  - a) Reduce GHGs from port-related sources to 40% below 1990 levels by 2030; and
  - b) Reduce GHGs from port-related sources to 80% below 1990 levels by 2050.
- Some current technologies and fuels can be of immediate benefit in helping meet these more stringent targets. For example, LNG as a fuel in the marine, transport and other sectors is already helping reduce emissions - a role it is well-placed to continue playing in the longer term.<sup>1</sup> It is plausible to consider that LNG will likely form part of the answer to delivering some CAAP proposals.
- The Ports will be key players in discussions with state and federal funding agencies. However, the overall approach to the identification of priority and/or demonstration projects should be technology and fuel neutral - a level playing field will likely be the most efficient means of delivering the CAAP.
- Estimated costs of between \$8.5b to nearly \$14b for new technologies, infrastructure investments and incentive programs are significant sums. We also note that the Ports and private industry will be required to bear the costs outside of any state and federal funding. On both counts, it is imperative to keep costs to a minimum in delivering the CAAP.
- Clarity regarding the means of cost recovery outside of any funding would be helpful. Key principles would likely include minimising cross-subsidies between technologies and fuels.

I trust that you have found these brief comments helpful. To the extent that you require any further clarification, please do not hesitate to contact me.

Tahir Faruqi  
President, Shell North America LNG LLC

*Due to electronic transfer this letter is unsigned*

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<sup>1</sup> The SEA\LNG response to this consultation details the increasing use of LNG as a marine fuel and its various environmental benefits.



September 18, 2017

Ms. Heather Tomley  
Director of Environmental Planning  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Mr. Chris Cannon  
Director of Environmental Management  
Port of Los Angeles  
425 South Palos Verdes St.  
San Pedro, CA 90731

Subject: Draft 2017 Clean Air Action Plan Update

Dear Ms. Tomley and Mr. Cannon:

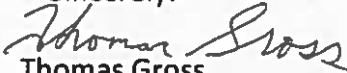
Southern California Edison (SCE) appreciates the opportunity to comment on the San Pedro Bay Ports Clean Air Action Plan (Plan).

SCE supports the strategies in the Clean Air Action Plan, particularly the Ports' goals of zero emission technology for goods movement equipment within the Port. As you know, SCE has been working closely with the Port of Long Beach to develop two electrification demonstration projects for equipment used to unload and move goods containers from ships to off-port transportation vehicles. SCE has an application currently before the California Public Utilities Commission, which, if approved, will allow SCE to build and maintain the needed infrastructure to supply the power needed for these two projects.

Once approved and completed, these projects will demonstrate to other Port entities that zero emission technology is viable and can reduce pollution on a much broader scale. SCE stands ready to work with the Port of Long Beach to develop additional electrification projects, recognizing that a thoughtful and coordinated effort is needed to bring about the desired reduction in emissions.



SCE supports California’s ambitious climate change goals and greenhouse gas reduction efforts. In helping the Ports achieve its goals of being cleaner and more sustainable, it will also help the state meet its goals as well as bring health and economic benefits to our communities and the environment. SCE appreciates the work that has been put into the Clean Air Action Plan and we look forward to working closely with the Port of Long Beach to develop more zero emission projects.

Sincerely:  
  
Thomas Gross



medium-duty, refuse, transit, and truck applications with higher displacement, more powerful, 11.9 liter engine for heavy-duty regional-haul truck/tractor coming soon. When tested by the University of California Riverside C-CERT mobile source testing laboratory, these near zero emission engines actually tested cleaner than their certification levels<sup>1,2</sup>. They showed to have NOx emissions that are 99.8 percent lower than their existing diesel counterparts in some drayage duty cycles. Both the South Coast Air Quality Management District (SCAQMD) and California Air Resources Board (CARB) have stated that early implementation of near zero 0.02 gram engines are critical for the region and state. The CARB Mobile Source Strategy states that *“..large-scale deployment ...of low-NOx heavy-duty engines ...will provide the largest health benefit of any single new strategy.”*

In addition to the significant reduction of NOx, when using renewable natural gas (RNG), the new near zero engines can reduce greenhouse gas (GHG) emissions by 60-80 percent on average or more depending on the source of biogas. When sourced from dairies and organic waste diverted from landfills, the carbon intensity of renewable natural gas is rated as “carbon-negative,” due to avoided methane emissions from dairies and landfills. Dairy-sourced RNG can provide around a 400% reduction in GHG emissions compared to diesel fuel, according to CARB’s Low Carbon Fuel Standard program. In addition to the significant methane and carbon dioxide reduction benefits RNG can provide, adopting natural gas trucks can also reduce black carbon, another potent GHG, by displacing diesel in older, heavy-duty vehicles. Renewable natural gas provides the best opportunity for the state and ports to achieve its climate change goals quickly. The technology and the fuel exists today and can be deployed now.

### **Incentive Funding is Critical**

The cost to implement the CAAP is estimated at up to \$14 billion. It is important that these costs are supplemented by incentive funding. The goods movement industry must keep costs low to remain competitive and to retain the jobs that this industry provides the region and state. The region needs to work together to lobby the legislature and granting agencies to commit funds for port trucking. Incentive funding should remain fuel neutral as long as near zero and zero emissions are met and funds are spent in a cost effective manner.

### **Cost Effectiveness**

As a government agency, the ports has a fiduciary duty to ensure that public funds are being used cost effectively. With limited public funding available and critical need for operations to stay cost-competitive, the ports must consider the most cost effective options to achieve its air quality goals. Shifting costs solely to the private sector would ultimately hinder competitiveness and would like have a negative impact on the Ports overall.

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<sup>1</sup> “Ultra-Low NOx Natural Gas Vehicle Evaluation ISL G NZ” Dr. Johnson, UC Riverside, C-CERT.

<sup>2</sup> The Near Zero Emission engines tested were certified to 0.02 grams per brake horsepower hour for NOx. The testing conde by UC Riverside showed that in some port duty cycles the emissions were 0.002 grams NOx, while diesel tested at 1.02 grams NOx in the same duty cycle.

As stated above, near zero natural gas trucks can achieve up to 99.8 percent reduction of NOx emissions compared to diesel. As such, the incremental benefit of adopting zero emissions trucks is a difference of 0.02 percent of emissions between near zero and zero emission technologies, however, the cost of these zero emission trucks can be up to eight times the cost of natural gas trucks, as described in the ports' Costing Analysis. Based on the cost calculations included in the CAAP, turning over the fleet of trucks operating at the ports to near zero natural gas could cost up to \$1.026 billion, while turning over the fleet of trucks operating at the ports to electric trucks could cost up to \$8.289 billion. The cost for turning over the fleet to electricity does not include infrastructure or charging stations, which would drive up the cost further. Near zero natural gas trucks achieve virtually the same NOx emission reductions at a fraction of the cost and the technology is available. There is no reason to wait for other technologies to catch up when action can be taken now.

### **Near-Term NOx Emission Reductions**

As currently proposed, the Truck Program of the CAAP does not require action until 2023, when a fee will be assessed and new trucks registering must meet near zero emission standards. That leaves five to six years of the status quo, potentially resulting in little to no near-term emission reductions except natural turnover.

SCAQMD is required to reduce emissions to meet the federally mandated National Ambient Air Quality Standards (NAAQS) by 2023 and they have acknowledged that the deployment of the low NOx engines in the heavy duty truck sector is a critical element to achieving that target. The NAAQS are determined by the federal government based on levels that are deemed to be protective of human health, therefore it is imperative that the region meet 2023 attainment. The ports are positioned to help SCAQMD achieve its 2023 attainment goals, but by delaying action until 2023, the ports are missing the opportunity to help improve public health in the port communities, along transportation corridors, and throughout the region. The largely disadvantaged populations that live along the freeways already have the most elevated levels of asthma and upper respiratory diseases compared to those living further from transportation corridors. There is no reason to ask them to wait another six years, especially since we are not sure if other technologies will become available by then.

Additionally, by failing to act until 2023, the ports are missing the opportunity to reduce GHG emissions during that time. Criteria pollutants such as oxides of nitrogen (NOx) have public health and environmental impacts based on concentration. GHG emissions, on the other hand, impact public health and the environment based on cumulative emissions. Therefore, it is important that the ports seek out early emission reductions for GHGs as soon as possible.

The ports are missing a significant opportunity to achieve early emission reductions with the CAAP as currently proposed. To achieve these needed reductions, the ports must consider accelerating the Truck Program.

### **Greenhouse Gas Emission Reductions**

In recent presentations, the ports have stated that this CAAP has additional focus on greenhouse gas (GHG) emission reductions. The CAAP includes a new target for GHG emission reduction of 40 percent by 2030. As trucks account for approximately 40% of the overall emission reductions, per the 2016 emission inventories, they represent the greatest opportunity to achieve this target. As discussed above, the use of renewable natural gas with the near zero engine technology is the best and most cost effective option for the ports to achieve this goal. Renewable natural gas has lower potential carbon intensities than electricity and there are over 500 million diesel gallon equivalents that can be accessed in California alone. Currently, over 60 percent of the natural gas used for transportation fuel is renewable natural gas and will be 90 percent next year, based on recent commitments from users. SoCal Gas recommends that a GHG study be conducted to determine which truck technologies will achieve the most emission reductions to support the 2030 GHG goal and what technologies can be deployed today to get early emission reductions prior to 2030.

### **Lack of Near-Term Emission Reduction Targets**

The 2010 CAAP Update developed the San Pedro Baywide Standards, which served as emission reduction targets for the ports. The 2017 CAAP does not include new standards for criteria pollutants, which is understandable as the 2023 standard is still in effect. There should, however, be interim emission reduction targets to maintain and advance the momentum achieved by the ports over the last decade. Setting long-term goals is admirable, however, these long-term goals should not preclude the plan from including intermediate targets that can provide immediate benefits and improve the ports' ability to meet long-term goals. By setting near-term emission reduction goals, the ports can continue the downward trend of emissions ahead of the 2030 and 2035 milestone dates for electrification. Near-term targets will also serve as a guide to developing program details. For example, a target is needed to develop the details of the truck program. A rate amount can be assessed to achieve the desired turnover to reach the emission reduction target, rather than an arbitrary rate amount. Additionally, incentives can be structured to help meet the targets. To develop a successful grant program; the structure, amount, and requirements; need to be developed to support the emission reduction goals.

### **Near-Zero Cargo Handling Equipment**

The draft CAAP includes a goal to electrify terminal equipment by 2030. Requiring full electrification does not give options or flexibility to the terminal operators to comply. The technology does not currently exist, and when it does become available, it is expected to not be a cost effective option. Per the Pacific Maritime Shippers Association, cargo handling equipment accounts for less than 1% of emissions in the state, yet would cost over \$4 billion dollars to electrify. This is an unreasonable cost for the amount of reductions that would be achieved. We support Pacific Maritime Shipping Association's requests that the final CAAP document must include a pathway for CHE that includes near zero emission technologies for achieving significant emissions reductions in a cost-effective manner. The CAAP should include the flexibility to choose near zero options that can achieve similar NOx reductions and can achieve better GHG reductions than electrification at a fraction of the cost.

The language in the CAAP states that the ports intend to “participate in the State’s regulatory development efforts to achieve up to 100% zero emissions cargo-handling equipment by 2030.” We recommend that the language be changed to “100% near zero and zero emissions cargo handling equipment by 2030.”

### **ACTNow Plan**

At the request of port staff, SoCal Gas and its Natural Gas Vehicle Coalition Partners developed provisions entitled the “ACT Now Plan,” that can be incorporated to revise the truck program included in the draft CAAP. By 2023, the ACT Now Plan would reduce port truck NOx emissions by 99%, reduce petroleum consumption by 100%, produce up to \$1.3 billion in private sector investment (fueling infrastructure, RNG facilities), and provide significant job creation opportunities. The primary provisions of the ACTNow Plan are listed below and additional detail and supporting materials are attached to the comment letter submitted by the California Natural Gas Vehicle Coalition.

#### Incentive Transition Program

- Beginning January 1, 2018, require all newly registered trucks to meet the CARB Alternative Low NOx Standard of 0.02 g/bhp-hr (0.02NZ) or Zero Emissions (ZE).
- Beginning July 1, 2018 or no later than 1 year from adoption of the CAAP, apply a rate on all containers hauled by diesel trucks that are not 0.02NZ or ZE, with the rate designed to incentivize transition to cleaner trucks.
- Beginning July 1, 2020 or earlier, implement requirements that achieve a 40% reduction in GHG emissions.
- Beginning January 1, 2023, apply the rate on all natural gas trucks that are not 0.02NZ or ZE.

#### Incentive Funding

- Create a regional stakeholder coalition to secure regional, state & federal incentive funding to increase the funding beyond that provided by the Ports.
- Beginning in January 2018, offer incentive funding provided by the Ports and AQMD to assist with the purchase of 0.02NZ and ZE trucks that deploys 2,400 trucks over 2018 and 2019, in addition to trucks deployed under other incentive programs.
- Apply funding of \$100,000

The Ports must take this opportunity to act now to reduce emissions using near zero emission technologies. The technology achieves similar NOx emission reductions and can achieve more GHG emission reductions than electrification. Communities and the region cannot wait until 2023 or 2035 when near zero emission technologies exist today. We strongly urge the ports to adopt the ACTNow Plan and to consider the comments made in this letter.

Page 6

Respectfully submitted,

A handwritten signature in black ink, appearing to be 'KM' or similar initials, written in a cursive style.

Kevin Maggay  
Energy and Environmental Affairs

September 18, 2017

Port of Los Angeles  
Harbor Commissioners  
425 South Palos Verdes St.  
San Pedro, CA 90731

Port of Long Beach  
Harbor Commissioners  
4801 Airport Plaza Dr.  
Long Beach, CA, 90815

*Submitted via Email, to: caap@cleanairactionplan.org*

**Re: Comments on Draft Clean Air Action Plan 2017**

Dear Presidents Martinez and Bynum, and Members of the Commissions:

On behalf of the Teamsters Port Division and Teamsters Local 848, we offer these comments and recommendations on the 2017 Draft Clean Air Action Plan (CAAP).

The Teamsters Union is the largest union of transportation workers in the country representing 1.4 million workers overall. Teamsters Local 848 represents 500 truck drivers at six (6) different companies at the Ports of Los Angeles and Long Beach, along with 7,200 members across Southern California.

Port drivers play a critical role in the global supply chain, and are indispensable to the functioning of the Ports. Yet despite their valuable contribution to the Ports' bottom line and the regional economy, the drivers continue to be treated by their employers as indentured servants and the Ports allow this illicit underground economy to thrive. The Teamsters are committed to the value that every job at the ports can and must be a good job, and that's why for over a decade, we have stood by our long-term commitment to bring justice to port drivers. Every single driver must have the opportunity to share in the prosperity generated by the nation's largest port complex.

There is strong widespread support for port drivers being treated fairly and not being further exploited by a new Clean Truck Program. Over the past week, two thousand five hundred (2,500) people signed a petition demanding that the ports not put the burden of cleaning the air on the backs of drivers. We attach a copy of the petition along with the names and zip codes of signers as part of our comments on the CAAP.

The update of the CAAP presents a unique opportunity to bring all trucking companies doing business at the Ports into conformance with the law and thereby raise standards for all who live and work in and near the Ports. The first CAAP, issued in 2006, was a great milestone for the Ports of Los Angeles and Long Beach. We have long been supportive of the highest possible



emissions standards in order to decrease deadly toxic diesel pollution because our members and those who organize to join live in port communities and also need to breathe clean air. That is why we have fought tirelessly alongside our community and environmental partners in support of the first Clean Truck Program. Unfortunately, industry interests undermined the Clean Truck Program by weakening the policy through court challenges, and there is still much work left undone. At a time when both Los Angeles and Long Beach should be making bold strides forward, the framework proposed in the Draft CAAP is a huge step backward.

Specifically, we have serious concerns with the proposals outlined in the CAAP for the Clean Trucks Program (Section 1.1), outlined below.

The complete lack of any mention of the actual structure of the port trucking industry is striking. In particular, there are two significant and persistent structural defects in the port trucking sector that must be addressed before the ambitious zero emissions goals can be met. First, the trucking industry continues to force its business costs and risks onto drivers. These costs include expensive lease payments and maintenance costs, which has gotten passed on to drivers after the trucking industry's legal challenges weakened the original CTP policy. Second, the incredibly fragmented nature of the industry makes it imperative that the Port not simply enact, but vigorously enforce the CAAP.

These issues were front and center during the development of the first CAAP and CTP. The 2006 CAAP explicitly recognized the challenge of modernizing a heavy-duty truck fleet.<sup>1</sup> A subsequent Clean Truck Program Overview issued by the Port of Los Angeles also rightly acknowledged that the industry was “fragmented” and stated that “Today’s disjointed drayage system places the burden of inefficiency (traffic, excessive fuel consumption, wasteful idling and extra truck trips) on the truck driver. The present system does not encourage efficiency.”<sup>2</sup>

In contrast, the 2017 Draft CAAP contains an entire 12-page section on the new proposed CTP, and only mentions drivers *once*, in reference to workforce development to transition to new technologies. No mention is made as to the fact that the underlying structural problems in the industry persist; that the cost of trucks have fallen – and will continue to fall – on the backs of truck drivers. Nor is there a description of the composition of the industry.

While the omission of any description of the port trucking market structure in the Draft CAAP might suggest that the issues in 2006 have been resolved, the reality is quite the opposite. Eleven years later, the underlying issues not only persist, but have gotten even more acute.

The industry challenges to the first Clean Truck Program resulted in the implementation of a clean truck mandate stripped of any measures to ensure that industry assumed responsibility for the associated costs. As a result, the adverse conditions for drivers have become even more severe. Trucking companies – many of which received thousands in public subsidies to purchase new trucks – required drivers to sign predatory subleases under the guise of an “independent

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<sup>1</sup> Final 2006 San Pedro Bay Ports Clean Air Action Plan Overview

<sup>2</sup> The Port of Los Angeles Clean Truck Program, Program Overview and Benefits, March 24, 2008, [https://www.portoflosangeles.org/ctp/CTP\\_O&B.pdf](https://www.portoflosangeles.org/ctp/CTP_O&B.pdf)

contractor” arrangement if they wanted to keep their jobs. The companies then deducted from drivers’ pay the costs of the new clean trucks, including lease payments for the new clean trucks, insurance, diesel, parking, maintenance, repairs, truck wash, and often the cost of CTP registration and RFID devices.

This scheme has become a national scandal, casting a pall on the Ports’ prized Clean Truck Program. A two-part June 2017 investigative report published on the front page of USA Today, “Rigged: Forced into debt, Worked past exhaustion, Left with nothing.” exposed the working conditions of drivers as “modern-day indentured servitude.”<sup>3</sup> The yearlong investigation revealed that it is not uncommon for drivers to receive a *negative* paycheck at the end of a week’s work, and begin the next work week indebted to the company. Through this same system, trucking companies were also found to coerce drivers to drive far longer hours than is legally permitted, by holding the threat of retaliation, termination, and losing the equity paid into the trucks over the heads of drivers.

This employment model is not just shocking, and a national shame. It is also illegal. Unfortunately, the Ports have made no efforts to ensure that trucking companies operate their businesses in a legal fashion, complying with necessary tax, labor, and employment laws, despite provisions in their concession and registration. Over the past five years, in the absence of any action by the Ports, drivers themselves have come forward to challenge their misclassification as independent contractors. They have brought their disputed status to government regulators and courts to settle the issue. Overwhelmingly, state and federal agencies and courts have consistently found drivers to be employees – not independent contractors – upon close examination of the facts.

The California Labor Commissioner has issued over 375 decisions finding that drivers were employees and therefore protected under the California Labor Code. The total amount that these decisions have ordered trucking companies to pay their drivers is at least \$40 million. The multiple violations that the Labor Commissioner has found include illegal deductions for clean truck payments and related costs under Labor Code § 221 and IWC Wage Order No. 9, §8. Additionally, the payments that companies pass on to drivers and require them to pay out of pocket – such as fuel or insurance – must be reimbursed under California Labor Code § 2802.

Yet despite the wave of claims and decisions in favor of drivers, the dominant model in the port trucking industry by which clean trucks have been paid for and continue to be operated and maintained, has remained. Many companies have ignored final court judgments, in many cases creating new shell companies and continuing to operate at the ports. Even in cases where judgments have been satisfied or claims have been settled, many of the same companies continue to misclassify their drivers, gambling that the chances and cost of being caught again are outweighed by the savings of illegally passing their business costs on to their drivers.

Working under such illegal and exploitative conditions has led to growing unrest among drivers. To protest their misclassification and the related wage theft, drivers whose employers classify them as “independent contractors” have been exercising their rights as employees,

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<sup>3</sup>“Rigged: Forced into debt. Worked past exhaustion. Left with nothing,” Brett Murphy, USA Today. 06/16/2017.

organizing to form their Union with the Teamsters and engaging in Unfair Labor Practice strikes to lawfully protest their treatment by their employers – the trucking companies that contract with the ports.

Since 2013, drivers have carried out 15 such strikes, picketing trucks from struck companies wherever they do business – at truck and rail yards, at warehousing and distribution centers, and at Port terminals. These picket lines have caused delays, disruptions in service, and instability and uncertainty for the Ports and the many stakeholders that rely upon dependable and smooth flows of cargo.

As a result of drivers' persistent efforts challenging their misclassification at the courts, through government investigations, and on the picket lines, drivers have succeeded in transforming their employment classification at several trucking companies. The Teamsters now represent 500 drivers at six drayage companies that have reformed their models and have come into compliance with employment, tax, and labor laws, properly classifying their drivers as employees. However, these high-road companies are at a steep competitive disadvantage as long as the majority of the industry continues to misclassify its drivers.

Although the industry challenges to the first Clean Trucks Program exacerbated driver exploitation, leading to significant unrest and chaos, we wish to acknowledge that the CTP made important initial strides. One of its key achievements was creating a system where trucking companies could be held accountable. Prior to the Clean Truck Program, as noted in the original CAAP, no one even knew how many unique trucks serviced the Ports let alone how many drayage companies conducted business at the ports. The implementation of direct contractual relationships between the Ports and trucking companies helped create more order and transparency.

Building upon that foundation, we urge the Ports to improve enforcement while taking even bolder steps to fully transform the port trucking sector to benefit all stakeholders, including workers and surrounding communities.

To that end, we share the below recommendations.

### **Recommendations:**

1. **The industry – trucking companies and cargo owners – must bear the cost of clean trucks.** As described above, the illegal nature of the leasing and misclassification has been widely demonstrated and well documented, and its adverse impact on drivers has worsened. To address this crisis, and seize the opportunity presented by the CAAP update, the CTP should contain measures to ensure that trucking companies and beneficial cargo owners assume the costs of clean trucks and do not illegally pass the costs on to drivers.

**2. The CTP must include provisions to ensure that trucking companies follow the law.**

The current Port of Los Angeles CTP Concession Agreement contains provisions requiring trucking companies to comply with the law. Specifically, Section 8, Compliance, states:

*Motor Carrier and all Drayage Trucks and their Drivers dispatched by Motor Carrier to perform Drayage Services shall when entering and leaving Port Property and while on Port Property, comply with this Concession Agreement, Port of Los Angeles Tariff No. 4 and all applicable federal, state and municipal laws, statutes, ordinances, rules and regulations that govern Motor Carrier's operations, including without limitation, any laws, rules and regulations regulating motor carriers, transportation, hazardous materials, safety, security, environment, employment, traffic, zoning and land use. Motor Carrier agrees that any non-compliant Drayage Trucks and drivers shall be denied access to Port property.*

While multiple trucking companies have outstanding final court judgments resulting from unpaid Labor Commissioner awards, demonstrating noncompliance with and violations of applicable federal, state and municipal laws that govern Motor Carrier's operations, to our knowledge, no trucking companies have been penalized, suspended or banned from the Port. To our knowledge, the Port has not even pursued any of the default remedies outlined in the concession agreement, not even a warning letter.

- a. The new CTP at both Ports should contain clear provisions requiring participating trucking companies to comply with federal, state and municipal laws – including, employment, and tax laws.
- b. The new CTP agreements should also include noncompliance with such laws as one of the events of default.
- c. The CTP should require licensed motor carriers to notify the port within 15 days of actions being brought regarding violations to applicable federal, state and municipal laws.
- d. The Ports should implement policies that protect them from negative economic impacts and reputational harm caused by labor disruptions, strikes and picketing that damage the ports' ability to compete in the market for port services.
- e. The CTP Applications should continue requiring applications to disclose financial, licensing and basic operations information.

3. **Port drivers' and labor's voice must be included in a meaningful way.** Simply put, port drivers' voices were not factored in to the development of the Draft CAAP. The document states that the Ports held 50 stakeholder meetings. The Teamsters, who represent the drivers, were not invited to any such meetings, and to our knowledge, none of these meetings were held with drivers, who were the most adversely affected by the first CTP. Drivers and Teamsters representatives have repeatedly expressed our concerns about the proposed CAAP – including our frustration at being excluded from the process – in public comment at Harbor Commission meetings and the August 30 CAAP public workshop.
  - a. As the CAAP moves forward and the new CTP is developed, drivers and their representatives must have meaningful opportunities to be a part of the solution by sharing their concerns, ideas, and feedback with the Commissioners and Port staff.
4. **We Support the Smog Test for Drayage Trucks.** The Teamsters have been raising concerns for years that the lack of regular truck maintenance would result in trucks emitting more diesel pollution than regulated emissions standards resulting in trucks not actually being in compliance of the CTP emissions standards. Therefore, we strongly support the CAAP's proposal to facilitate, support, and expand upon the State's heavy-duty vehicle maintenance, repair, and inspection program currently under development. It is long overdue for the Ports to take a leadership role in inspecting trucks for safety and air emissions. It is important that this as part of the new CAAP.
5. **Transitioning to Zero emissions technology.** We support the highest possible emissions standards. We want clean air for the communities surrounding the ports and for the drivers themselves. Port drivers are among the most vulnerable to harmful emissions. Not only are they are in close proximity to the pollution at the ports and along the freight corridors during their long workdays, but many drivers live in the most affected communities.

We applaud the Mayors' June 2017 commitment to a zero emissions drayage fleet by 2035. However, we find the Draft CAAP falls short in laying out a road map to reach those goals, largely because of the unresolved structural problems of the port drayage market.

The cost to reach zero emissions is steep. The Ports' own estimated costs of turning over to a zero emissions fleet ranges from \$5.2 to \$7 billion for an electrical equipment fleet and from \$8.4 to \$11.2 billion for a fuel cell fleet.<sup>4</sup> A single fuel cell truck ranges from \$480,000 to \$640,000. Reaching zero emissions will require well-capitalized companies that are committed to making long-term investments in their fleets. As noted above, currently, the industry model is to force the costs of truck operation and any new technology onto the drivers. Such an approach is simply not sustainable and ultimately undercuts the goal of improving and maintaining air quality. Our recommendation to ensure companies pay this cost partially solves this problem, but more is needed. The Draft CAAP states that the Ports

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<sup>4</sup> "Preliminary Cost Estimates For Select 2017 Clean Air Action Plan Strategies," Port of Long Beach/Port of Los Angeles. 08/18/2017

will play an advocacy role in securing and facilitating the distribution of public subsidies, but taxpayers should not provide subsidies anywhere close to the cost of reaching zero emissions, instead only a fraction at most. Therefore, there is only one viable option which has had demonstrable success: create conditions that advantage companies that move towards zero emission, ensuring that investors will be ready, willing and able when the technology is ready.

- a. Establish a more aggressive timetable for “sun-setting” old trucks. Over the next two years, nearly 60 percent of registered trucks will become 10 years and older. Given the economics of the industry, once truck warranties expire it is highly likely that servicing these trucks and performing the maintenance required to stay in compliance with emissions standards will not be met. Therefore, trucks that are older than ten years should be sunset and banned from the ports.
- b. Any truck subsidy programs should explicitly prohibit any lease to own or similar programs such as those described in the USA Today “Rigged”.

We thank you for the opportunity to share our comments, and we hope to continue to work with you to develop a Clean Truck Program that benefits all stakeholders, including port drivers and communities. We welcome the opportunity to discuss further with Commissioners and staff.

Sincerely,

Fredrick Potter  
Director  
Teamsters Port Division

Eric Tate  
Secretary-Treasurer  
Teamsters Local 848

CC: Eric Garcetti, Mayor of the City of Los Angeles  
Mayor Garcia, Mayor of the City of Long Beach  
Randy Cammack, President, Teamsters Joint Council 42

Enclosure: CTP/Rene Flores petition and signers

LA Mayor Garcetti and Long Beach Mayor Garcia,

2500 people have signed a petition on Action Network telling you to We Need Clean Air + Good Jobs.

Here is the petition they signed:

You recently received a letter from René Flores, a port truck driver who was fired by Morgan Southern, which hauls goods for Walmart and Harbor Freight, for speaking out against 20-hour work days and routine wage theft he experienced as a port truck driver. René and his co-workers are deeply concerned that once again the cost of new trucks will be put on them as the new Clean Air Action Program is finalized.

I wholeheartedly support the sentiment expressed in René's letter to you:  
"We have chosen to raise our children here and my wife and I want them to breathe clean air. I know the trucks need to be replaced. But families like mine shouldn't have to pay for your program – you must take a stand and demand that the trucking companies and their big retail customers pay for these new zero-emission trucks. And you must kick out any trucking company that breaks the law and makes us pay for their equipment."

Those living close to the ports of LA and Long Beach deserve clean air, which is why I also support community and environmental organizations in calling for the ports to go further on clean air standards. It is time that the Mayors, ports, big retailers, and the companies we work for are held accountable to workers, communities, and the environment we live and work in.

Sincerely,

You can view each petition signer and the comments they left you below.

Thank you,

Trina Tocco

- 
- 
1. **Douglas Frye** (*ZIP code: 98102*)
  2. **Angel Rodriguez** (*ZIP code: 90731*)
  3. **Thomas Reynolds** (*ZIP code: 12186*)
  4. **Lynn Skibinski** (*ZIP code: 14150*)
  5. **I. Engle** (*ZIP code: 88352*)
  6. **Steve Schatz** (*ZIP code: 90715*)

7. **Dianne Yonan** (*ZIP code: 49735*)
8. **Char Esser** (*ZIP code: 19085*)
9. **Wendy Futrick** (*ZIP code: 19607*)
10. **Loretta Moore** (*ZIP code: 94513*)
11. **Jan Lochner** (*ZIP code: 96472*)
12. **Kimberly Shaub** (*ZIP code: 08618*)
13. **Frank Martinez** (*ZIP code: 90605*)
14. **Julie Takatsch** (*ZIP code: 12771*)
15. **Doug Yamamoto** (*ZIP code: 94706*)
16. **Sandra Smith** (*ZIP code: 98122*)
17. **Robert Janusko** (*ZIP code: 18018*)
18. **Tina Ann** (*ZIP code: 94924*)
19. **Andrea Saunders** (*ZIP code: 18015*)
20. **Andrea Oloughlin** (*ZIP code: 90603*)  
In a country that touts freedom of speech, it is unacceptable that Rene was fired because he chose to speak up against the work place atrocities that he has experienced. It is up to our mayors to stand up for those who make up our thriving economy through their manual labor-labor so intensive that it affects their health and their families.
21. **Ann Diamond** (*ZIP code: 06511*)
22. **Allen Strous** (*ZIP code: 43113*)
23. **Aaron Kenna** (*ZIP code: 92128*)
24. **Arnold McMahon** (*ZIP code: 91006*)
25. **Angel Torres** (*ZIP code: 85082*)
26. **Martin Marcus** (*ZIP code: 92120*)



27. **abigale wool** (*ZIP code: 90805*)
28. **Betty Stewart** (*ZIP code: 23608*)
29. **Ann Bein** (*ZIP code: 90064-2026*)
30. **Tom Ramsay** (*ZIP code: 79852*)
31. **Abigail Collazo** (*ZIP code: 20009*)
32. **Lilith Magdalene** (*ZIP code: 95461*)
33. **Edwin Johnson** (*ZIP code: 97520*)
34. **William Wilson** (*ZIP code: 45420*)
35. **A C** (*ZIP code: 94541-2382*)
36. **Adalyn Watts** (*ZIP code: 30311*)
37. **Amitav Dash** (*ZIP code: N1L 0A2*)
38. **Adam Barnes** (*ZIP code: 24060*)
39. **Maria Garcia** (*ZIP code: 90650*)
40. **Adolfo Bermeo** (*ZIP code: 90290*)
41. **Diane J** (*ZIP code: 55046*)
42. **Andrea Bonnett** (*ZIP code: 91001*)
43. **Arlene Forward** (*ZIP code: 11743*)
44. **Sister Clare Ann Litteken C.P.P.S.** (*ZIP code: 63118*)
45. **Aaron Gayken** (*ZIP code: 57105*)
46. **Nathan Taylor** (*ZIP code: 94110*)
47. **Edward Handley** (*ZIP code: 40241*)

48. **Albin Hansen** (*ZIP code: 49829*)
49. **Art Hanson** (*ZIP code: 48917*)
50. **Andrew Hinz** (*ZIP code: 21217*)
51. **Art Hubbard** (*ZIP code: 91762*)
52. **Alice Hunt** (*ZIP code: 90027*)
53. **William Cheek** (*ZIP code: 92115*)
54. **Nicholas Lenchner** (*ZIP code: 95403-1543*)
55. **Amanda Davies** (*ZIP code: V3M 2X5*)
56. **Aloysius Wald** (*ZIP code: 43214*)
57. **Jordan Kelso** (*ZIP code: 35565*)
58. **Al Weinrub** (*ZIP code: 94602*)
59. **Alan Feingold** (*ZIP code: 92011*)
60. **Alan Brown** (*ZIP code: 10024-6414*)
61. **Anthony Albert** (*ZIP code: 97330*)
62. **Robert Aldridge** (*ZIP code: 07070*)
63. **Alice Alford** (*ZIP code: 92226*)
64. **Allen Royer** (*ZIP code: 95125*)
65. **Allan Weiss** (*ZIP code: 33024*)
66. **Allison Rensch** (*ZIP code: SE18 2BA*)
67. **Alli Starr** (*ZIP code: 94609*)
68. **Alan Vessels** (*ZIP code: 30215*)

69. **Allan Ball** (*ZIP code: 22005*)
70. **Charles Alger** (*ZIP code: 96761-1220*)
71. **Brian Ternamian** (*ZIP code: 76054*)
72. **Alan Sundby** (*ZIP code: 53711*)
73. **Alvina Yeh** (*ZIP code: 20011*)
74. **Anthony Vallecillo** (*ZIP code: 90717*)
75. **Ann Lynch-Oasen** (*ZIP code: 53716*)
76. **Alison Guzman** (*ZIP code: 02453*)
77. **Allison Mannos** (*ZIP code: 90017*)
78. **Angela Gantos** (*ZIP code: 94920*)
79. **Amanda McNeill** (*ZIP code: 81321*)
80. **Elsa Gerard** (*ZIP code: 90266*)
81. **Amit Shoham** (*ZIP code: 94619*)
82. **Ann Lusch** (*ZIP code: 48240*)
83. **Angus M Macdonald** (*ZIP code: 22718*)
84. **anthony Montapert** (*ZIP code: 93004*)
85. **Christopher Walker** (*ZIP code: 72015*)
86. **amrit Khalsa** (*ZIP code: 90278*)
87. **Alex Stavis** (*ZIP code: 10128*)
88. **Amy Holt** (*ZIP code: 53711*)
89. **amy schumacher** (*ZIP code: 45440*)

90. **Andrea Anaya** (*ZIP code: 92780*)
91. **William Anderson** (*ZIP code: 29412*)
92. **An anonymous signer** (*ZIP code: SO53 2HY*)
93. **Andrew Costigan** (*ZIP code: 02062*)
94. **Andrew Slack** (*ZIP code: 20010*)
95. **Andrew Yale** (*ZIP code: IL*)
96. **George Levesque** (*ZIP code: 01851*)  
justice for all
97. **Andy Towers** (*ZIP code: 95605*)
98. **Angela Maeda** (*ZIP code: 98033*)
99. **angela thompson** (*ZIP code: 20910*)
100. **Angela Black** (*ZIP code: 90805*)
101. **Angie Affolter** (*ZIP code: 60060-3372*)
102. **Angela Kelly** (*ZIP code: 98501*)
103. **Brian Williams** (*ZIP code: 48185*)
104. **Cori Bishop** (*ZIP code: 08215*)
105. **Nina Utigaard** (*ZIP code: 97540*)
106. **Anita Coolidge** (*ZIP code: 92007*)
107. **ANA DIAZ** (*ZIP code: 01071*)
108. **Anke Brady** (*ZIP code: 84086*)
109. **Ann Worth** (*ZIP code: 94703*)
110. **Anne Darby** (*ZIP code: NG5 2AJ*)

**111. Anne Hepfer** (ZIP code: 98112)

**112. anne veraldi** (ZIP code: 94110)

**113. Anthony Dent** (ZIP code: N22 5PN)

**114. Aaeron Robb** (ZIP code: 21218)

**115. Ella Robson** (ZIP code: 59037)

**116. Anil Prabhakar** (ZIP code: 78613)

**117. Anne Pavlic** (ZIP code: 48167)

**118. Nelson Ross Laguna** (ZIP code: k2e 5e1)

**119. Alice Neuhauser** (ZIP code: 90266)

**120. Kenneth Nahigian** (ZIP code: 95827)

**121. Tony Greiner** (ZIP code: 87110-1439)

**122. Matthew Genaze** (ZIP code: 02139)

Any policy or action that promotes any fuel source other than 100% sustainable and clean sources such as solar and wind, is criminally negligent as it knowingly increases carbon emissions and there accelerates climate change and the degradation of current and future American's resources, health and prosperity.

**123. Andrew Brown** (ZIP code: SK4 1QA)

**124. Michael Price** (ZIP code: 37073)

Please don't make the workers pay for new trucks. It's not their responsibility and they can't afford it. Do the right thing and help the working man. The company doesn't need any help making money.

**125. Isaac Wollman** (ZIP code: 93405)

**126. Rob Jenkin** (ZIP code: 48390)

**127. Carroll Arkema** (ZIP code: 07442)

**128. Erin Winslow** (ZIP code: 28205)

**129. Arlene Rakoncay** (ZIP code: 60076)

**130. arlene merryman** (*ZIP code: 94705*)

Stand in, woman!

**131. Arline Taylor** (*ZIP code: 54022*)

**132. arnold martelli** (*ZIP code: 94010*)

It's time to stop abusing workers / employees in America.

**133. Angel Roberts** (*ZIP code: 95501*)

Angel Roberts

**134. Andreas Rossing Angeltveit** (*ZIP code: 3915*)

**135. Arthur & Shirley Wolfe** (*ZIP code: 49617*)

**136. Asano Fertig** (*ZIP code: 94702-1427*)

**137. aron shevis** (*ZIP code: 11218*)

**138. Ashley Pagan** (*ZIP code: 90731*)

**139. Alice Polesky** (*ZIP code: 94107*)

**140. A.L. Steiner** (*ZIP code: 90063*)

**141. Chris Drumright** (*ZIP code: 37130*)

**142. Doug Arnold** (*ZIP code: 85044-2423*)

**143. Alan Swyer** (*ZIP code: 90402*)

**144. Lauren Moss-Racusin** (*ZIP code: 06238*)

**145. Ann Thryft** (*ZIP code: 95006*)

**146. Matt Peters** (*ZIP code: 85712-4651*)

**147. Ann McMullen** (*ZIP code: 84093*)

**148. Anthony Straka** (*ZIP code: 12590*)

**149. Vanessa Guzman** (*ZIP code: 90280*)

**150. Steve Rivera** (*ZIP code: 92102*)

**151. Andrew Vogel** (*ZIP code: 52761*)

Why isn't the attorney general of California or the state taxing body suing these companies for fraud? The state could easily prove that these businesses are failing to collect state income tax on these so called independent contractors.

**152. Audrey van Ryn** (*ZIP code: 1010*)

Of course the trucking companies should pay for the trucks!!

**153. Clint Austill** (*ZIP code: 92661*)

**154. autumn gonzalez** (*ZIP code: 95623*)

**155. John Tovar** (*ZIP code: 50613-8913*)

**156. Peter Gunther** (*ZIP code: 60625*)

**157. Raquel Avila** (*ZIP code: 90602*)

**158. Amy Warner** (*ZIP code: 2052*)

**159. Judith Smith** (*ZIP code: 94601*)

**160. Drew & Susan Lindhoff** (*ZIP code: 30047*)

Can't the powers that be for once give labor a break?

**161. James Toy** (*ZIP code: 48103*)

**162. Pamela A. Lowry** (*ZIP code: 94704*)

**163. Bruce Donnell** (*ZIP code: 87506*)

**164. Bill Hulstrom** (*ZIP code: 92570*)

**165. B. Z.** (*ZIP code: 32569*)

**166. Fernie Hayes** (*ZIP code: 80202*)

**167. Edith Mann** (*ZIP code: 14527*)

**168. Kirk Bails** (*ZIP code: 48045*)

**169. Fatima Baker** (ZIP code: 21613)

**170. Lilinoe Smith** (ZIP code: 96741)

**171. Benjamin Allen** (ZIP code: 21114-2125)

**172. Barbara Wood** (ZIP code: 98133)

**173. Barbara Clewett** (ZIP code: 40517-2482)

**174. Greg Barfuss** (ZIP code: 90247)

It's time for you to listen to the drivers who are being missed classified and work like slaves for bare minimum wages. Manny or miss treated threatened that they will be fired. We are not going to go away we want justice for all port Drivers!

**175. Kathryn Boyd** (ZIP code: 12953)

**176. Bob Druwing** (ZIP code: 91401-1010)

**177. babette bruton** (ZIP code: 33707)

**178. Belle Sprague** (ZIP code: 91709)

**179. b carpenter** (ZIP code: 94608)

**180. Elizabeth Chacich** (ZIP code: 55720)

**181. BC Shelby** (ZIP code: 97209)

**182. John Cairns Jr.** (ZIP code: 19462-2429)

**183. Barry Cutler** (ZIP code: 19064)

**184. Brian Murphy** (ZIP code: 91423)

**185. Rita Sheehan** (ZIP code: 08730)

**186. Michael Brandes** (ZIP code: 11566-2103)

**187. George Hanas** (ZIP code: 44030)

**188. John A Beavers** (ZIP code: 60625)



- 189. Bruno Eckert** (*ZIP code: 1230*)
- 190. Becky Daiss** (*ZIP code: 22201*)
- 191. Bob Segal** (*ZIP code: 85710*)
- 192. Timothy Beitel** (*ZIP code: 08071*)
- 193. Belinda Sharp** (*ZIP code: 00000*)
- 194. Ben Treidlilinger** (*ZIP code: k7v 1v3*)
- 195. Ben George** (*ZIP code: 87110*)
- 196. Steven Berman** (*ZIP code: 94703*)
- 197. Ronald Ratner** (*ZIP code: 57104*)
- 198. Bethany Sattur** (*ZIP code: 07066*)
- 199. Ron Kloberdanz** (*ZIP code: 94044*)
- 200. Elizabeth Werner** (*ZIP code: 06514*)
- 201. Betsy Germanotta** (*ZIP code: 02140*)
- 202. B. Chan** (*ZIP code: 92131*)
- 203. Betty Cooper** (*ZIP code: 65109*)
- 204. Beverly Solomon** (*ZIP code: 08033*)
- 205. Beverly Mitchell** (*ZIP code: 83709*)
- 206. Dorene Robinson** (*ZIP code: 98005*)
- 207. Barry Morrill** (*ZIP code: 90501*)
- No way can we accept companies collecting profits by passing on the responsibility for the negative effects of their business into the individual worker.
- 208. Bonnie German** (*ZIP code: 48309*)

**209. Barbara Gordon** (*ZIP code: V8S4G3*)

**210. Barbara Grove** (*ZIP code: 78741*)

**211. Birgit Hermann** (*ZIP code: 94117*)

**212. Susan Ozawa** (*ZIP code: 94127*)

**213. Albert Sargis** (*ZIP code: 94606*)

**214. Patricia Cipolla** (*ZIP code: 07420*)

**215. Brian Russell** (*ZIP code: 90046*)

**216. Sarah Hamilton** (*ZIP code: 13032*)

**217. Michael Shea** (*ZIP code: 93631*)

**218. Rose Henderson** (*ZIP code: 90044*)

**219. Mike Lencsak** (*ZIP code: 07071*)

**220. Jennifer Sumiyoshi** (*ZIP code: 89031*)

**221. Brandon Salse** (*ZIP code: 91786*)

**222. Patricia Always** (*ZIP code: 85351*)  
Put the responsibility where it belongs.

**223. Bill Sorem** (*ZIP code: 55345*)

**224. Bill Holt** (*ZIP code: 78736*)

**225. Bill Evans** (*ZIP code: 91104*)

**226. Deb Beck** (*ZIP code: 10566*)

**227. William McGee** (*ZIP code: 02360*)

**228. William Shaw** (*ZIP code: BT41JX*)

**229. Michael Mills** (*ZIP code: 94115*)

230. **Sonja Birdsong** (*ZIP code: 40515*)
231. **Barbara Jacoby** (*ZIP code: 44142*)
232. **Bettie Reina** (*ZIP code: 08340*)
233. **Beverly Lewis** (*ZIP code: 30534*)
234. **Barry Saltzman** (*ZIP code: 90035*)
235. **Boaz Kanarek** (*ZIP code: 11428-1441*)
236. **Darren Mitton** (*ZIP code: 30002*)
237. **Brent Spencer** (*ZIP code: 90808-4105*)
238. **Barbara Lenarcic** (*ZIP code: 16155*)
239. **Cory Runion** (*ZIP code: 82009*)
240. **April Ewaskey** (*ZIP code: 90809-2674*)
241. **Brian Moore** (*ZIP code: 19145*)
242. **Robert Reilly** (*ZIP code: 80470*)
243. **Bob Rushford** (*ZIP code: 11769*)
244. **Jim Mochuk** (*ZIP code: v9m 2v3*)
245. **Bonnie Lynn MacKinnon** (*ZIP code: 78626*)
246. **Bettina Adragna** (*ZIP code: 96786*)
247. **robert maschi** (*ZIP code: 91730*)
248. **Bernie Saftner** (*ZIP code: 15241*)
249. **William Munger** (*ZIP code: 02130*)
250. **Matthew A. Weaver** (*ZIP code: 43430*)

**251. Bo Bergstrom** (ZIP code: 88061)

**252. Robert Nelson** (ZIP code: 84105)

**253. Robert Lombardi** (ZIP code: 11234)

**254. Robert Stephens** (ZIP code: 85122)

**255. Bob Atwood** (ZIP code: 96003)

**256. Bobbie DelCastillo** (ZIP code: 89011)

**257. BOB HAGELE** (ZIP code: 60601)

**258. Robert Haslag** (ZIP code: 65023)

**259. Bo Breda** (ZIP code: 96778)

**260. Robert Crum** (ZIP code: 44721)

**261. Bob Sipe** (ZIP code: 04210)

**262. Karen Malley** (ZIP code: 92804)

**263. Matt Brzezinski** (ZIP code: 48081)

**264. bonnie uffman** (ZIP code: 66044)

**265. Carolyn Webb** (ZIP code: 10471)

**266. JOANN WAYMAN** (ZIP code: 86327)

I HAVEN'T LIVE IN CA FOR MANY YEARS, BUT I STILL LOVE THIS STATE. WHEREVER I LIVE I SUPPORT THE WORKERS SO I WILL ASK YOU TO ENSURE DRIVERS WILL NOT HAVE TO PAY FOR NEW ZERO EMISSIONS TRUCKS!

**267. Stacy Crosby** (ZIP code: 72404)

**268. Margaret Eells** (ZIP code: 01701)

**269. Jess Graffell** (ZIP code: 92399)

**270. Jonathan Boyne** (ZIP code: 96822)

- 271. Brendan Kierans** (*ZIP code: 94601*)
- 272. Robert Prola** (*ZIP code: 95139*)
- 273. Anne Carpenter** (*ZIP code: 48105*)
- 274. Barb McCown** (*ZIP code: 97702*)
- 275. Mark Simpson** (*ZIP code: 98584*)
- 276. Barbara King** (*ZIP code: 90029*)
- 277. Brenda Fies** (*ZIP code: 91406*)
- 278. Brent Catherman** (*ZIP code: 85053*)
- 279. Brett Dennison** (*ZIP code: 92840*)
- 280. Brian Fink** (*ZIP code: 11215*)
- 281. brian luft** (*ZIP code: 43230*)
- 282. Brian Miles** (*ZIP code: 49320*)
- 283. Susanne Hesse & Doug Dyer** (*ZIP code: 32615*)
- 284. Bridget Gordon** (*ZIP code: 90004*)
- 285. Obie Hunt** (*ZIP code: 10456-3941*)
- 286. Barbara Nagy** (*ZIP code: 90503-7235*)
- 287. Lee Brockhaus** (*ZIP code: 74802*)  
20 hours is not legal
- 288. BOB ROLSKY** (*ZIP code: 98392*)
- 289. Bill Rosenthal** (*ZIP code: 11374*)
- 290. Regina Brown** (*ZIP code: 29809*)
- 291. BRUCE CARROLL** (*ZIP code: 50014*)

**292. Bruce Cratty** (ZIP code: 80210)

**293. Bruce Fleming** (ZIP code: 91405)

**294. Bruce Krawisz** (ZIP code: 54449)

**295. Bruce Wimberley** (ZIP code: 90245-2053)

**296. Bruce Peters** (ZIP code: 95065)

**297. Betsy Ruhe** (ZIP code: 40214)

**298. Barbara Singer** (ZIP code: 33351)

**299. Tom Dougherty** (ZIP code: 02766)

**300. Belinda Thielen** (ZIP code: 53402)

**301. Holly Burgin** (ZIP code: 91405)

**302. Kathryn Burns** (ZIP code: 90620)

**303. Steven Burrows** (ZIP code: 38501)

**304. Sam Bowers** (ZIP code: 92802-1434)

**305. Yogi Clinton** (ZIP code: 74136)

**306. Claire Simonich** (ZIP code: 94019)

Workers should not have to pay for equipment nor should they have to pay exorbitant fees. That's wage theft. Equipment upgrades and fees should be paid for by the companies and customers.

**307. Carol Rahbari** (ZIP code: 48197)

**308. Christopher F. Vota** (ZIP code: 08060-3305)

Any agreement where someone can work an entire day and not take home a living wage is a CRIME AGAINST HUMANITY! The truckers do their part: stop the indentured servitude!

**309. Duncan Baruch** (ZIP code: 97219-4067)

Stop exploiting Rene Flores and all other truck drivers.

**310. Cheryl E** (ZIP code: 76207)

Demand that the trucking companies and their big retail customers pay for these new zero-emission

trucks.

**311. Cheryl Dzubak** (*ZIP code: 08620*)

**312. Sarah K Harper** (*ZIP code: 20781-2133*)

**313. Carol Follett** (*ZIP code: 98226*)

**314. marc Alfano** (*ZIP code: 11940*)

**315. Richard Blakemore** (*ZIP code: 95338*)

**316. J. McGeary** (*ZIP code: 02152*)

**317. Connie Anderson** (*ZIP code: 93010*)

**318. Candace LaPorte** (*ZIP code: 98315*)

**319. Diane Berliner** (*ZIP code: 90046*)

**320. Vic Bostock** (*ZIP code: 91001*)

**321. Caren Bar-Zvi** (*ZIP code: 33442*)

**322. Carey Corr** (*ZIP code: 92663*)

**323. Carol Fly** (*ZIP code: 78727*)

**324. Carlton Russell** (*ZIP code: 99508*)

**325. Carl Rosen** (*ZIP code: 60607*)

**326. Carol Green** (*ZIP code: 55418*)

**327. Carol Criqui** (*ZIP code: 91104*)

**328. Carole Gonsalves** (*ZIP code: 95120*)

**329. Carol J. Loomis** (*ZIP code: 97233*)

**330. carolyn massey** (*ZIP code: 62301*)

331. **Carolynn Griffith** (*ZIP code: 96825*)
332. **Carolyn Trovao** (*ZIP code: 93722*)
333. **Silvia Carrillo** (*ZIP code: 92376*)
334. **Caryn Cowin** (*ZIP code: 92211-7537*)
335. **Caryn Graves** (*ZIP code: 94702*)
336. **Kathleen Doyle** (*ZIP code: 80403*)
337. **Cassie Stumborg** (*ZIP code: 63084*)
338. **Tracy Pease** (*ZIP code: 61107-4354*)
339. **John Viacrucis** (*ZIP code: 56560*)
340. **Catherine Croteau-Pinney** (*ZIP code: 02302*)
341. **Susan Kutz** (*ZIP code: 88012*)
342. **Ellen McConnell** (*ZIP code: 08872*)
343. **Linda Jones** (*ZIP code: 86325*)
344. **Linda Smith** (*ZIP code: 97527*)
345. **Charles Wolfe** (*ZIP code: 91342*)
346. **Terry Bartle** (*ZIP code: 59701*)
347. **Carlos Borba** (*ZIP code: 94590*)
348. **Caryn Wagner-McPherson** (*ZIP code: 62034*)
349. **HC Cannon** (*ZIP code: 95436*)
350. **Cheryl Del Vecchio** (*ZIP code: 93446*)
351. **Cory Christian** (*ZIP code: 30629*)



**352. Diana Bain** (ZIP code: 05734)

**353. e c** (ZIP code: 90606)

**354. Celeste Hong** (ZIP code: 90027-1144)

**355. Carol Moné** (ZIP code: 95570)

**356. Carol Steinhart** (ZIP code: 53705)

It's a mayor's job to do things like this.

**357. Chuck Graver** (ZIP code: 08088)

**358. Santiago Rivera** (ZIP code: 33705)

Good luck brothers

**359. myrna freeman** (ZIP code: 93643-9589)

**360. Chandra Cruz-Thomson** (ZIP code: 47161)

**361. Charlene Davies** (ZIP code: 99201)

**362. Charlene Hamer** (ZIP code: 90039)

**363. Charles Risher** (ZIP code: 7017)

**364. Charles Allen** (ZIP code: 95112)

**365. Charles Hargrove** (ZIP code: 46816)

**366. Charles Lange** (ZIP code: 97402)

**367. James Gray** (ZIP code: 49418)

**368. RAY D. DENNISON** (ZIP code: 65605-7035)

GIVE REN'E FLORES JOB BACK TO HIM WITH BACK PAY.( AT ONCE )

SINCERELY RAY D DENNISON

**369. Cheryl Gaster** (ZIP code: M4L 2Y8)

**370. Cheri Laos** (ZIP code: 97202)

**371. Chilton Gregory** (ZIP code: 87106)

**372. Christina Burton** (ZIP code: 92308)

**373. James Stone** (ZIP code: 32459)

**374. Chris Monti** (ZIP code: 44039)

**375. Christine Niskanen** (ZIP code: 13905)

**376. Chris Baudy** (ZIP code: D-20175)

**377. Christine Wordlaw** (ZIP code: 75229)

**378. christa vanderbilt** (ZIP code: 19348)

**379. Christiana Brinton** (ZIP code: 75223)

**380. Christina Montorio** (ZIP code: 07758)

**381. Charles Marchese** (ZIP code: 90815)

**382. Louise and Chuck Quigley** (ZIP code: 02184)

**383. Cyndi Hunt** (ZIP code: 32305)

**384. Peter Kahn** (ZIP code: 01772-1915)

**385. carol jagiello** (ZIP code: 07403)

**386. Chris J. Tanzi** (ZIP code: 95023)

**387. Charles K. Alexander II** (ZIP code: 12202)

**388. Cheryl Kallenbach** (ZIP code: 83555)

Expecting workers to pay for the zero-emissions edict is ludicrous. The people making money off the trucks are the ones who should pay. And I guarantee you, Walmart and Amazon can afford to pay a lot easier than the truck drivers.

**389. Carol Armstrong** (ZIP code: 98604)

**390. Chad Johnson** (ZIP code: 90004)

**391. Claudette Begin** (ZIP code: 94587)

**392. Melanie Chischilly** (*ZIP code: 75638*)

**393. Jimi Cleek** (*ZIP code: 75081*)

**394. William Clemens** (*ZIP code: 11706*)

**395. Crystal Gibson** (*ZIP code: 46563*)

**396. Catherine Clifton** (*ZIP code: 13809*)

**397. Constance Minerovic** (*ZIP code: 44077*)

Don't penalize the workers! Tell the companies to pay!

**398. Melanie A. Cloghessy A. Cloghessy** (*ZIP code: 46394*)

**399. Wendi Myers** (*ZIP code: 34683*)

**400. Christina Whiting** (*ZIP code: 90066*)

**401. Alan Robinson** (*ZIP code: 92637*)

**402. Cheryl Dare** (*ZIP code: 38104-6409*)

**403. Marilyn Hansen** (*ZIP code: 95403*)

**404. Christine Roane** (*ZIP code: 01108*)

**405. Carmen Ramirez** (*ZIP code: 32324*)

**406. Claudio Naranjo** (*ZIP code: 33114*)

**407. Matthew Franck** (*ZIP code: 08904*)

**408. Christopher Dowling** (*ZIP code: 79843*)

**409. Coeli Hoover** (*ZIP code: 03820-4368*)

**410. Sharon J Sawyer** (*ZIP code: 80504*)

**411. maria rodriguez** (*ZIP code: 94547*)

**412. Collin Rees** (*ZIP code: 20001*)

**413. Lyle Collins** (*ZIP code: 98908*)

**414. Conrad Franz** (*ZIP code: 8618*)

**415. William Conger** (*ZIP code: 98221*)

**416. Connie North** (*ZIP code: 80516*)

**417. Katherine Holmes** (*ZIP code: 48104*)

**418. David Mayer** (*ZIP code: 98502*)

It's up to the companies that are purchasing high-emissions trucks. If you really want to decrease the amount of smog and particulates in the LA basin, truck owners should be compelled to make drastic changes or lose their business.

**419. Corinne dodge** (*ZIP code: 030238*)

The environment must be protected for the sake of all of us, and we need the clean air which new zero emission trucks will provide. The wealthy corporations who are benefiting from the trucking industry have the responsibility to pay for these trucks, not the workers who drive the trucks.

**420. Alice Corson** (*ZIP code: 23404*)

**421. Sammy Low** (*ZIP code: 98292*)

**422. Celene Perez** (*ZIP code: 91803*)

**423. Chas Griffin** (*ZIP code: 27376-9759*)

**424. donald taylor** (*ZIP code: 95628*)

**425. Carl Pribanic** (*ZIP code: 75025*)

**426. C P Saul** (*ZIP code: 10025*)

**427. Cynthia Bauet** (*ZIP code: 15229*)

**428. Christine Fluet** (*ZIP code: 06237*)

Port truck drivers should not be the ones paying for the new zero emission trucks. This is a bill that should be paid for by the large extremely wealthy corporations.

**429. Cristina Gallo** (*ZIP code: 11238*)

**430. Catherine Loudis** (*ZIP code: 94960*)

**431. Cindy Jensen** (ZIP code: 97133)

This is all so very doable if those with the power choose to make the change. The people are already on board and want this. If those in power ignore the people then we'll have to replace them.

**432. An anonymous signer** (ZIP code: 61701)

**433. Charles Weber** (ZIP code: 92056)

**434. Tiffaney Derreumaux** (ZIP code: 97038)

**435. Scott Cummings** (ZIP code: 90095)

**436. Heather Miller** (ZIP code: 78747)

**437. Curtis Barnett** (ZIP code: 90803)

**438. Carolyn Villanova** (ZIP code: 01201)

California is always a leader. Do it again.

**439. Chris Washington** (ZIP code: 10019-1140)

**440. Celeste Winterberger** (ZIP code: 27616)

**441. Cynthia Garcia-Doane** (ZIP code: 93005)

**442. Darnell Barsness** (ZIP code: 55033-3302)

Please quit screwing people over for the sake of big corporations.

**443. Duncan Callow-Evans** (ZIP code: BA2 2HG)

**444. dana finn** (ZIP code: 92509)

**445. Dennis Manning** (ZIP code: 80921)

**446. David Abalos** (ZIP code: 08520)

**447. Deborah Dahlgren** (ZIP code: 06118)

**448. Yvonne Fisher Neal** (ZIP code: 90293)

**449. Paul Carmi** (ZIP code: 63128-3072)

**450. Dennis Koopman** (ZIP code: 77901)

**451. dale riehart** (*ZIP code: 94107*)

**452. Dale Matlock** (*ZIP code: 95065-1226*)

**453. Dan Alexander** (*ZIP code: 10024*)

**454. Dana Hooten** (*ZIP code: 37029*)

**455. Lilli Ross** (*ZIP code: 10024*)

**456. Dan Chen** (*ZIP code: 95064*)

**457. Daniel Wilkinson** (*ZIP code: 90808-1716*)

**458. Dan Greene** (*ZIP code: 50501*)

**459. Daniel Gerwin** (*ZIP code: 90039*)

**460. Daniel Clarkson** (*ZIP code: 80501*)

Real sick of fascists and oligarchs stealing from the very people who make them rich

**461. Dan Stabel** (*ZIP code: 98520*)

**462. Gail Tinsley** (*ZIP code: 93117*)

**463. Dennis Ruffer** (*ZIP code: 95125*)

**464. David A. Smith** (*ZIP code: 92617*)

**465. DE SMITH** (*ZIP code: 55432*)

**466. Diana Stokes** (*ZIP code: 60637*)

**467. David Burwasser** (*ZIP code: 44074*)

**468. Dave Dunkak** (*ZIP code: 97215*)

**469. Dave Fronske** (*ZIP code: 86001*)

**470. David Margolis** (*ZIP code: 60089-1762*)

**471. David Robinson** (*ZIP code: 62707*)

**472. David McCaffrey** (ZIP code: 92869)

**473. David Kerlick** (ZIP code: 98126)

**474. David Misch** (ZIP code: 90403)

**475. David Yao** (ZIP code: 98133)

**476. David Downing** (ZIP code: 92240-1136)

**477. David Black** (ZIP code: 85719-1110)

**478. David Gonzales** (ZIP code: 91910)

Put a stop to all Big Retailers who practice unfair labor and wage theft...

**479. David Stetler** (ZIP code: 98034-1907)

**480. David N Franklin N Franklin** (ZIP code: 98115)

**481. david wagner** (ZIP code: 90802)

total support!!!

**482. Davin Peterson** (ZIP code: 95501)

**483. Dawn Albanese** (ZIP code: 60007-1718)

**484. deirdre brownell** (ZIP code: 91504)

**485. Denise Bruskin-Gambrell** (ZIP code: 21044)

**486. david olson** (ZIP code: 53704)

**487. Bronkie** (ZIP code: 32935)

**488. Dwight Taylor** (ZIP code: 47630)

**489. George Mazanderan** (ZIP code: 20704-1723)

**490. David Campbell** (ZIP code: 90039)

**491. Della Clason Sperling** (ZIP code: 447085931)

**492. Drew Cucuzza** (ZIP code: 06515)

**493. Doug Wingeier** (ZIP code: 28801)

**494. Diane Hendricks** (ZIP code: 76374)

**495. Daniel Duarte** (ZIP code: 92114)

**496. Deb Senig** (ZIP code: 03062)

**497. Gerald Liebich** (ZIP code: 97321)

**498. Deborah Martin** (ZIP code: 08021)

**499. Deborah Axt** (ZIP code: 10040)

**500. Dorothy Wilkinson** (ZIP code: 90027-5722)

So you PROFESSIONAL politicians, what's your stance going to be? The usual SCREW the citizenry, while boot-licking the BIG CORPORATIONS who PAY you? Or will you do your jobs for a BIG CHANGE and work for your fellow citizens? Hmm?

**501. ayodeji abidogun** (ZIP code: 94105)

**502. Priscilla Rocco** (ZIP code: 92626)

**503. B D'Emilio** (ZIP code: 20011)

**504. gerardo montano** (ZIP code: 91773)

Environmental regulations on air pollution cannot wait any longer; our children's lives depend on it.

**505. Denise DeGrazia** (ZIP code: 90815)

**506. Dennis Kashi** (ZIP code: 44125)

**507. Dennis McCraven** (ZIP code: 91745)

**508. Donald Erway** (ZIP code: 96740)

**509. Dennis Rogers** (ZIP code: 01452)

**510. Jessica Ramirez** (ZIP code: 90045)

**511. David Hand** (ZIP code: 98110)



**512. Debra Flott** (*ZIP code: 91344*)

**513. Derek Gendvil** (*ZIP code: 89117*)

I think Long Beach & other cities & ports need to take action for port drives that demand zero emissions to reduce our consumption of fossil fuels. There are many families that are making below minimum wage & the wage theft & the unsafe conditions has destroyed the livelihoods & we need trucking companies to take a stand to reduce emissions & that Mayors Garcetti & Garcia take a stand to not pay for those new zero emission trucks.

**514. Carrie Cole** (*ZIP code: 97213*)

**515. David Bensman** (*ZIP code: 07052*)

**516. David H. Finke** (*ZIP code: 44074-1525*)

**517. Diane Hohnbaum** (*ZIP code: 92697*)

THE PORT DRIVERS AND THE MIDDLE CLASS WORK FORCE ARE THE KEY TO "MAKING AMERICA GREAT AGAIN".

I urge you to support the truckers stand against corporate greed.

**518. Dave Hornstein** (*ZIP code: 48071*)

**519. DIA REDMAN** (*ZIP code: 55109*)

**520. DIA REDMAN** (*ZIP code: 55411*)

**521. Diana Knowland** (*ZIP code: 93560*)

**522. Diana Duncan** (*ZIP code: 90403*)

**523. Diana Dee** (*ZIP code: 91606*)

**524. Adina Parsley** (*ZIP code: 98292*)

**525. Eduardo Diconca** (*ZIP code: M6H 2P3*)

**526. JAMES BARTLETT** (*ZIP code: 93458*)

**527. rosemarie werner** (*ZIP code: 48658-9778*)

**528. Dineo Maine** (*ZIP code: 91915*)

**529. Joyce schwartz** (*ZIP code: 32714-1335*)

- 530. Mary Zamagni** (*ZIP code: 95252*)
- 531. Daniel Jarvis** (*ZIP code: 93041*)  
Please protect our humanity and environment now and for the future.
- 532. Dennis Feichtinger** (*ZIP code: 48183*)
- 533. Gabriel Lautaro** (*ZIP code: 94610*)
- 534. David Klass** (*ZIP code: 10011*)
- 535. Douglas Langenau** (*ZIP code: 12578*)
- 536. Daniel Linhart** (*ZIP code: 85705*)
- 537. Linda Kane** (*ZIP code: 85208*)
- 538. Nancy Carl** (*ZIP code: 97111*)
- 539. Terry S.C.** (*ZIP code: 93455*)
- 540. Dennis' LaborSOLIDARITY** (*ZIP code: 19612*)
- 541. Jennifer Cochran** (*ZIP code: 82601*)
- 542. Don Deck** (*ZIP code: 93546*)
- 543. Daniel Melo** (*ZIP code: 01749*)
- 544. Donald Meyerson Sr** (*ZIP code: 180426045*)
- 545. Dan Mikkelsen** (*ZIP code: 90502*)
- 546. Deidre Moderacki** (*ZIP code: 10009*)
- 547. Deanna Clinger** (*ZIP code: 43110*)
- 548. Donald Rolf** (*ZIP code: 43551*)
- 549. Diana Savas** (*ZIP code: 91040*)
- 550. Terry Shetler** (*ZIP code: 34234*)

**551. Zvika Greensfield** (*ZIP code: 94903*)

**552. Dollie Moir** (*ZIP code: 85546*)

**553. Gerry Milliken** (*ZIP code: 86326-5991*)

**554. Dominic D'ambrosia** (*ZIP code: 60148*)

**555. Don Woodson** (*ZIP code: 75154*)

**556. donald solomon** (*ZIP code: 02908*)

**557. Donald Shaw** (*ZIP code: 33703*)

**558. Don McKelvey** (*ZIP code: 44123*)

This is a no-brainer !

**559. Donna Blue** (*ZIP code: 40502*)

**560. Donna Pedroza** (*ZIP code: 94501*)

**561. Donnie Waltermire** (*ZIP code: 42754*)

**562. Don Norrell** (*ZIP code: 30064*)

**563. Elaine Donovan** (*ZIP code: 14466*)

**564. Don Der** (*ZIP code: 37043*)

**565. Wendy Shuman** (*ZIP code: 19335*)

**566. Dorian Sarris** (*ZIP code: 05826*)

**567. Dorinda Scott** (*ZIP code: 78704*)

**568. dorinda kelley** (*ZIP code: 97213*)

**569. Dorothy Stoner** (*ZIP code: 60103*)

**570. David Osterhoudt** (*ZIP code: 92688*)

**571. Norman Traum** (*ZIP code: 80304*)

**572. Douglas Dyakon** (ZIP code: 90069)

**573. Donna J. Pemmitt** (ZIP code: 49242)

**574. Charlotte Pirch** (ZIP code: 92708)

**575. Cami Cameron** (ZIP code: 98661)

**576. Heath Post** (ZIP code: 48906)

**577. Thomas Dannecker** (ZIP code: 90027)

**578. Andrew Heiserman** (ZIP code: 60618)

**579. Molly Rhodes** (ZIP code: 90039)

**580. Doug Roberts** (ZIP code: N2J 3W9)

Zero emission trucks are a great idea, but they should be paid for by the trucking companies, not their employees.

**581. Seth Picker** (ZIP code: 95619)

**582. David Schwebke** (ZIP code: 60014)

**583. Roy Wilensky** (ZIP code: 22033)

**584. David Savige** (ZIP code: 23703)

**585. donna selquist** (ZIP code: 34987)

Absolutely!

**586. David Floyd** (ZIP code: 90254)

**587. Darrell Neft** (ZIP code: 92626)

**588. David Sookne** (ZIP code: 90230)

**589. david tully** (ZIP code: 97220)

**590. matt wilgosz** (ZIP code: 15042)

**591. Susan Dunn** (ZIP code: 95945)

**592. Dianne Varga** (*ZIP code: 73102*)

**593. Dwain Jones** (*ZIP code: 92506*)

**594. Donald Weigt** (*ZIP code: 06002*)

**595. Donald W. Henderson** (*ZIP code: 14850*)

**596. David Wood** (*ZIP code: 98499*)

**597. Diane Wynne** (*ZIP code: 28212*)

**598. El Daleiden** (*ZIP code: 55104*)

**599. Emilio Verdugo** (*ZIP code: 90066*)

As a matter of public safety and driver health, no driver should be on the road for more than 8 hours.

**600. Elaine Benjamin** (*ZIP code: 91901*)

**601. Evan Kutch** (*ZIP code: 11725*)

**602. Ellen Caprio** (*ZIP code: 92131*)

**603. Elgie Cloutier** (*ZIP code: 55021*)

**604. ed kelly** (*ZIP code: 19029*)

**605. Ed Bennett** (*ZIP code: 98660*)

**606. Edeltraut Renk** (*ZIP code: 00060*)

**607. Eddie Fischmann** (*ZIP code: 89110*)

**608. Edith Frederick** (*ZIP code: 93901*)

**609. Edith Ogella** (*ZIP code: 93111*)

**610. Edward Landler** (*ZIP code: 90065*)

**611. Edmund Skowronski** (*ZIP code: 18360*)

**612. Edmund Light** (*ZIP code: 95501*)

**613. Esther Weaver** (*ZIP code: 12528*)

**614. Edward Freeman** (*ZIP code: 19139*)

**615. albert Eelman** (*ZIP code: 19317*)

Profits are not made by management. They are made by the hard working employees. If greed is your only thought in life, you are damned by all right thinking people. Share it don't hoard it

**616. Elizabeth Enright** (*ZIP code: 85251-7006*)

**617. Evelyn Sizer** (*ZIP code: 98003*)

**618. Eugene Flannery** (*ZIP code: 45223*)

**619. Elizabeth Moore** (*ZIP code: 20877*)

**620. Eleanor Fox** (*ZIP code: 12203*)

**621. Esther Garvett** (*ZIP code: 33186*)

**622. Gerritt and Elizabeth Baker-Smith** (*ZIP code: 18301*)

**623. Emily Gordon** (*ZIP code: 94602*)

**624. Evelyn Griffin** (*ZIP code: 82523*)

**625. Earl Grove** (*ZIP code: 44730*)

**626. Eve Himmelheber** (*ZIP code: 90621*)

**627. Barry Eidlin** (*ZIP code: H3G2W9*)

**628. Eileen Macmillan** (*ZIP code: 94549*)

**629. Connie Allison** (*ZIP code: 14456-2033*)

**630. Elizabeth Jackson** (*ZIP code: 95624*)

**631. Elisabeth Price** (*ZIP code: 87110*)

**632. Elliot Zais** (*ZIP code: 97217*)

**633. Elizabeth ODear** (*ZIP code: 77401*)

**634. Elaine Becker** (*ZIP code: 24018-2625*)

**635. Linda Brickley** (*ZIP code: 91913*)

**636. Eleanor Comegys** (*ZIP code: 90046*)

**637. edgardo fernandez** (*ZIP code: 80012*)

**638. Eliot Tigerlily** (*ZIP code: 95542*)

**639. ELI Lipmen** (*ZIP code: 90034*)

**640. Elisse De Sio** (*ZIP code: 94070-5009*)

**641. Elizabeth Adan** (*ZIP code: 95608*)

**642. Elizabeth Watts White** (*ZIP code: 11563*)

**643. Elizabeth Poteet** (*ZIP code: 14424*)

**644. Elizabeth Vyka** (*ZIP code: 80621*)

**645. Mike Husar** (*ZIP code: 60655*)

**646. Ellen Schlingmann** (*ZIP code: 82008*)

**647. ellene shapiro** (*ZIP code: 60035*)

Say, Mayors Garcetti and Garcia - how about walking a week in Rene's shoes - or in Rene's truck?  
Your choice - you can be oppressors or leaders towards a better economy and a healthier population.  
Your choice - your consequences.

**648. Ellen Fleishman** (*ZIP code: 11215*)

**649. Susanne Ellis** (*ZIP code: 94112*)

**650. Eloise Swenson** (*ZIP code: 06804*)

Mayors Garcetti and Garcia:

Port drivers cannot afford to pay for zero-admission trucks. Port drivers haul products for very deep-pocketed retail businesses like Walmart and Amazon that could afford to pay for these trucks. Give the little guy a break for once. Work out a plan in which wealthy, profitable businesses bear the costs of zero-admission trucks. Also, stop the wage theft that these hard working drivers endure. And

when they speak up about their unfair working conditions, ensure that they will not be fired for being whistleblowers. These injustices must be corrected.

- 651. Elton Howard** (*ZIP code: 90402*)
- 652. RED Mc KENNA** (*ZIP code: 11106*)
- 653. Emma Bartholomew** (*ZIP code: 98108*)
- 654. Nicole Enslow** (*ZIP code: 98496*)
- 655. Edward Oleski** (*ZIP code: 12130*)
- 656. Ellen Poist** (*ZIP code: 19118-2694*)
- 657. Eric Ramstrom** (*ZIP code: 96002-5125*)
- 658. Emil Reisman** (*ZIP code: 91436*)
- 659. Eric Robson** (*ZIP code: 53705*)
- 660. Eric Beck** (*ZIP code: 90731*)  
Port Truck Driver  
Member of CLUE
- 661. Eric Fosburgh** (*ZIP code: 98112*)
- 662. Eric Mattei** (*ZIP code: 91304*)
- 663. Erika Wilson** (*ZIP code: 30215*)
- 664. Erika DeCarlo** (*ZIP code: 60504*)
- 665. Erik Schnabel** (*ZIP code: 94134*)
- 666. ernest boyd** (*ZIP code: 94087-2711*)
- 667. Ernesto Collosi** (*ZIP code: 92019*)
- 668. John K Erskine** (*ZIP code: 49424*)
- 669. Edda Spielmann** (*ZIP code: 90405*)



**670. Thomas Esposito** (ZIP code: 89431)

How dare any company try to steal from the employees upon whose work its very existence depends. Discontinue all contracts with any and every company that breaks the law and commits wage theft or tries to make drivers pay for the company's equipment.

**671. Sigrid Asmus** (ZIP code: 98199)

I want justice for Long Beach's irreplaceable truck drivers. It is imperative that you act to stop the blatant and disgusting wage theft practiced by Morgan Southern, as well as the dangerously unsafe working conditions these drivers face.

I agree with Rene Flores. It is time to demand that the trucking companies and their big retail customers (like Walmart) pay for these new zero-emission trucks. You must also kick out and ban any trucking company that breaks the law and makes the drivers pay for the equipment they operate but do not own.

**672. Elaine Tyrie** (ZIP code: 99202)

Replacement of trucks is the responsibility of trucking companies and corporations. Clean air for drivers and for families and communities and all living beings is essential.

**673. Ettie Councilman** (ZIP code: 90808)

**674. evan Eisentrager** (ZIP code: 01027)

**675. Craig Stallone** (ZIP code: 11367)

**676. Derald Tucker** (ZIP code: 90804)

**677. Beatriz Pallanes** (ZIP code: 92704)

**678. Laurie Brunner** (ZIP code: 02155)

**679. Frank Rustad** (ZIP code: 83404)

Don't you think you need to listen to people like René Flores, otherwise you'll have an empty agreement from companies like Amazon and Walmart. If Amazon and Walmart along with other companies try to put it on the backs of independent Truckers who already have wages slashed to the minimum by these large companies there's no way your hopes and dreams will come true for the cities.

Again it takes people on the ground floor to know what's really going on that's why even companies like Ford decided to listen two people like René Flores, and now look at poured their cars are selling like hotcakes.

Regards  
Frank Rustad

**680. Flor Barajas Tena** (ZIP code: 92706)

We need to clean the air, but not on the backs of these workers.

- 681. Fran Collier** (*ZIP code: 94133*)
- 682. Fred Welty** (*ZIP code: 44024-9355*)
- 683. Sharon Frank** (*ZIP code: 75077-7628*)
- 684. Felicity Figueroa** (*ZIP code: 92604*)
- 685. Greg Allbee** (*ZIP code: 76182*)
- 686. Frances Hoenigswald** (*ZIP code: 19143-1869*)
- 687. Mike DePaoli** (*ZIP code: V3M 1T4*)
- 688. Phillip Randall Randall** (*ZIP code: 91367*)
- 689. Fiona Priskich** (*ZIP code: 90210*)
- 690. Steven Combes** (*ZIP code: 32608*)  
Stop Corporate Gluttony! !
- 691. John Fitzpatrick** (*ZIP code: 22152*)
- 692. John Visser** (*ZIP code: 2800*)
- 693. Robert Fladger** (*ZIP code: 97465*)
- 694. Rose Leather** (*ZIP code: 85016*)
- 695. Gloria Mason** (*ZIP code: 11757*)
- 696. Fred Lowe** (*ZIP code: 91105*)
- 697. James Pratt** (*ZIP code: 93711*)
- 698. Farrah Chaichi** (*ZIP code: 97005*)
- 699. John Young** (*ZIP code: 78586*)
- 700. Mary E O'Kiersey** (*ZIP code: 60302-1950*)
- 701. frank belcastro** (*ZIP code: 52001-6327*)

**702. Fr Donald MacKinnon** (ZIP code: 94709)

LA and LB are blessed to have citizens like Driver Rene Flores. Please do your part to support him and his fellow truckers.

**703. Frances Goff** (ZIP code: 91107)

**704. frank pagliaro** (ZIP code: 06606)

**705. fred allen** (ZIP code: 90731)

**706. Fred Amador** (ZIP code: 85310)

**707. Sophie Diamond** (ZIP code: 06371)

**708. Fred Geiger** (ZIP code: 95060)

**709. Forest Frasier** (ZIP code: 94510)

**710. Fran Holme** (ZIP code: 98155)

**711. Jay Starr** (ZIP code: 60482)

**712. Robert Barnes** (ZIP code: 18972)

**713. Gabriel Bobek** (ZIP code: 10012)

**714. Gordon Greer** (ZIP code: 91601)

For G-d's Sake!

**715. Gail Sullivan** (ZIP code: 10040)

**716. Mercedes Gaitan** (ZIP code: 90047)

**717. Jessica Denham** (ZIP code: 90277-2638)

**718. amutio denis** (ZIP code: 13230)

There's nothing but struggle

No hay nada sino la lucha

Il n'y a que la lutte

**719. Grace Padelford** (ZIP code: 98034)

**720. Mark Grotzke** (ZIP code: 60477-6465)

**721. Pamela Evans** (*ZIP code: 75143*)

**722. Michael Garitty** (*ZIP code: 95959*)

**723. alvaro garza** (*ZIP code: 95354*)

**724. Glory Arroyos** (*ZIP code: 78704*)

**725. Gary Thaler** (*ZIP code: 02151*)

**726. Marie DesJarlais** (*ZIP code: 54601*)

**727. Gayle Ruedi** (*ZIP code: 27517*)

**728. Gerald Blume** (*ZIP code: 30527*)

**729. Gerald Briggs** (*ZIP code: 28086*)

**730. Gregory Brown** (*ZIP code: 43215*)

**731. gwen irish** (*ZIP code: 01701*)

This is an outrage. Working so hard, (too many hours), and conditions are not safe. Then these workers complain and get fired. Why don't the ones doing the firing try switching places.

**732. David Staley** (*ZIP code: 90731*)

**733. George Bond** (*ZIP code: 70115*)

Renewable energy and clean trucks are a winning combination

**734. George Dibelka** (*ZIP code: 96094*)

**735. James Goodwin** (*ZIP code: 90068-3928*)

**736. Gerald Ealy** (*ZIP code: 94553-2334*)

**737. Geert Sergeant** (*ZIP code: 9860*)

**738. Grace Jenkins** (*ZIP code: 94590*)

**739. Cliff Johnson** (*ZIP code: 94019*)

**740. Genevieve Miller** (*ZIP code: 22180*)

**741. Lauren Pepper** (ZIP code: 95037)

**742. George Gillman** (ZIP code: 14052)

**743. Georgia Shankel** (ZIP code: 60624-2953)

**744. Georgia Kahn** (ZIP code: 94947)

**745. Germano Brandes** (ZIP code: 78521)

**746. Gerri Horka** (ZIP code: 94010)

**747. Kent Minault** (ZIP code: 91423)

**748. Robert Preston** (ZIP code: 32257)

**749. Gary Peniston** (ZIP code: 983329318)

**750. Timothy Gilmore** (ZIP code: 94109)

When you stand before God and open your heart to Him, will He delight in seeing the soul He created for you on a journey of truth, honor, charitable acts and the courage to hold inviolate principles of justice, or will He see a hypocrite's cesspool of lies, fraudulent business practices, needless pain and suffering caused by you, allowing injustice, corruption and oppression of the poor to flourish for profit?

**751. J Esposito** (ZIP code: 89431)

Trucking companies and the big retailers who depend on them need to pay for zero-emission trucks, NOT the drivers whose hard work makes the whole economy run. Port drivers and their families contribute to communities everywhere, and each and every city must take a stand to protect them from wage theft and unfair treatment. Each city must make sure workers, communities and the environment are protected on all sides.

**752. Mera Wolf** (ZIP code: 87108)

**753. Giulio Perini** (ZIP code: 20026 ITALY)

**754. George Miller** (ZIP code: 7057)

**755. George Kormendi** (ZIP code: 10033)

**756. Glen Anderson** (ZIP code: 98503)

Make the corporations pay for their own expenses.  
Do NOT make ordinary people pay for corporations.

**757. Glen Worrell** (ZIP code: 20910)

**758. Glen Bovenkamp** (ZIP code: 98166)

**759. Glenn Ross** (ZIP code: 95502)

**760. Glenn Gawinowicz** (ZIP code: 19075)

**761. Glenn Smith** (ZIP code: 95959-9428)

**762. Gloria Linda Maldonado** (ZIP code: 94062)

Trucking companies and their retail customers should pay for new zero emission standards

**763. Gloria Morrison** (ZIP code: 79772)

**764. Vivian Nicely** (ZIP code: 46703)

**765. Ray Schaffer** (ZIP code: 63447)

**766. Gail Williams** (ZIP code: 87505)

**767. Gerry OConnor** (ZIP code: 11510)

**768. Gladwyn D'Souza** (ZIP code: 94002)

Please prevent asthma and cancer in our communities

**769. Steven Solomon** (ZIP code: 90046)

**770. Jackie Goldberg** (ZIP code: 90026)

The trucking companies and their big retail customers **MUST** be the ones to pay for the zero-emission trucks so necessary to cleaner air. When you dont punish the trucking companies that break the law and force drivers to pay for their equipment, it is like not having a law at all.

**771. Leslie Gold** (ZIP code: 1004)

**772. Charlie Brocco** (ZIP code: 37075)

**773. George Gonos** (ZIP code: 33182)

**774. Libby Goldstein** (ZIP code: 19147)

**775. will gorenfeld** (ZIP code: 94947)

- 776. William Sharpe** (*ZIP code: 24954*)
- 777. Gene Davis** (*ZIP code: 78749-1224*)
- 778. Glen Poppo** (*ZIP code: 53185*)
- 779. Grace Burson** (*ZIP code: 03063*)
- 780. Grace W Tiessen** (*ZIP code: 91103*)
- 781. Jean Brooks** (*ZIP code: 39203*)
- 782. Paul Jokelson** (*ZIP code: 94606*)
- 783. Panayotis Pertsas** (*ZIP code: 34683*)
- 784. Bradley Rikard** (*ZIP code: 29631*)
- 785. Greg Zyzanski** (*ZIP code: 44124*)
- 786. Edmund Gigg** (*ZIP code: 02144*)
- 787. Greg Meyer** (*ZIP code: 63139*)
- 788. Gregory Sparks** (*ZIP code: 40065-8856*)
- 789. Gretchen Turonek** (*ZIP code: 48104*)
- 790. Norda Gromoll** (*ZIP code: 54521*)
- 791. William Grosh** (*ZIP code: 92243*)
- 792. K R** (*ZIP code: 10019*)
- 793. George Schneider** (*ZIP code: 92105*)
- 794. Sandra Gruner** (*ZIP code: 90404*)  
Stop exploiting people.
- 795. Gloria Sanchez** (*ZIP code: 94578*)
- 796. Sister Gladys Schmitz** (*ZIP code: 56001-3138*)

**797. Greg Sells** (ZIP code: 78741)

**798. Glenda Lilling** (ZIP code: 10573)

**799. Gregory Marshall** (ZIP code: 80020)

Amazon makes enough money to help take care of their workers that are out pounding the pavement.

**800. Lawrence Maier** (ZIP code: 7700)

**801. Gloria towers** (ZIP code: 92054)

**802. Gordon Tyrer** (ZIP code: 11971)

**803. FORREST HOPPING** (ZIP code: 93702)

**804. Ralph Notaro** (ZIP code: 07067)

**805. Gabriel Voiles** (ZIP code: 10463)

**806. Galloway Allbright** (ZIP code: 90042)

**807. Thomas Hernandez** (ZIP code: 92881)

**808. george white** (ZIP code: 11753-1528)

**809. gerrit woudstra** (ZIP code: 91126)

**810. Helen Templeton** (ZIP code: 47714)

**811. James Haas** (ZIP code: 60177)

**812. Jamie Shultz** (ZIP code: 26508)

**813. Paul Haeder** (ZIP code: 98685)

Pay for work and corporations need to pay for their operations, not externalize costs to the backbone of their profits or shareholders' profits. And then firing people for speaking truth to power. The level of shame you all possess is always amazing. Workers must unit again this tyranny.

**814. Janet Handford** (ZIP code: 02893)

**815. robert ferrara** (ZIP code: 82009)

**816. Henry Bennett** (ZIP code: 97214)



**817. Mark Feldman** (*ZIP code: 95401*)

**818. Happy Shumer** (*ZIP code: 95687*)

**819. Hugo Arellano** (*ZIP code: 93274*)

**820. Harry Howe** (*ZIP code: 16506*)

**821. Kristy Mitchell** (*ZIP code: 75010*)

**822. Helen Stuehler** (*ZIP code: 89508*)

**823. Howard Weiss** (*ZIP code: 08090*)

**824. Paul Wilgus** (*ZIP code: 24368*)

**825. Heath Hancock** (*ZIP code: 52804-2155*)

**826. Teri Siciliani** (*ZIP code: 92105*)

**827. Hector J Pena** (*ZIP code: 34953*)

**828. heddy schlackman** (*ZIP code: 33484*)

**829. Erick Hedrick** (*ZIP code: 46122*)

**830. heidi nakamura** (*ZIP code: 91601*)

**831. Helen Greer** (*ZIP code: 85705-1465*)

**832. helen simonaitis** (*ZIP code: 90068*)

**833. Laurel Hieb** (*ZIP code: 86005*)

**834. Hugh Peach** (*ZIP code: 97006*)

Customers and trucking customers should pay for the trucks. We need zero emission trucks but drivers should not pay for them (under the legal fiction that they are independent contractors). Just look at the financial set up: in the real world the drivers are not independent. It is just a trick, a legal fiction, if they appear that way. They are actually real people and should not be exploited and oppressed.

**835. Ariel Bradford** (*ZIP code: 49024*)

- 836. Hooker Hailstone** (*ZIP code: 98014*)
- 837. Helen Voris** (*ZIP code: 28712*)
- 838. Sarah Monderoy Garcia** (*ZIP code: 77379*)
- 839. Jo Ann Herr** (*ZIP code: 94602*)
- 840. James Hamilton** (*ZIP code: 90274*)
- 841. Hilary Capstick** (*ZIP code: 32303*)
- 842. Helen Hays** (*ZIP code: 97045*)
- 843. Helena Freeman** (*ZIP code: 90024*)
- 844. Joan Parks** (*ZIP code: 28789*)
- 845. Hersha Evans** (*ZIP code: 24073*)
- 846. les roberts** (*ZIP code: 93704*)
- 847. Natalie Van Leekwijck** (*ZIP code: 2100*)
- 848. Amy Roberts** (*ZIP code: 97321*)
- 849. Susan Jordan** (*ZIP code: 55422*)
- 850. Wendy Rosenfeld** (*ZIP code: 91601*)
- 851. Joe Salazar** (*ZIP code: 95407*)
- 852. Lorraine Kirk** (*ZIP code: 80304*)
- 853. Hugh Phillips** (*ZIP code: 85282*)
- 854. Harry Hochheiser** (*ZIP code: 15217*)
- 855. Denise Hudson** (*ZIP code: 90027*)
- 856. Barbara Hughes** (*ZIP code: 32771*)

- 857. Curtis Hughes** (*ZIP code: 32771*)
- 858. Philip Shook** (*ZIP code: 85281*)
- 859. Adrienne Hochberg** (*ZIP code: 33477*)
- 860. Philip Torres** (*ZIP code: 94510*)
- 861. Helen Dickey** (*ZIP code: 94530*)
- 862. Ian Thomson** (*ZIP code: ng237ls*)
- 863. Cathy Foxhoven** (*ZIP code: 94030*)
- 864. Emily Michaud** (*ZIP code: 01430*)
- 865. Ian Shelley** (*ZIP code: 97225*)
- 866. Mikail Barron** (*ZIP code: 95018*)
- 867. April Eversole** (*ZIP code: 44423*)
- 868. Ivan Zenker** (*ZIP code: 55901*)
- 869. Ida Nissen** (*ZIP code: 32570*)
- 870. Gail Roberts** (*ZIP code: 91980*)
- 871. Matthew Conlan** (*ZIP code: 55616*)  
Union proud
- 872. Kelley Keisch** (*ZIP code: 63379*)
- 873. Debra Moore** (*ZIP code: 48420*)
- 874. A Wilson** (*ZIP code: 60628*)
- 875. mike white** (*ZIP code: 97233*)
- 876. Edward Vaughn** (*ZIP code: 98204-4335*)  
We need unions to stop this mugging of working folk.

- 877. David White** (*ZIP code: 04609*)
- 878. Indira Smith** (*ZIP code: 94118*)
- 879. Edward Costello** (*ZIP code: 90402*)
- 880. ingeborg glier** (*ZIP code: 89084*)
- 881. Alisa Battaglia** (*ZIP code: 29486*)
- 882. Ira Kriston** (*ZIP code: 60202*)
- 883. Irene Kang** (*ZIP code: 90066*)
- 884. deb mannion** (*ZIP code: 63005*)
- 885. Isacc Ramirez** (*ZIP code: 91732*)
- 886. Regina DeFalco Lippert** (*ZIP code: 94553*)
- 887. Edh Stanley** (*ZIP code: 95823-1457*)  
Let the offenders pay!
- 888. steve pod** (*ZIP code: 60042*)
- 889. Ivan Makfinsky** (*ZIP code: 20886*)
- 890. john golding** (*ZIP code: 94619*)
- 891. Jerry Ryberg** (*ZIP code: 61401*)
- 892. Jacob Hyden** (*ZIP code: 84057*)
- 893. J. Lhesli Benedict** (*ZIP code: 95959*)
- 894. Judith Stone** (*ZIP code: 98032*)
- 895. Janice Banks** (*ZIP code: 03225*)
- 896. Jack Bradbury** (*ZIP code: BS2 9TB*)
- 897. jack cogswell** (*ZIP code: 02719*)

**898. Darren Jackson** (*ZIP code: 31313*)

**899. Brian Menard** (*ZIP code: 37015*)

**900. Jackie Demarais** (*ZIP code: 76049*)

**901. jacqueline wurn** (*ZIP code: 80302*)

**902. Mark Levin** (*ZIP code: 19462*)

**903. Janice Hughes** (*ZIP code: 64116-3678*)

**904. Jennifer Alberghini** (*ZIP code: 11426*)

**905. Joanne Kondratieff** (*ZIP code: 74801-7948*)

**906. james hunter** (*ZIP code: 80209-4331*)

**907. James Perkins** (*ZIP code: 90037*)

“All that is necessary for the triumph of evil is that good men do nothing.”

**908. James Dawson** (*ZIP code: 95618*)

Seems reasonable for the companies to pay for the equipment which must be done to benefit everyone through clean air.

**909. Jim Silliman** (*ZIP code: 78412*)

**910. James Vallejos** (*ZIP code: 80010*)

I care.

**911. James Vollaro** (*ZIP code: 93117*)

**912. Jamie Welsh** (*ZIP code: 91331*)

These drivers deserve justice!

**913. Jan Salas** (*ZIP code: 95062*)

**914. Judith Knouff** (*ZIP code: 29732*)

**915. Kristen Howard** (*ZIP code: 21221*)

**916. Janell Marshall** (*ZIP code: 02885*)

- 917. Janet Kennington** (*ZIP code: 90077*)
- 918. Janet Fotos** (*ZIP code: 03049*)
- 919. j angell** (*ZIP code: 95672*)
- 920. Jan Modjeski** (*ZIP code: 29576*)
- 921. Janie Lucas** (*ZIP code: 94110*)
- 922. Janis Thompson** (*ZIP code: 88012*)
- 923. Janet Hoover** (*ZIP code: 92845*)
- 924. janna piper** (*ZIP code: 97293*)
- 925. Jarrod Baniqued** (*ZIP code: 95695*)
- 926. Jason Schulman** (*ZIP code: 10034*)
- 927. Jason Todd Steadmon** (*ZIP code: 89005*)
- 928. John Totten** (*ZIP code: 33952*)
- 929. Javier Rivera** (*ZIP code: 11249*)
- 930. Judith Robinson** (*ZIP code: 07747*)
- 931. J Beverly** (*ZIP code: 61801*)
- 932. Judith Brey** (*ZIP code: 53959*)
- 933. Judith Broder** (*ZIP code: 91604*)
- 934. Judith Broder** (*ZIP code: 91604*)
- 935. Jim Christiansen** (*ZIP code: M6G 3Z1*)
- 936. John Bhend** (*ZIP code: 48740-9712*)
- 937. jason husby** (*ZIP code: 55412*)

- 938. John Cooper** (*ZIP code: 17837*)
- 939. Jon Solmos** (*ZIP code: 46304*)
- 940. Jon Bedillion** (*ZIP code: 15301*)
- 941. John Deegan** (*ZIP code: 19085*)
- 942. Joseph DellaFave** (*ZIP code: 10023*)
- 943. James Deshotels** (*ZIP code: 63072*)
- 944. J Davis** (*ZIP code: 94102*)
- 945. Jean Gore** (*ZIP code: 80303*)
- 946. Jean Langford Langford** (*ZIP code: 35803*)
- 947. Phyllis Miller** (*ZIP code: 02115*)
- 948. Jean Mont-Eton** (*ZIP code: 94116*)
- 949. Jeff Burns** (*ZIP code: 80120*)
- 950. Jeff Hess** (*ZIP code: 80304*)
- 951. Jeffery Sparling** (*ZIP code: 90302*)
- 952. Jeff Cohen** (*ZIP code: 97370*)
- 953. Jeff Smith** (*ZIP code: 21136*)
- 954. julie kramer** (*ZIP code: 94114*)
- 955. Jane Ellis** (*ZIP code: 94710*)
- 956. Jen Halbert** (*ZIP code: 61604*)
- 957. Jennifer Lake** (*ZIP code: 84123*)
- 958. Jennifer Goins** (*ZIP code: 89509*)

**959. Jennifer Prevost** (ZIP code: 78213)

**960. Jenny Frescholtz** (ZIP code: 85745)

I hear you loud and clear, you need to keep fighting and eventually quit moving product for Walmart!!!!  
Get a job that is union, you will be amazed on the great results and back you will have!!!! Always  
believe in what you do, never Quit, never surrender !!!!! Loud and proud do it brother, we here you in  
Tucson

**961. Jillian Paragg** (ZIP code: T6G 0T5)

**962. Jeri Pollock** (ZIP code: 91001)

**963. MARY ROJESKI** (ZIP code: 90405)

**964. Jerome Roth** (ZIP code: 85281)

**965. Jerome Onufer** (ZIP code: 98027)

**966. Mike Andrewjeski** (ZIP code: 94121)

**967. Jessea Greenman** (ZIP code: 94609)

**968. William Lorch** (ZIP code: 60435)

**969. Judith Turner** (ZIP code: 90295)

**970. Jill Fields** (ZIP code: 93740)

**971. Jan MacMillan** (ZIP code: 94541)

**972. Jose Galdo** (ZIP code: 33140)

**973. Jocelyn Anthony** (ZIP code: 19144)

**974. John Hammel** (ZIP code: 38401)

**975. James H Wilson** (ZIP code: 94533)

**976. Jason Hodge** (ZIP code: 92395)

This is not right and illegal and must be stopped!

**977. Jason Hoobler** (ZIP code: 45218)



**978. Joseph Shulman** (ZIP code: 92115-6932)

**979. Jill Berkowitz-Berliner** (ZIP code: 10549-2908)

**980. Jim Hard** (ZIP code: 95818)

**981. James Amory** (ZIP code: 13760)

**982. Jim Clapp** (ZIP code: 85373)

**983. Jim Loveland** (ZIP code: 33707-3327)

**984. jim Snee** (ZIP code: 05736)

**985. James Wolf** (ZIP code: 81601)

**986. Jenice Jackson** (ZIP code: 90302)  
corporations should pay for their own upgrades to save the planet.

**987. Janae Dale** (ZIP code: 83864)

**988. John Wiseley** (ZIP code: 89701)

**989. Jim Kerner** (ZIP code: 07621)

**990. John Knapp** (ZIP code: 19128)

**991. James Plimmer** (ZIP code: 60107)

Something needs to be done for working men and woman, and that something should start with you !!!

**992. Julie Squire** (ZIP code: 64133)

**993. Jason Kull** (ZIP code: 60201-1558)

**994. Jean Hricik** (ZIP code: 13801-31-1)

The public does not need to choose between a clean environment or jobs. That is propaganda. How about clean-energy jobs?

**995. Joanne Lamert** (ZIP code: 44313)

**996. Jay Caplan** (ZIP code: 01093)

**997. John S** (ZIP code: 98133)

**998. Jeane Harrison** (ZIP code: 50321)

**999. Jen Manders** (ZIP code: 52001)

**1000. Jose Lopez** (ZIP code: 33067)

**1001. Jessica Peet** (ZIP code: 17837)

**1002. Josh Ludeking** (ZIP code: 61201)

**1003. Jeannette Bartelt** (ZIP code: 21703)

**1004. Jessica Cresseveur** (ZIP code: 47150)

**1005. John Crotty** (ZIP code: 63021)

**1006. James Melloh** (ZIP code: 04106)

Wage theft is the same as bank robbery.  
Stop the thieves who cheat their employees now.

**1007. Joan Wilson** (ZIP code: 63670)

**1008. Jeffrey Holman** (ZIP code: 93510)

I worked for Pacer/XPO for 6 years and was forced out because I refused to sign the new contract

**1009. Jim Thomas** (ZIP code: 27514)

Take a stand and demand that the trucking companies and their big retail customers pay for these new zero-emission trucks. And you must kick out any trucking company that breaks the law and makes us pay for their equipment."

**1010. Joann Koch** (ZIP code: 06249)

**1011. JM AURNAGUE Aurnague** (ZIP code: 87507)

**1012. Jamaka Petzak** (ZIP code: 91202)

Do NOT put the charges on the drivers or on the customers.

**1013. Jeanine Nagrod** (ZIP code: 07712)

**1014. Jim Farley** (ZIP code: EH12 5NQ)

**1015. Jan Novotny** (ZIP code: 32250)

**1016. JOAN MCKIERNAN** (ZIP code: 10471)

**1017. Joan Smith** (ZIP code: 94129-2219)

**1018. G Joan Jarvis** (ZIP code: 97007)

**1019. Joan Chryst** (ZIP code: 43065-7133)

**1020. Jo Ann McGreevy** (ZIP code: 07047)

Both these issues are of vital importance to not only those in California but in all of America! Please do the right and the smart thing!

**1021. Joann Lo** (ZIP code: 91205)

**1022. Jo Ann Draughon** (ZIP code: 92007)

**1023. Joanne Tenney** (ZIP code: 92026)

**1024. Joan Sitnick** (ZIP code: 91436)

**1025. Joaquina Rodriguez** (ZIP code: 77008)

**1026. Joe Pfister** (ZIP code: 11215)

**1027. An anonymous signer** (ZIP code: 13669)

**1028. Joel Fithian** (ZIP code: 93105)

Port drivers should not have to pay for equipment.

**1029. Joel Hoffman** (ZIP code: 93312)

**1030. Joel Myron** (ZIP code: 07307)

**1031. Johanna Hart** (ZIP code: 94116)

**1032. john burke** (ZIP code: 94127)

**1033. John Mon Mon** (ZIP code: 11691)

**1034. John Cort** (ZIP code: 80516)

**1035. john cevasco** (ZIP code: 01360)

**1036. John Wozniak** (*ZIP code: 55412*)

**1037. John Gruninger** (*ZIP code: 94710*)

**1038. John Kaufmann** (*ZIP code: 32953*)

**1039. John Mago** (*ZIP code: 46408*)

**1040. John Ota** (*ZIP code: 94501*)

**1041. John Bremer** (*ZIP code: 98229*)

**1042. John Culotta** (*ZIP code: 10306*)

**1043. John Moylan** (*ZIP code: 21229*)

**1044. Jonathan Holland** (*ZIP code: 38571*)

**1045. Jonathan Wexler** (*ZIP code: 07603*)

**1046. Joseph Szabo** (*ZIP code: 90045*)

**1047. Jose Dorado** (*ZIP code: 94601*)

**1048. Joseph Lawson** (*ZIP code: 10023*)

**1049. Jose Rodriguez** (*ZIP code: 92336*)

Thanks to Rene Flóres for being brave and speaking up. Hopefully it gives courage to those who want to speak up but choose not too.

**1050. Josh Bell** (*ZIP code: 02673*)

**1051. Joshua Stoll Stoll** (*ZIP code: 64151*)

**1052. Julie Ostoich** (*ZIP code: 95826*)

**1053. Joy Baker** (*ZIP code: 94121*)

**1054. Susan Castelli-Hill** (*ZIP code: 11747*)

**1055. john papandrea** (*ZIP code: 10024*)

**1056. John Morgerson** (*ZIP code: 40241*)

**1057. Hans Potters** (*ZIP code: NL-2341 HX*)

**1058. Jeremy Spencer** (*ZIP code: 94044-3318*)

**1059. John and Martha Stoltenberg** (*ZIP code: 53020-1828*)

Capitalism's short-term profit motive is incompatible with long-term public health and safety, and/or long-term environmental health and safety, and/or animal welfare, and/or human welfare!

**1060. Joyce Pusel** (*ZIP code: 27713*)

**1061. Jim Rankin** (*ZIP code: 94518*)

**1062. Joe Ayala** (*ZIP code: 93063*)

**1063. JOSEPH REEL** (*ZIP code: 93950*)

**1064. Jeffrey Evans** (*ZIP code: 43953*)

**1065. Jelica Roland** (*ZIP code: 52420*)

**1066. Jose Jose** (*ZIP code: 92551*)

**1067. Jaime Becker** (*ZIP code: 94702-2622*)

**1068. J Schieffer** (*ZIP code: 53105*)

**1069. Jon Schmitt** (*ZIP code: 19014*)

**1070. John Sherman** (*ZIP code: 33161*)  
Do the right thing!

**1071. john s** (*ZIP code: 97212*)

**1072. Jarrod Skelton** (*ZIP code: 47711*)

**1073. Jeff Kulp** (*ZIP code: 27612*)

**1074. James Stamos** (*ZIP code: 95070-4910*)

**1075. Jack Stansfield** (*ZIP code: 98292*)

**1076. John Swanson** (*ZIP code: 92807*)

**1077. Judith Wraight** (*ZIP code: 48227*)

For shame

**1078. Jerry Johnson** (*ZIP code: 80209*)

**1079. Juan Narron** (*ZIP code: 78045*)

Juan narron

**1080. Judd Webb** (*ZIP code: 60462*)

**1081. Judith Swain** (*ZIP code: SA9 2AP*)

**1082. Judy Lubow** (*ZIP code: 80504*)

**1083. Kevin West** (*ZIP code: 78723*)

**1084. J B** (*ZIP code: HR11JJ*)

**1085. Julia Aparicio-Mercado** (*ZIP code: 90027*)

**1086. Julia Wackenheim** (*ZIP code: 90212*)

**1087. Julie Amato** (*ZIP code: 94043-2806*)

**1088. juli van brown** (*ZIP code: 70119*)

**1089. John Doyle** (*ZIP code: 90804*)

**1090. Natalie Blasco** (*ZIP code: 96007*)

**1091. James Vipond** (*ZIP code: 57252*)

**1092. John Waering** (*ZIP code: 187052426*)

**1093. John Wehr** (*ZIP code: 89148*)

**1094. Joseph Weinstein** (*ZIP code: 90807*)

World trade promoted by the ports delivers profits above all for shippers and big retail.

Those folks - not the little-guy employees or contractors - can at least pay for clean air at and around the Ports and in the LA Basin.

After all, even AFTER they do it, their profits are still a bargain - achieved at the expense of continuing to pollute with climate-degrading emissions over thousands of miles of trucking and rail and shipping lanes!

**1095. John Wiles** (ZIP code: 27713-6542)

**1096. John Wilhelm** (ZIP code: 93105)

**1097. Jean Wilhelm** (ZIP code: 04631)

**1098. Joshua Wines** (ZIP code: 91605-5102)

**1099. Joanne Zipay** (ZIP code: 12553)

**1100. Karlene Gunter** (ZIP code: 14618-4861)

**1101. Karen Kirchdoerfer** (ZIP code: 18069)

**1102. Katherin Balles** (ZIP code: 98310)

Mayors, you must ensure this law is enforced. Save the working class.

**1103. Kabira Stokes** (ZIP code: 90027)

**1104. p.k. caporrino** (ZIP code: 7030)

**1105. Terry Skjelstad** (ZIP code: 95628)

**1106. KA Lemon** (ZIP code: 80222)

Companies need to pay what it costs to do business and not put it off on the workers or on taxpayers. If money is tight, maybe they need to look at the ridiculous salaries being paid to management and the board!!!

**1107. Keith A. MacAdams** (ZIP code: 01501-2611)

**1108. tony Archuleta** (ZIP code: 84120)

**1109. Keri Martin** (ZIP code: 94564)

**1110. Karen Fedorov** (ZIP code: 22712-7844)

**1111. Karen Collins** (ZIP code: 30014)

**1112. Karen Berger** (*ZIP code: 91020*)

**1113. karen steele** (*ZIP code: 95501*)  
DO THE RIGHT THING!!

**1114. Karin Mak** (*ZIP code: 91803*)

**1115. Karl Koessel** (*ZIP code: 95519*)

**1116. Karl Schumaker** (*ZIP code: 95006*)

**1117. katherine barnhart** (*ZIP code: 11209*)

**1118. Kate Brotherton** (*ZIP code: 92630*)

**1119. Kathryn Summers** (*ZIP code: 90402*)

**1120. Melissa Craig** (*ZIP code: 98512*)

**1121. Kathleen Helmer** (*ZIP code: 91307*)

**1122. Kathi Aker** (*ZIP code: 91042-1816*)

**1123. KATHLEEN RICHARDSON** (*ZIP code: 7823*)

**1124. Kathryn Burns** (*ZIP code: 78727*)

Cleaning up the air is good. The trouble is that you're making the workers pay for it, and many of them don't have the money. It's not fair to them. Readjust your program so that the costs are born by the executives.

**1125. Kathy Colton** (*ZIP code: 52302*)

**1126. Katherine Slawinski** (*ZIP code: 10003*)

Of course drivers should not have to pay for the zero emission trucks!

**1127. Kathy Tolman** (*ZIP code: 80033*)

**1128. Kat Saalfield** (*ZIP code: 95945*)

**1129. Katrin Sippel** (*ZIP code: 10023*)

**1130. Kathleen Kuczynski** (*ZIP code: 92630*)



**1131. Nancy Brown** (*ZIP code: 27021*)

**1132. Dan Kegebein** (*ZIP code: 98582*)

**1133. kay gallin** (*ZIP code: 90064*)

**1134. Joseph Melvin** (*ZIP code: 96003*)

**1135. Cheryl Majkrzak** (*ZIP code: 44017*)

**1136. Kathleen Bartolini** (*ZIP code: 01772*)

**1137. Kathleen Bentley** (*ZIP code: 21234*)

**1138. Kenneth Bierman** (*ZIP code: 85745*)

**1139. Kathleen Brennan** (*ZIP code: 92506*)

**1140. Karen Christiansen Christiansen** (*ZIP code: 80621*)

**1141. Sister Kathleen Corbett** (*ZIP code: 88001*)

**1142. Diane Kruse** (*ZIP code: 80433*)

Trucking companies and companies that use them should pay for your emission standards, not drivers.

**1143. Kevin Ryan** (*ZIP code: 14228*)

**1144. Keenan Sheedy** (*ZIP code: 90065*)

**1145. Kathleen Hopkins** (*ZIP code: 94610*)

**1146. Keith Runion** (*ZIP code: 72205*)

**1147. Kellie Smith** (*ZIP code: 03244*)

**1148. Bernice Kelman** (*ZIP code: 05489*)

**1149. Keith Emery** (*ZIP code: 46219*)

**1150. Ken Greenwald** (*ZIP code: 90404*)

1151. **Br. Ken Homan, SJ** (ZIP code: 53208)
1152. **Kent Hudson** (ZIP code: 94110)
1153. **Donna Webb** (ZIP code: 23510)
1154. **Kerry Bevan** (ZIP code: 84081)
1155. **kevin galvin** (ZIP code: 02035)
1156. **Kathleen Grossman** (ZIP code: 34951)
1157. **Kathy Bradley** (ZIP code: 29078)
1158. **Kurt Yamada** (ZIP code: 90247)
1159. **Kicab Castaneda-Mendez** (ZIP code: 27517)
1160. **gregg killeen** (ZIP code: 08859)
1161. **John Pasqua** (ZIP code: 92025)  
END THE POLLUTING TRUCKS.
1162. **Kim Diehl** (ZIP code: 11230)
1163. **Kimberly Seger** (ZIP code: 16201)
1164. **Kim Sellon** (ZIP code: 07974)
1165. **Robert J King** (ZIP code: 11732)
1166. **Maria Reyes** (ZIP code: 95811)
1167. **Jim Kirby** (ZIP code: 85614)
1168. **Mike Kirkby** (ZIP code: M5R3C2)
1169. **Kathryn Kirui** (ZIP code: 91763)
1170. **Deirdre Morris** (ZIP code: 2155)
1171. **Kivi Neimi** (ZIP code: 90069)

- 1172. K Krupinski** (*ZIP code: 90042*)
- 1173. Kevin Krausnick** (*ZIP code: 94560*)
- 1174. Karin Lackmann** (*ZIP code: 841*)
- 1175. Valerie Klauscher** (*ZIP code: 15046*)
- 1176. Lea Morgan** (*ZIP code: 01201*)
- 1177. Linda Klein** (*ZIP code: 90245-3259*)
- 1178. Kim Nguyen** (*ZIP code: 95136*)
- 1179. Kevin Vaught** (*ZIP code: 37013*)
- 1180. Kasey McKeral** (*ZIP code: 10005*)
- 1181. An anonymous signer** (*ZIP code: 13760*)
- 1182. Katherine Wright** (*ZIP code: 97068*)
- 1183. Kay Reinfried** (*ZIP code: 17543*)
- 1184. Donna Knipp** (*ZIP code: 10034*)
- 1185. Tricia Kob** (*ZIP code: 80526*)
- 1186. Ryan Hanson** (*ZIP code: 60626*)
- 1187. Ken Lahnar** (*ZIP code: 63114-3226*)
- 1188. Lucy Kramer** (*ZIP code: 66002*)
- 1189. Katherine Renfro** (*ZIP code: 94720*)
- 1190. Kristian Glover** (*ZIP code: 12508*)
- 1191. Kristian Koerwitz** (*ZIP code: 60656*)
- 1192. Kevin McKelvie** (*ZIP code: 92264*)

- 1193. Henry Krokosky** (*ZIP code: 54914*)
- 1194. Kristin Rosenqvist** (*ZIP code: 89523*)
- 1195. Kate Skolnick** (*ZIP code: 11238*)
- 1196. Thomas Kruggel** (*ZIP code: 34759*)
- 1197. Karen Scotese** (*ZIP code: 60202*)
- 1198. David Speakman** (*ZIP code: 66046*)
- 1199. Karen Stickney** (*ZIP code: 04240*)
- 1200. Karen Stingle** (*ZIP code: 97401*)
- 1201. Kurt Speidel** (*ZIP code: 92673*)
- 1202. Kathie E Takush** (*ZIP code: 19602-1251*)
- 1203. Linda Gertig** (*ZIP code: 68005*)
- 1204. Kahlil Goodwyn** (*ZIP code: 11206*)
- 1205. Stephanie Clayton** (*ZIP code: 90503*)
- 1206. Kat Shield** (*ZIP code: 76878*)
- 1207. Kathleen Turner** (*ZIP code: 63125*)
- 1208. Kyozo Ueyoshi** (*ZIP code: 92037*)
- 1209. Ruby Kumar** (*ZIP code: 44107*)
- 1210. Curtis Swan** (*ZIP code: 90802*)
- 1211. Karen Vasto** (*ZIP code: 07716*)
- 1212. Ken Windrum** (*ZIP code: 90004*)
- 1213. Dan Rusnak** (*ZIP code: 23225*)

**1214. Michael Feinberg** (ZIP code: 10025)

**1215. Lacey Hicks** (ZIP code: 94536)

**1216. irene walker** (ZIP code: la9 4je)

**1217. Michael Heinsohn** (ZIP code: 55421)

**1218. Liana Astorga Feng** (ZIP code: 77065-2228)

**1219. Gee Davis** (ZIP code: 01020)

**1220. Lucretia Jevne** (ZIP code: 95688-3811)

**1221. Martha Lammers** (ZIP code: 38578)

**1222. Dmitry Landa** (ZIP code: 11421)

**1223. Lanie Cox** (ZIP code: 99224)

**1224. Avis Ogilvy** (ZIP code: 70118-4057)

**1225. Lisa Patton** (ZIP code: 94115)

**1226. Paula Hoffman** (ZIP code: 90026)

**1227. Laura Regan** (ZIP code: 55810)

**1228. Larry Boatman** (ZIP code: 55118-4131)

Lately the words of Amos to Israel (echoed by Isaiah, Jeremiah, and Haggai to Judah) from the Hebrew Original Witnessing have been ringing clear: "Woe to you who turn justice to vinegar and stomp righteousness into the mud. Do you realize where you are? . . . People hate this kind of talk. Raw truth is never popular. But here it is, bluntly spoken: Because you run roughshod over the poor and take the bread right out of their mouths, you're never going to move into the luxury homes you have built. You're never going to drink wine from the expensive vineyards you've planted. . . . Justice is a lost cause. Evil is epidemic. Decent people throw up their hands. Protest and rebuke are useless, a waste of breath. . . . Hate evil and love good, then work it out in the public square. . . . Go out into the streets and lament loudly! Fill the malls and shops with cries of doom! Weep loudly, 'Not me! Not us! Not now!' Empty offices, stores, factories, workplaces. Enlist everyone in the general lament. . . . I can't stand your religious meetings. I'm fed up with your conferences and conventions. I want nothing to do with your religion projects, your pretentious slogans and goals. I'm sick of your fund-raising schemes, your public relations and image making. . . . Do you know what I want? I want justice - oceans of it. I want fairness - rivers of it. That's what I want. That's all I want."

**1229. Karen Ratzlaff** (ZIP code: 95404)

**1230. Laura Leipzig** (*ZIP code: 94702-1504*)

**1231. Laura Manges** (*ZIP code: 40403*)

**1232. Laurel Kornfeld** (*ZIP code: 08904*)

**1233. James Lawless** (*ZIP code: 92252*)

**1234. Lawrence Joe** (*ZIP code: 91770*)

**1235. Randall Webb** (*ZIP code: 97210*)

**1236. Louise Friedenson** (*ZIP code: 60016*)

**1237. Ginny Pendas** (*ZIP code: 33410*)

**1238. Lloyd Rowe** (*ZIP code: 92619*)

**1239. Lama Lane** (*ZIP code: 92627*)

**1240. Laura Campione** (*ZIP code: 11801*)

**1241. Lynn Cardiff** (*ZIP code: 97301*)

**1242. Dennis Ledden** (*ZIP code: 95629*)

**1243. L.D. Hieber** (*ZIP code: 48118*)

**1244. Laurie Neill** (*ZIP code: 95567-9317*)

**1245. Larry Potter** (*ZIP code: 63559*)

**1246. Leanna Noble** (*ZIP code: 90802*)

**1247. Lee Ann Greaves** (*ZIP code: 99206*)

**1248. Lee Gurel** (*ZIP code: 22304*)

**1249. Rita Weisheit** (*ZIP code: 90266*)

**1250. Leigh Stamets** (*ZIP code: 95608*)

America for all.

**1251. Lenny Potash** (*ZIP code: 90039*)

**1252. Lenore Madeleine** (*ZIP code: 28715*)

**1253. Leslie Cassidy** (*ZIP code: 10028*)

**1254. Beth Levin** (*ZIP code: 97213*)

**1255. Tim Taylor** (*ZIP code: 90064*)

**1256. Lewis Litzinger** (*ZIP code: 32309*)

**1257. Lourdes Garcia** (*ZIP code: 90505*)

**1258. Linda Gillaspy** (*ZIP code: 89506*)

**1259. L.M. Holmes** (*ZIP code: 96817*)

**1260. Linda Howie** (*ZIP code: 97224*)

**1261. Judith Lienhard** (*ZIP code: 97225*)

**1262. Lieve Bain** (*ZIP code: 14580*)

**1263. Jamie Caya** (*ZIP code: 98664*)

**1264. Lily Maisky** (*ZIP code: 1060*)

**1265. MICHAEL Riforgiato** (*ZIP code: 14752*)

Let's get it clean!

**1266. Linc Conard** (*ZIP code: 90210*)

**1267. Linda Buch** (*ZIP code: 80012*)

Really? YOU CAN DO BETTER THAN THIS, MAYORS!!

**1268. Linda Bolduan** (*ZIP code: 97034*)

**1269. Lindsey Williams** (*ZIP code: 15229*)

**1270. Richard Blincoe** (*ZIP code: 91786*)

**1271. Elizabeth Edwards** (ZIP code: 78660)

**1272. geraldine caldarola** (ZIP code: 94904)

**1273. L Thachet** (ZIP code: 94704)

**1274. Elizabeth MacKelvie** (ZIP code: 54915)

**1275. Elizabeth Bubriski** (ZIP code: 90046)

**1276. e p** (ZIP code: 95482)

**1277. Lizzie Ishmael** (ZIP code: 55344)

**1278. Elizabeth Smith** (ZIP code: 64138)

**1279. Laura Joseph** (ZIP code: 91107)

the truck drivers' rightful earnings are being stolen by the trucking companies. they should not have to pay for the zero emission trucks!

**1280. Lowell Weber** (ZIP code: 44281)

**1281. L. Licari** (ZIP code: 92833)

**1282. Lloyd Hedger** (ZIP code: 98403)

**1283. Louis Malizia** (ZIP code: 20902)

**1284. Linda Brosh** (ZIP code: 94947)

**1285. Lawrence Mick** (ZIP code: 45449)

**1286. Linda Ng** (ZIP code: 11358)

**1287. Dave Mills** (ZIP code: 78644)

**1288. Lois Shubert** (ZIP code: 93010)

**1289. Katherine Robertson** (ZIP code: 80528)

**1290. Lonnie Albrecht** (ZIP code: 33538)



**1291. Diana Blanks** (ZIP code: 92116)

**1292. Loretta Larkin** (ZIP code: 07304-1608)

**1293. Lorna Farnum** (ZIP code: 90720)

**1294. Lorraine D. Johnson** (ZIP code: 98125-2603)

**1295. Lorraine Moore** (ZIP code: 78210)

**1296. Lorraine Hartmann** (ZIP code: 98125)

**1297. Gerald De Los Reyes** (ZIP code: 89052)

**1298. Lou Villalvazo** (ZIP code: 90021)

I encourage you, to support workers and constituents Rene Flores, who are the back bone of Los Angeles.

These company's that profit with millions of dollars, should pay for these trucks being retrofitted. Why is the cost being passed to workers barley making ends meat.

I support these workers and ask you, to do the same and protect them and my family as well.

Thank you

Lou Villalvazo

**1299. Malcolm Campbell** (ZIP code: 94704)

This is the only fair way to improve the emission standards for trucks. Drivers are already pushed to the limit, even inhuman limits.

**1300. Louie Diaz** (ZIP code: 90807-4323)

**1301. Kimberly Lowe** (ZIP code: 43230-2262)

**1302. Lee Paxton** (ZIP code: 90068)

**1303. Kathleen O'Nan** (ZIP code: 90039)

**1304. Lonnie Lopez** (ZIP code: 98168)

**1305. Leticia Rodriguez** (ZIP code: 91204)

**1306. Lynda Aubrey** (ZIP code: 95432)

**1307. William Shields** (ZIP code: 72227)

**1308. Lisa Silguero** (ZIP code: 78704)

**1309. Linda Sirois** (ZIP code: 01938)

Time to protect workers and the environment and hold corporations, CEOs, and 1% accountable. People over profits!

**1310. Linda McCalister** (ZIP code: 95687)

**1311. Linda Stead** (ZIP code: 97540)

Truck driver's need protection from unscrupulous companies. If they are running on no sleep and meth then everyone else on the road is in danger.

**1312. Sandra Woodall** (ZIP code: 78212-1203)

Our budgets should not be balanced and major engineering changes should not be enacted on the backs of working people.

**1313. lauren Ornelas** (ZIP code: 94928)

**1314. Luci Rojas** (ZIP code: 91360)

**1315. Luke Bauerlein** (ZIP code: 19475)

**1316. Luke Dubois** (ZIP code: 92707)

**1317. Alice Bowron** (ZIP code: 55429)

Working people mustn't be robbed by corporations - and here's a good example.

**1318. jo mccord** (ZIP code: 95130-1845)

**1319. Jacob R. Raitt** (ZIP code: 06605)

**1320. Lyle Summerfield** (ZIP code: 48609)

Treat others as you want to be treated, be fair, and where is YOUR SOUL ?

**1321. Lynda Barry** (ZIP code: 96793-2641)

**1322. lynda leigh** (ZIP code: 95062-5533)

**1323. Lynette Lowe** (ZIP code: 45214)

**1324. Lynn Levine** (ZIP code: 55416)

**1325. Lynn Ziegler** (ZIP code: 33950)

**1326. Jennifer Waters** (ZIP code: 85285)

**1327. Lynn Adams Adams** (ZIP code: 92026)

**1328. Mitch DeBoer** (ZIP code: 46241)

**1329. Mike Butche** (ZIP code: 60504)

**1330. m c kubiak** (ZIP code: 61701)

**1331. Marianne Ehrhardt** (ZIP code: 4178)

**1332. Robert Duckworth** (ZIP code: 06484)

**1333. Mike Tipton** (ZIP code: 82609)

**1334. Francisco Mercado** (ZIP code: 10016)

**1335. jorge magallan** (ZIP code: 90262)

I am calling for Los Angeles Mayor Eric Garcetti & Long Beach Mayor Robert Garcia to ensure that port drivers will NOT have to pay for the proposed new zero emission trucks. Don't sell out and don't give in .dont join the wave of politicians giving in to these global companies getting rich off the working mans back . Do not commit economic treason .

**1336. Maggie Davidson** (ZIP code: 33060)

**1337. charlie houchins** (ZIP code: 98370)

**1338. Michael A Hartman** (ZIP code: 18603)

**1339. Maija Schaefer** (ZIP code: 94945)

**1340. Mike Albar** (ZIP code: 08844)

**1341. Mal Gaff** (ZIP code: 93436)

**1342. Ma\_gorzata Maciejewska** (ZIP code: 04-088)

**1343. Malia Fisher** (ZIP code: 11201)

**1344. Maggie A.** (ZIP code: 54301)

**1345. Therese Ryan** (ZIP code: 93550)

- 1346. Armando Moran** (*ZIP code: 95127*)
- 1347. Steve Manly** (*ZIP code: 95842-3119*)
- 1348. edith gnasso** (*ZIP code: 92320*)
- 1349. Miguel Ramos** (*ZIP code: 98248*)
- 1350. Mike Pincus** (*ZIP code: 94110*)
- 1351. Mary Mahoney** (*ZIP code: 02114-3247*)
- 1352. Marc Dreves** (*ZIP code: 16134*)
- 1353. marcia flannery** (*ZIP code: 94609*)
- 1354. Marie Garescher** (*ZIP code: 10566*)
- 1355. Marge Schwartz** (*ZIP code: 93101*)
- 1356. Margo Vanderhill** (*ZIP code: 51003-8749*)
- 1357. Marian Gillis** (*ZIP code: 98119*)
- 1358. Marilyn Shepherd** (*ZIP code: 95570*)
- 1359. Marisol Rhodes** (*ZIP code: 91364*)
- 1360. Marjorie Short** (*ZIP code: 01960*)
- 1361. Mark Reback** (*ZIP code: 90042*)
- 1362. Mark Cappetta** (*ZIP code: 92270*)
- 1363. Mark Glasser** (*ZIP code: 90066*)
- 1364. MARK DESANGLES** (*ZIP code: 94619*)  
Stop the war on these hard working folks!
- 1365. Mark Bowman** (*ZIP code: 95076*)
- 1366. Mark Hutton** (*ZIP code: SE266ND*)

**1367. Mark Laity-Snyder** (*ZIP code: 24088*)

**1368. Wayne Langford** (*ZIP code: 30044*)

**1369. Lauren Range** (*ZIP code: 63116*)

**1370. Margaret Silvers** (*ZIP code: 28756*)

**1371. Martha Izzo** (*ZIP code: 80439*)

**1372. Martha W D Bushnell** (*ZIP code: 80027*)

**1373. Martin Ward** (*ZIP code: DH1 2TZ*)

**1374. Martin Diedrich** (*ZIP code: 92627*)

**1375. Martin Horwitz** (*ZIP code: 94122*)

**1376. Martin B Friedman** (*ZIP code: 94705*)

**1377. Martin Martinez** (*ZIP code: 90808*)

Big trucking companies should pay their workers a living wage and stop treating them like independent contractors.

**1378. Mary Cheves** (*ZIP code: 90815*)

**1379. Mary Cato** (*ZIP code: 76012-3033*)

**1380. Mary Van Buren** (*ZIP code: 80524*)

Protection of the environment should be paid for by the companies who make large profits - not shifted to vulnerable workers and small-scale companies who do contract work for them.

**1381. Mary Geraets** (*ZIP code: 57401-1238*)

**1382. Marybeth Webster** (*ZIP code: 97526*)

Here is a situation that frames the injustices to the middle class by the wealthy. To draw a line here might stand a chance of restoring the democratic dream our founders had in mind for America.

**1383. mary wickwire** (*ZIP code: 98112-4530*)

**1384. Mary Shesgreen** (*ZIP code: 60123*)

The big corporations should buy those trucks.

**1385. Mary McCauley** (ZIP code: 78520)

**1386. Mary Vorachek** (ZIP code: 97301)

**1387. Maureen Sheahan** (ZIP code: 48033-3520)

**1388. Mason Whitcomb** (ZIP code: 05641)

**1389. T C** (ZIP code: 60403)

**1390. Matthew Eager** (ZIP code: 11901-2648)

**1391. Matthew Humphrey** (ZIP code: 21218)

**1392. Maxwell Chaplin** (ZIP code: 93923-9556)

**1393. Teresia LaFleur** (ZIP code: 01776)

**1394. Mayellen Henry** (ZIP code: 98008-5123)

Surely big corporations do not need to cheat their workers in any way. Please protect the worker's right to make a decent wage AND breathe clean air.

**1395. Gary Mazzotti** (ZIP code: 62625)

**1396. Raymond Machak** (ZIP code: 01075)

**1397. Mark Bartleman** (ZIP code: 92651)

**1398. Mi He** (ZIP code: B3L 2R4)

**1399. Mary Rand** (ZIP code: 27546 )

**1400. Marta McCarey** (ZIP code: K0H 2H0)

LA Mayor Garcetti and Long Beach Mayor Garcia, If you want to protect the environment you must buy zero-emission trucks. Your drivers should NOT be paying for them. Each company should be paying for those trucks!!!In Canada we have very strict laws that protect the drivers, our communities and the environment.

**1401. Harriet McCleary** (ZIP code: 55404)

**1402. Michael McCarthy** (ZIP code: 48060)

**1403. Robert McFadden** (ZIP code: 02301)

**1404. Donlon McGovern** (ZIP code: 97211-6411)

**1405. michael mcguire** (ZIP code: 40229)

**1406. Mitchell Chaikin** (ZIP code: 17857)

**1407. Michael Kemper** (ZIP code: 94109)

**1408. Michael Kemper** (ZIP code: 94109)

**1409. Mary McAuliffe** (ZIP code: 90028)

**1410. Miguel Cubillos** (ZIP code: 90007)

Mr. Mayor,

I urge you to put a stop to Port Companies that are breaking the Law in your Back Yard and also making the drivers to Pay for Their equipment such as the New Zero Emission Trucks.

**1411. Mary L De Luca, MD** (ZIP code: 87110)

**1412. Matthew Emmer** (ZIP code: 33324)

**1413. Margaret King** (ZIP code: NW3 4UN)

Surely it is the responsibility of the EMPLOYER to ensure the health and safety of their employees. They have the means to do so - due to their profits gained by the work of their employees, who obviously DON'T have these means!

**1414. Madonna Martinez** (ZIP code: 92804)

**1415. Manetric Douglas** (ZIP code: 46229)

**1416. Michelle Dugan** (ZIP code: 19082)

**1417. Dallas Windham** (ZIP code: 75243)

**1418. Mark DiMaria** (ZIP code: 90034-1938)

**1419. Meghan Frost** (ZIP code: 06410)

**1420. WILLIAM C BRIGGS** (ZIP code: 90254)

**1421. meg kettell** (ZIP code: 11222)

- 1422. Michael Eisenscher** (*ZIP code: 94601*)
- 1423. Maryann LaNew** (*ZIP code: 92673*)
- 1424. Melanie Kuhn** (*ZIP code: 47906*)
- 1425. Mel Cup Choy** (*ZIP code: 96744*)
- 1426. Melissa Brown** (*ZIP code: 10009*)
- 1427. Liz Dyer** (*ZIP code: 22307*)
- 1428. Melvin D. Chaitlin** (*ZIP code: 94109*)
- 1429. Marjorie Liese** (*ZIP code: 15212*)
- 1430. Melody Knight** (*ZIP code: 94114*)
- 1431. melody smith** (*ZIP code: 52246*)
- 1432. Mercy Drake** (*ZIP code: 85205*)
- 1433. mercy grieco** (*ZIP code: 93720-2325*)
- 1434. Susaan Aram** (*ZIP code: 92651*)
- 1435. Meryle A. Korn** (*ZIP code: 98226*)
- 1436. Marvin Sawyer** (*ZIP code: 92284*)
- 1437. renato rodriguez** (*ZIP code: 95376*)
- 1438. Mary Ellen Strote** (*ZIP code: 91302*)
- 1439. Luke Metzger** (*ZIP code: 67208*)
- 1440. Margaret Weeks** (*ZIP code: 04073-4459*)
- 1441. Marguerita Denise Flowers** (*ZIP code: 89081*)
- 1442. Michael Hoover** (*ZIP code: 90046*)



- 1443. Douglas McCormick** (*ZIP code: 92679*)
- 1444. Mike Farrell** (*ZIP code: 91602*)
- 1445. Doris Morrison** (*ZIP code: 94544*)
- 1446. Marvin Gehrmann** (*ZIP code: 78613*)
- 1447. Mary Gifford** (*ZIP code: 78731*)
- 1448. Michael Iltis** (*ZIP code: 53713*)
- 1449. Marcia Hammerberg** (*ZIP code: 93555*)
- 1450. Martha H. Ames** (*ZIP code: 02906*)
- 1451. Melanie Hallahan** (*ZIP code: 94605*)
- 1452. Marianne Hart** (*ZIP code: 97008*)
- 1453. Melissa Cruz** (*ZIP code: 91010*)
- 1454. Matthew Evans** (*ZIP code: BD4 8TJ*)
- 1455. mario higa** (*ZIP code: 96813*)
- 1456. Mary Yee** (*ZIP code: 19143*)
- 1457. Mercedes Armillas** (*ZIP code: 11216*)
- 1458. Michael Seager** (*ZIP code: 44060*)
- 1459. Michael Hellmann** (*ZIP code: 92101*)
- 1460. Michael Shapiro** (*ZIP code: 33134*)
- 1461. Michael Gnat** (*ZIP code: 11215-4911*)
- 1462. Michael Misquez** (*ZIP code: 90660-1702*)
- 1463. Michael Wohlleb** (*ZIP code: 40222*)

**1464. Michelle Genest** (*ZIP code: 04073*)

**1465. Michelle Oroz** (*ZIP code: 95603*)

**1466. Sonia Hernandez** (*ZIP code: 33776*)

**1467. Midge Pauluk** (*ZIP code: 91423*)

**1468. Migdalia Jimenez** (*ZIP code: 60608*)

**1469. Mike Jones** (*ZIP code: 91307*)

**1470. Michael Lombardi** (*ZIP code: 19054-2023*)

**1471. Mike LaPorte** (*ZIP code: 97223*)

**1472. Michael Eisenberg** (*ZIP code: 27613*)

**1473. Mike Kappus** (*ZIP code: 94116*)

**1474. Mike Peale** (*ZIP code: 19014-1545*)

**1475. Mik Moore** (*ZIP code: 10040*)

**1476. adam browne** (*ZIP code: 4710*)

**1477. Jared Miller** (*ZIP code: 90027*)

**1478. Thomas Miller** (*ZIP code: 94066*)

The Employers should pay for the cost  
not the Drivers

**1479. Maria Miller** (*ZIP code: 49505*)

**1480. Kerby Miller** (*ZIP code: 65203*)

**1481. Millie Phillips** (*ZIP code: 94609*)

**1482. Gavi Stevens** (*ZIP code: 33771*)

**1483. Mini Liu** (*ZIP code: 11238*)

**1484. Salvador Miranda** (ZIP code: 91402)

**1485. Adam Beebe** (ZIP code: 94952)

**1486. Debra Gleason** (ZIP code: 60634-2651)

**1487. Mary Jaklevick** (ZIP code: 90807)

**1488. Marty Kitsman** (ZIP code: 95683)

Good Luck Port drivers!

**1489. Mary Wood** (ZIP code: 93401)

Any action of government must be fair to everyone. Please protect vulnerable people from rich companies trying to increase their bottom line.

**1490. M Langelan** (ZIP code: 20815)

**1491. Michael Montgomery** (ZIP code: 33704)

**1492. MJ Toppen** (ZIP code: 90720)

**1493. Michelle Keating** (ZIP code: 98664)

**1494. Martha Kransdorf** (ZIP code: 48103)

**1495. Mary Lechner** (ZIP code: 47876)

**1496. Michael Lewandowski** (ZIP code: 27526)

**1497. Marcia Bernstein** (ZIP code: 11229)

Trucking companies must pay for the new trucks, not the workers.

**1498. Michael Meranze** (ZIP code: 90405)

**1499. Michael Mitsuda** (ZIP code: 94555)

**1500. Mark Messing** (ZIP code: 49684)

**1501. Howard Miller** (ZIP code: 93003-1319)

WORKING PEOPLE AND FAMILIES MUST NOT BE FURTHER VICTIMIZED FINANCIALLY, BY THE WELL-OFF !!!!!!!

**1502. Molly Moore** (ZIP code: 85719)

**1503. Mehry Sepanlou** (*ZIP code: 89148*)

**1504. Mary Mutch** (*ZIP code: 54601*)

Truck drivers are not paid such huge wages that this should be their responsibility. They are not paid enough, I'm sure. The responsibility rests with their employers.

**1505. Martin Powers** (*ZIP code: 60639*)

**1506. Molly Huddleston** (*ZIP code: 95402*)

**1507. Gayle Edelman-Tolchin** (*ZIP code: 33498*)

**1508. Maureen O'Neal** (*ZIP code: 97223*)

**1509. Julie McCarthy** (*ZIP code: 80021*)

**1510. Armando A. Garcia** (*ZIP code: 90723*)

**1511. Glenn Mooney** (*ZIP code: 02896*)

**1512. Lynn Walker** (*ZIP code: 44110*)

**1513. Lynn Walker** (*ZIP code: 44110*)

**1514. Diana Saxon** (*ZIP code: 97301*)

I'm signing this petition because drivers working 20-hour work days is not only insane, but dangerous and hazardous. I find it egregious that drivers not only have to work these kind of hours, but them having to pay for the equipment is wrong!!!

**1515. P BG** (*ZIP code: 22192*)

**1516. Morgan Clark** (*ZIP code: 07079*)

**1517. Bambi Magie** (*ZIP code: 08724*)

**1518. Lynne Weiske** (*ZIP code: 90048*)

**1519. D. Rincon** (*ZIP code: 93703*)

**1520. Michelle Palladine** (*ZIP code: 92262*)

**1521. Michael Parker** (*ZIP code: 87120*)

**1522. Ray Wigent** (ZIP code: 60438)

Do the right thing.put yourselves in our position for a minute.

**1523. Margery Race** (ZIP code: 78741)

**1524. Mr. Evans** (ZIP code: 93612)

**1525. Peter Morrow** (ZIP code: LL62 5NL)

**1526. Michael Want** (ZIP code: 2753)

**1527. Lindsey Caudill** (ZIP code: 78749)

**1528. Laura Newton** (ZIP code: 92234)

**1529. Anthony Castillo** (ZIP code: 90805)

**1530. Andre Meaux** (ZIP code: 32821)

**1531. William Hewes** (ZIP code: 93063)

**1532. Sara Eisner** (ZIP code: 00000)

**1533. Larry Hannon** (ZIP code: 28270)

**1534. amy dingman** (ZIP code: 87121)

**1535. Mike Bolgert** (ZIP code: 15238)

**1536. Mark Schaffer** (ZIP code: 89108)

**1537. lois harris** (ZIP code: 91711)

**1538. Maureen McCarthy** (ZIP code: 1945)

**1539. Carolyn De Mirjian** (ZIP code: 91401)

**1540. Monica Stuhlreyer** (ZIP code: 48162)

**1541. Matt Sweeney** (ZIP code: 93101)

**1542. Diane Whitman** (ZIP code: 98109)

**1543. Warren Parks** (ZIP code: 95338-5008)

**1544. Michael Tomczyszyn** (ZIP code: 94132)

**1545. Twikie Simms** (ZIP code: 92801)

**1546. Lauren Murdock** (ZIP code: 93110)

**1547. Michelle Murphy** (ZIP code: 08619)

**1548. Martin Watts** (ZIP code: 02760)

**1549. Joshua Seff** (ZIP code: 75070-5815)

**1550. valerie snyder** (ZIP code: 97116)

**1551. Marc Woersching** (ZIP code: 91617)

**1552. Denise Romesburg** (ZIP code: 85021)

**1553. Kate Harder** (ZIP code: 60137)

**1554. Yvonne Quilenderino** (ZIP code: 93955)

**1555. Myron Wollin** (ZIP code: 90808)

**1556. Michael Zuckerman** (ZIP code: 08618)

**1557. michael zuckerman** (ZIP code: 08618)

**1558. Noel Barnes** (ZIP code: 98058)

**1559. nancy blastos** (ZIP code: 92373)

Free truckers from wage theft by wealthy employers

**1560. Nadia Sindi** (ZIP code: 97440-0059)

My life with Liberal Klans in Oregon!!

Arab/Muslim Americans are treated less than animals! We are called Sand N...

We are being prosecuted in a daily basis! High tech lynching, institutionally racism! Especially for Arab women!!

Oregon former late A.G. Dave Frohnmayer had my SS# blocked & prevented me from getting

employed, made me homeless and jobless!

He was the one who started & initiated the fraud of Foreclosed-houses & taking over our homes!

His bank robber Rep. Bob Ackerman, Doug McCool and Margaret Hallock hired Scarlet Lee/Barnhart Associates, forged my family's signature, gave our fully paid Condo to the thief Broker Bob Ogle. And his mom Karen Ogle " who was working in the USA Consulate in Jeddah, Saudi Arabia 1997-1999 & administered the power of attorney to have my sister signed it and add her son to the deed," without my signature!!

Bob Ackerman had never responded to the Summon from the Court, and the sheriff never served him or arrested him either!!

This is what kind of criminal government we have in Oregon!!

Arrest Rep. Bob Ackerman, Doug Mccool, Broker Bob Ogle, his mom Karen Ogle, Scarlet Lee/Barnhart Associates, UO Prof. Margaret Hallock, Wells Fargo

Both D.A. Doug Harclerod, Alex Gardner and the rest of Oregon criminal Officials who are complicit with these crimes against me!

Both the EPD & the Lane County Sheriff Dep. had been told to step down from investigating the bank robber Rep. Bob Ackerman & the rest of Lane County Criminal Officials who are complicit with him!!

I ran five times for public offices! Voter Fraud & Sedition by Lane County government to protect & cover up for the two criminals Frohnmayer & Ackerman!!

Oregon government is complicit with their crimes!!

<https://www.facebook.com/groups/justice4nadiasindi>

[www.davefrohmayer.com](http://www.davefrohmayer.com)

Please sign petition.

[https://www.change.org/petitions/a-g-eric-holder-sent-jeff-merkley-gov-john-kitzhaber-investigate-abuse-of-power-and-criminal-forgery-by-former-oregon-a-g-david-frohmayer-and-lane-county-government#share\\_](https://www.change.org/petitions/a-g-eric-holder-sent-jeff-merkley-gov-john-kitzhaber-investigate-abuse-of-power-and-criminal-forgery-by-former-oregon-a-g-david-frohmayer-and-lane-county-government#share_)

**1561. Nadine Bloch** (ZIP code: 20912)

**1562. Nadya Tichman** (ZIP code: 94602)

**1563. Jerry Nailon** (ZIP code: 95831)

**1564. Nancy Pape** (ZIP code: 03823)

**1565. Nancy Porter-Steele** (ZIP code: 92020)

- 1566. Nancy Sadowsky** (*ZIP code: 33155*)
- 1567. Nancy L. Anderson** (*ZIP code: 97520*)
- 1568. Nancy Ellingham** (*ZIP code: 98040*)
- 1569. Nancy Caswell** (*ZIP code: 01510*)
- 1570. Nancy White** (*ZIP code: 99216*)
- 1571. n. pyle** (*ZIP code: 95610*)
- 1572. Dan Morgan** (*ZIP code: 93560-6804*)
- 1573. Pierina Provenzano** (*ZIP code: 12590*)
- 1574. Barbara Born** (*ZIP code: 90740*)
- 1575. Paul Naylor** (*ZIP code: 27707*)
- 1576. Nancy Batayola** (*ZIP code: 98126*)
- 1577. Nancy DeJarlais** (*ZIP code: 95010*)
- 1578. Nancy Donald** (*ZIP code: 94530*)
- 1579. Ned Savage** (*ZIP code: 24127*)
- 1580. Emilio Villa** (*ZIP code: 93060*)  
FIGHT THE POWER !!!!!
- 1581. Neil Hultgren** (*ZIP code: 90815*)
- 1582. Neil Quarles** (*ZIP code: 78704*)
- 1583. Neil Dunaetz** (*ZIP code: 85641*)
- 1584. Roberto Romo** (*ZIP code: 94121*)
- 1585. Robert Racine** (*ZIP code: 85201-5304*)
- 1586. william elwood** (*ZIP code: 15370*)



**1587. Jan Hillegas** (ZIP code: 39207)

**1588. Rose Murphy** (ZIP code: 95076)

**1589. Nancy Garo** (ZIP code: 12508)

**1590. Linda Nguyen** (ZIP code: 80209)

**1591. Natasha Hopkins** (ZIP code: 63034)

**1592. Jovohn Hornbuckle** (ZIP code: 75104)

**1593. An anonymous signer** (ZIP code: 23451)

Bring the middle class back!!! Support the port truckers. Port truckers are taken advantage of take on all the burden. Sit in port for 5 hours waiting on box while not getting paid and burning gas. Picking up loads that were 10k pound over weight. Blowing tire because of load over weight which driver has to pay losing money for the day. Can do on and on. Corporations making money on the little guy increasing wage inequality.

**1594. Nicolas Humphrey** (ZIP code: 54301)

**1595. Nick Weiner** (ZIP code: 20016)

Stop the abuse of port truck drivers!

**1596. Katherine Nelson** (ZIP code: 98031)

**1597. Michele Nihipali** (ZIP code: 96717)

**1598. Nile Arena** (ZIP code: 47401)

**1599. Bill Harmon** (ZIP code: 95035)

**1600. Rika Reyes** (ZIP code: 90501)

**1601. Georgia Lynn** (ZIP code: 93308 4462)

**1602. Nadine LaVonne** (ZIP code: 98107)

**1603. Nancy Bradford** (ZIP code: 34982)

**1604. William Petruno** (ZIP code: 06783)

**1605. Noelle Marquis** (ZIP code: 94973)

**1606. Bruce Revesz** (*ZIP code: 07009*)

**1607. Shariann Lewitt** (*ZIP code: 2143*)

**1608. Tiani Gholar Pesante** (*ZIP code: 91416-7234*)

**1609. Robert Hernandez** (*ZIP code: 92805*)

**1610. Michael Treece** (*ZIP code: 96720*)

**1611. Greg Noonan** (*ZIP code: 15317*)

**1612. Nora Polk** (*ZIP code: 97206*)

**1613. Norma J F Harrison** (*ZIP code: 94702*)

Los Angeles Mayor Eric Garcetti & Long Beach Mayor Robert Garcia; ensure that port drivers will NOT have to pay for the proposed new zero emission trucks.

**1614. Norma Claire Moruzzi** (*ZIP code: 60640*)

**1615. Richard Tregidgo** (*ZIP code: 17532*)

**1616. Kristen Norton** (*ZIP code: 92866*)

**1617. WILLIAM DAVISON** (*ZIP code: 98204*)

**1618. Nancy Petranto** (*ZIP code: 94949*)

**1619. Neil Puckett** (*ZIP code: 89434*)

**1620. Nancy Hunt** (*ZIP code: 28560*)

**1621. Norman Conrad** (*ZIP code: 98274*)

**1622. Carla Weil-Martin** (*ZIP code: 86314*)

**1623. Nathan Coles** (*ZIP code: 37027*)

**1624. Nancy Kingston** (*ZIP code: 92692*)

**1625. NANCY YAMADA** (*ZIP code: 95814*)

**1626. mark blandford** (ZIP code: 79124)

**1627. Robert March** (ZIP code: 44483)

**1628. Victor Ochoa** (ZIP code: 94602)

**1629. Ellen Koivisto** (ZIP code: 94122)

**1630. Bob DiGaetano** (ZIP code: 19020)

**1631. Evelyn Haas** (ZIP code: 19152)

**1632. Omar Martin** (ZIP code: 46208)

**1633. Omar Boumali** (ZIP code: 79901)

**1634. Constance Youens** (ZIP code: 92562-3245)

**1635. C. Kasey** (ZIP code: 23116)

**1636. Marie O'Meara** (ZIP code: 87108)

Port drivers are not to be treated like slaves. The mayors in question must address and correct this disgraceful injustice immediately.

**1637. arthur bermudez** (ZIP code: 90255)

**1638. Terrie Allen** (ZIP code: 91101)

**1639. Tom Jezek** (ZIP code: 04530)

**1640. Odessa Osby** (ZIP code: 95341)

**1641. Oren Sachs** (ZIP code: 11570)

**1642. Laura Overmann** (ZIP code: 94010-5141)

**1643. Peter Humphries** (ZIP code: 95158)

**1644. Pela Tomasello** (ZIP code: 95062)

**1645. Peter Reynolds** (ZIP code: 27703)

**1646. Paul Mikod** (*ZIP code: 60646*)

**1647. Pat Chefalo** (*ZIP code: 14624*)

**1648. Paige Kimble** (*ZIP code: 53226*)

**1649. Phillip Meyers** (*ZIP code: 31419*)

**1650. Pamela Meier** (*ZIP code: 60096*)

**1651. Pamela Osgood** (*ZIP code: 95945-4822*)

It is only fair that the trucking companies bear the financial burden of going to zero emissions.

**1652. Pam Verner** (*ZIP code: 60134*)

**1653. Pamela Raup-Kounovsky** (*ZIP code: 12037*)

**1654. Pam Ramirez** (*ZIP code: 94804*)

**1655. Pamela Nordhof** (*ZIP code: 49419*)

**1656. Patricia Morton** (*ZIP code: 90039*)

**1657. Ross Copeland** (*ZIP code: 6020*)

**1658. Pamala Thomas** (*ZIP code: 90403*)

**1659. Pat Vescio** (*ZIP code: 27513*)

**1660. Patricia Chelmecki** (*ZIP code: 60119*)

**1661. Patricia Claytor** (*ZIP code: 63119-4261*)

**1662. Pat Blackwell-Marchant** (*ZIP code: 94552-1708*)

**1663. Patricia Randazzo** (*ZIP code: 1886*)

**1664. Patricia Baley** (*ZIP code: 89121*)

**1665. Patricia Pruitt** (*ZIP code: 60302*)

**1666. Pat Annoni** (*ZIP code: 84047*)

**1667. patricia martin** (*ZIP code: k2g5s8*)

**1668. Patrick Maloney** (*ZIP code: 60657-6778*)

**1669. Patrick Quiroz** (*ZIP code: 92869*)

**1670. Patricia Nadreau** (*ZIP code: 54660*)

Protect the drivers. Trucking companies and Retail giants should pay for the zero emission trucks.

**1671. Patty Byers** (*ZIP code: 86401-4069*)

Do not penalize the working man

**1672. Paul Jefferson** (*ZIP code: 66044-1327*)

**1673. Paul Jerome** (*ZIP code: 79936*)

**1674. Paul Moss** (*ZIP code: 55110*)

**1675. Paul Poplawski** (*ZIP code: 15214*)

**1676. Paul Koehler** (*ZIP code: 94611*)

**1677. Paul Nasuti** (*ZIP code: 19130*)

**1678. Pawiter Parhar** (*ZIP code: 49512*)

**1679. Paul Stanley** (*ZIP code: 90069*)

**1680. Phil Bunker** (*ZIP code: 78723*)

**1681. Patricia Bleha** (*ZIP code: 92009*)

This is only fair and the decent thing to do,

**1682. Phillip Cripps** (*ZIP code: 92234-7932*)

**1683. Paul Drummond** (*ZIP code: 86404*)

**1684. Janet Johnson** (*ZIP code: 97365*)

I grew up in smoggy Riverside

**1685. Phoebe Oaks** (*ZIP code: 97205*)

**1686. Robin Perry** (*ZIP code: 94602*)

**1687. Peggy Alt** (*ZIP code: 12565*)

**1688. Penny Hammack** (*ZIP code: 76180-6623*)

**1689. Penny Menerey** (*ZIP code: 48439*)

**1690. Rachel C** (*ZIP code: 05403-6510*)

**1691. Pete Wilson** (*ZIP code: 96778-8327*)

**1692. perry harris** (*ZIP code: 10918*)

**1693. Graciela Huth** (*ZIP code: 90045*)

**1694. Peter Smullen** (*ZIP code: 34746*)

**1695. Pete Chrisos** (*ZIP code: 33736*)

**1696. Pete Klosterman** (*ZIP code: 10025-8209*)

**1697. Peter Lee** (*ZIP code: 91766*)

**1698. Kyle Peterson** (*ZIP code: 48313*)

**1699. Sarah Wiebenson** (*ZIP code: 97227*)

**1700. Antoinette Bill** (*ZIP code: 90403*)

**1701. Patricia Gawith** (*ZIP code: 90650*)

**1702. Patrick Guaschino** (*ZIP code: 08755*)

**1703. Philippe LEBOURG** (*ZIP code: 38760*)

**1704. Patrick Herbert** (*ZIP code: 08081*)

**1705. Phillip Alexander** (*ZIP code: 22307*)

It's unfair to expect the drivers to pay for the excesses of Walmart, Amazon, Harbor Frieght and other trucking companies. IT is their cost of doing business and should correctly pay for their trucks.

**1706. Pat Herron** (*ZIP code: 92129*)

ANY TRUCKING COMPANY THAT MAKES TRUCKERS PAY FOR THEIR EQUIPMENT SHOULD BE KICKED OUT!

**1707. Franklin Creasman** (*ZIP code: 28715*)

**1708. Philip Gasper** (*ZIP code: 53717*)

**1709. Susan Babbitt** (*ZIP code: 19107*)

**1710. Paul Albrecht** (*ZIP code: 19128-3125*)

**1711. Phillip Manson** (*ZIP code: 92106*)

**1712. Phillip Hope** (*ZIP code: 11215*)

**1713. Jon Singleton** (*ZIP code: 10118*)

**1714. Phyllis Chavez** (*ZIP code: 90405-5038*)

**1715. Pietro Poggi** (*ZIP code: 94901-2852*)

**1716. Pamela Lanagan** (*ZIP code: 75965*)

**1717. Scott Nelson** (*ZIP code: 94511*)

**1718. Piotr Sliwka** (*ZIP code: 20109*)

**1719. Patrick McDonough** (*ZIP code: 20009*)

**1720. P. Melanie Vliet** (*ZIP code: 90638*)

**1721. Paul Savino** (*ZIP code: 30047*)

shipping and container companies should not be allowed by law to haul freight. It should be made an illegal act if they do. Freight should be hauled by DRIVERS !!! And we should be setting the rates ! --not the crooks that take advantage of us drivers !!! when will things change ?

**1722. Stephanie Mory** (*ZIP code: 18411*)

**1723. Jaclyn Griffeth** (*ZIP code: 80911*)

**1724. Alan Gross** (*ZIP code: 08873-2317*)

**1725. P.P. Soucek** (*ZIP code: 91401-5625*)

**1726. Peggy O'Neil-Rosales** (*ZIP code: 90807-4723*)

- 1727. Mike Smythe** (ZIP code: 08012)
- 1728. Daisy Porter** (ZIP code: 52554)
- 1729. Paul Price** (ZIP code: 60130)
- 1730. pranay reddy** (ZIP code: 90014)
- 1731. PRISCILLA DELANEY** (ZIP code: 19096-1547)
- 1732. Paula Shafransky** (ZIP code: 98284)
- 1733. Pamela Lichtenwalner** (ZIP code: 94970)
- 1734. Paul Ripley** (ZIP code: 95062)
- 1735. Paul Szymanowski** (ZIP code: 43412-0074)
- 1736. Martha Smith** (ZIP code: 14904)
- 1737. Rose Berl** (ZIP code: YO23 1DA)
- 1738. pat warstler** (ZIP code: 46528)  
WE NEED CLEAN AIR GOOD JOBS NOW!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!
- 1739. Priscilla Chew** (ZIP code: 02143)
- 1740. Patricia Westwater** (ZIP code: 20010)
- 1741. Paul Sanchez** (ZIP code: 95815)
- 1742. linda letnick** (ZIP code: v4a 1t5)
- 1743. Michael Dobbs** (ZIP code: 78727)
- 1744. Jena Janek** (ZIP code: 76901)
- 1745. Seth Mosgofian** (ZIP code: 87501)
- 1746. Querido Galdo** (ZIP code: 94601)
- 1747. JOSEPH LITE** (ZIP code: 45420-2444)



**1748. Ray Wells** (*ZIP code: 98926*)

**1749. Robert Kastigar** (*ZIP code: 60625-5500*)

**1750. Robert Bonsall** (*ZIP code: 95822*)

The cost of clean air vehicles should not be borne by the employees because of the cynical and self-serving business model used by the employers.

**1751. ron Callander Sr** (*ZIP code: 43213*)

**1752. R Le Heron** (*ZIP code: 0629*)

**1753. Rachel Scarlata** (*ZIP code: 80814*)

**1754. R.A. Dayton** (*ZIP code: 15227*)

**1755. Radia Amari** (*ZIP code: 90025*)

**1756. Ralph Famularo** (*ZIP code: 590-0403*)

**1757. Rafal Dobrowolski** (*ZIP code: 92037*)

**1758. Charlotte Jones** (*ZIP code: 60126*)

Drivers should not have to pay for the zero emission trucks. Let the people who can afford this expense, the trucking companies and these huge retail customers pay. It is absurd to ask the workers to foot the bill. Shame on you mayors for not protecting these drivers, and the environment.

**1759. Andrew Nelson** (*ZIP code: 85603*)

**1760. Janice Gloe** (*ZIP code: 94602*)

**1761. Raymond Zahra** (*ZIP code: 63033*)

**1762. e ralston** (*ZIP code: 61107*)

**1763. Sandra Hillerstrom** (*ZIP code: 28740*)

**1764. Randy Breen** (*ZIP code: 47394*)

**1765. Ron Giddings** (*ZIP code: 93402*)

**1766. Randy Diner** (*ZIP code: 87123*)

**1767. Randolph Schoedler** (ZIP code: 53208-3714)

**1768. Richard Orrange** (ZIP code: 81050)

The large retail companies should take responsibility!

**1769. Ramon Lamirand** (ZIP code: v1z1b2)

**1770. Timothy Raymond** (ZIP code: 14607)

**1771. Julie Smith** (ZIP code: 93402)

**1772. Jerry Rosenkoetter** (ZIP code: 97317)

Port truck drivers are not contractors. Pay them a living wage and protect their rights and give them decent worker protections.

**1773. Robert Blumenthal** (ZIP code: 98115)

**1774. Richard Guevara** (ZIP code: 85123)

**1775. Richard Khanlian** (ZIP code: 87505)

**1776. randy sailer** (ZIP code: 58523)

**1777. Russell Attoe** (ZIP code: 53704)

**1778. Randolph D. Hedgebeth** (ZIP code: 98405)

**1779. Rhonda D. Wright, MD** (ZIP code: 30319-4168)

**1780. Deborah Reade** (ZIP code: 87501)

**1781. Rebecca Bierbaum** (ZIP code: 62002)

**1782. Rebecca Birkel** (ZIP code: 69123)

**1783. Ed Parks** (ZIP code: 73505)

**1784. Bobby Belknap** (ZIP code: 49635)

**1785. Jim Phillips** (ZIP code: 95476)

**1786. DD REDMAN** (ZIP code: 55109)

**1787. Matt Scanlon** (ZIP code: 90732)

I'm a retired high school teacher who taught at Banning High in Wilmington for over 12 years. The majority of students in my class had at least one family member w/ respiratory problems due to living, going to school and working in the center of the "diesel death zone."

PLEASE do the right thing for the health of all of those who live near the port: Wilmington, Carson, San Pedro and West Long Beach and pass the CLEAN AIR ACTION PLAN. Thousands of lives depend on you to protect them.

Thank you!

Matt Scanlon

**1788. Leslie Gleason** (ZIP code: 94938)

**1789. RedLion York** (ZIP code: 80525)

**1790. demario reece** (ZIP code: 90220)

**1791. James Tatum, Jr.** (ZIP code: 99336)

**1792. reese saulter** (ZIP code: 30253)

**1793. Rees Urban** (ZIP code: 60618)

**1794. Reevyn Aronson** (ZIP code: 94061)

**1795. Robert Glover** (ZIP code: 93726)

**1796. Rene McIntyre** (ZIP code: 94102)

**1797. Reuben Wade** (ZIP code: 19147)

**1798. Rev. Allan B. Jones** (ZIP code: 95404)

Thank you.

**1799. Hollis Whiting** (ZIP code: 93950)

**1800. Jerald Stinson** (ZIP code: [revjstinson@verizon.net](mailto:revjstinson@verizon.net))

**1801. Sandra John** (ZIP code: 95928)

**1802. Sandy Williams** (ZIP code: 91723)

**1803. rex franklyn** (ZIP code: 94920)

**1804. Kevin Reynolds** (ZIP code: 94541)

**1805. Dale Reynolds** (*ZIP code: 91205*)

**1806. Robert King** (*ZIP code: 87144*)

**1807. Robert Fritsch** (*ZIP code: 04930*)

Zero emission proposed requirements expenses should be borne by the the ports of LA & Long Beach.

**1808. Ronald Hammersley** (*ZIP code: 32907*)

**1809. Ray Bartlett** (*ZIP code: 92708*)

**1810. Rachel Hess** (*ZIP code: 43443*)

**1811. Rheta Johnson** (*ZIP code: 60189*)

**1812. Rene Huerta** (*ZIP code: 91763*)

**1813. Ricco Bonelli** (*ZIP code: 92648*)

**1814. Richard Han** (*ZIP code: 48103*)

**1815. Jess Bernstein** (*ZIP code: 53572*)

**1816. Richard Edelman** (*ZIP code: 02140*)

**1817. Richard Boyce** (*ZIP code: 45230*)

**1818. Richard Fehr** (*ZIP code: 30277*)

**1819. Rick Hart** (*ZIP code: 78752*)

**1820. Ricki Newman** (*ZIP code: 47630*)

**1821. Richard Rheder** (*ZIP code: 12498*)

**1822. Richard Schulte** (*ZIP code: 91941-4237*)

**1823. Ricardo Wheeler** (*ZIP code: 93510-2141*)

**1824. Carolyn Riddle** (*ZIP code: 78758*)

**1825. Richard Kuykendall** (*ZIP code: 90731*)

**1826. J Louis Nielsen** (*ZIP code: 02906*)

**1827. Mary Jones-Giampalo** (*ZIP code: 53950*)

**1828. Ralph Bocchetti** (*ZIP code: 92337*)

**1829. Ryan Janota** (*ZIP code: 69538*)

**1830. Raymond Arent** (*ZIP code: 21146*)

**1831. Rebecca Doxtater** (*ZIP code: 98612*)

**1832. RUBEN BRENHAUG** (*ZIP code: 97504-5689*)

**1833. Rajan Karunakaran** (*ZIP code: 06854*)

**1834. Rita Kern** (*ZIP code: 90008*)

**1835. Greg Stawinoga** (*ZIP code: 60473*)

**1836. Randy Kliewer** (*ZIP code: 95603*)

**1837. Robert Lewandowski** (*ZIP code: 46307*)

**1838. Becca Greenstein** (*ZIP code: 60202*)

**1839. robert lindey** (*ZIP code: 95670-5624*)

**1840. Robert Johnson** (*ZIP code: 90245-3259*)

**1841. Rose Ash** (*ZIP code: 14202*)

**1842. I.B.T. LOCAL 600 GOLDEN AGE RETIREES CLUB** (*ZIP code: 63043*)

**1843. Robert Moreillon** (*ZIP code: 85614*)

**1844. Ray Morris** (*ZIP code: 93308*)

**1845. Rosie Noguera** (*ZIP code: 94102*)

The people of this Country should not have to pay for new zero emission trucks. The trucking

companies and the companies that are profiting from having products delivered to them should foot the bill. Not the working class that is barely surviving from pay check to pay check and one check away from being homeless. The lower/middle class society need your help and protection.

**1846. Russell Novkov** (ZIP code: 53705)

**1847. Ronald Wolniewicz** (ZIP code: 43609)

**1848. Robert Bein** (ZIP code: 80504)

**1849. Robert Lowe** (ZIP code: 94803)

**1850. robert spaccarotelli** (ZIP code: 91711)

**1851. Robert Cahill** (ZIP code: 94928)

**1852. Robert Sweeney** (ZIP code: 38401)

**1853. Robert Fischhoff** (ZIP code: 88062)

**1854. robert keenan** (ZIP code: 92691)

**1855. bob nace** (ZIP code: 94523)

**1856. Robert Wohlberg** (ZIP code: 55423)

**1857. William Anderson** (ZIP code: 19072)

**1858. william Hoffele** (ZIP code: N0H2T0)

**1859. beth engelman** (ZIP code: 80401)

**1860. Daniel rodriguez** (ZIP code: 92551)

**1861. Roel Cantu** (ZIP code: 78572)

**1862. Roger Blair** (ZIP code: 94555)

**1863. Jeffrey White** (ZIP code: 97116-8523)

**1864. coach ron** (ZIP code: 90013)

(:Amen.

**1865. Ron Mahood** (*ZIP code: CA*)

**1866. Ronald Martin** (*ZIP code: 98321*)

Do the right thing and pay,for the zero emissions for these port drivers and fine any company that puts excessive fees and payments on these trucks remember a happy driver is a good driver and will stay with you

**1867. Ron van Lienden** (*ZIP code: 97504*)

**1868. Judy White** (*ZIP code: 43202*)

**1869. Ron Galen** (*ZIP code: 94804*)

**1870. Ron Teninty** (*ZIP code: 97405*)

**1871. Ronald Richardson** (*ZIP code: 51555*)

**1872. Ronlyn Schwartz** (*ZIP code: 98260*)

**1873. Ron Schmidt** (*ZIP code: 94132*)

**1874. Ronald Warren** (*ZIP code: 91206*)

**1875. richard plumber** (*ZIP code: 34684-4541*)

**1876. Veronica Bourassa** (*ZIP code: 37332*)

**1877. Rosalie Preston** (*ZIP code: 90247-4541*)

**1878. Rosalind Bresnahan** (*ZIP code: 92405*)

**1879. Rosemary Caolo** (*ZIP code: 18510-1902*)

**1880. Joel Rosenblit** (*ZIP code: 97302*)

**1881. Rosemary Wetherold** (*ZIP code: 78735*)

**1882. Roslyn Feldberg** (*ZIP code: 02467*)

**1883. Peggy Ross** (*ZIP code: 52101*)

**1884. Ross Heckmann** (*ZIP code: 91006*)

- 1885. Ashley Farreny** (*ZIP code: 08110*)
- 1886. Austin Turney** (*ZIP code: 66044*)
- 1887. Ronnie Rouse** (*ZIP code: 67068*)
- 1888. ROXENE MILLER** (*ZIP code: 60628*)
- 1889. Roxanne Cody** (*ZIP code: 77042-5805*)
- 1890. roy adsit** (*ZIP code: 97228*)  
Support workers Rights to a healthy work place.
- 1891. Roy Zarow** (*ZIP code: 85705*)
- 1892. richard farino** (*ZIP code: 01801*)
- 1893. Rolf Friis** (*ZIP code: 40218*)
- 1894. Reuben Roth** (*ZIP code: P3E2C6*)
- 1895. Robert Sandgrund** (*ZIP code: 14209*)
- 1896. Rebecca Berlant** (*ZIP code: 11231*)
- 1897. Robin Schaef** (*ZIP code: 16327*)
- 1898. Russell Skinner** (*ZIP code: 54136*)
- 1899. Rick Sparks** (*ZIP code: 91602*)
- 1900. Rob Seltzer** (*ZIP code: 90265*)
- 1901. Robert Stanley** (*ZIP code: 92336*)  
Keep the trucks rolling keep people work
- 1902. Lawrence East** (*ZIP code: 28540*)
- 1903. Ralph Sullender** (*ZIP code: 64439*)
- 1904. ROBERT TURNER** (*ZIP code: 90008*)



**1905. Jeanette Traudt** (ZIP code: 80134)

**1906. Wayne Wilkinson** (ZIP code: 63116)

**1907. Robert Esposito** (ZIP code: 08757)

**1908. Russell La Claire** (ZIP code: 98198)

Let us do right by these folks who do so much for the economy of this nation.

**1909. Russell Grindle** (ZIP code: 94533)

**1910. Russell Jones** (ZIP code: 96778)

WE NEED A SAFE HARBOR FOR OUR DRIVERS!!

**1911. Ruth Leventhal** (ZIP code: 91606)

**1912. Riley Canada II** (ZIP code: 30066)

**1913. Robert Jacobson** (ZIP code: 11217)

**1914. Richard Madole** (ZIP code: 78578)

**1915. Roger Vortman** (ZIP code: 95060)

**1916. Ruth Weiner** (ZIP code: 55102)

I support the port drivers' campaign. Good luck!

**1917. Ryan Persad** (ZIP code: 11432)

**1918. Ryan Davis** (ZIP code: 91502)

**1919. Robert Rynasiewicz** (ZIP code: 21212)

**1920. Ryan W.** (ZIP code: 78240)

**1921. Robert Zabala** (ZIP code: 91789)

**1922. Sherrill Futrell** (ZIP code: 95618)

Time for you to help the working people for a change.

**1923. Sal Mantineo jr** (ZIP code: 19963)

**1924. Sally-Alice Thompson** (ZIP code: 87108)

- 1925. Sally Small** (*ZIP code: 46219*)
- 1926. Sally Jane Wilson** (*ZIP code: 02908*)
- 1927. Sally Mackey** (*ZIP code: 98166*)
- 1928. Salme Armijo** (*ZIP code: 97302*)
- 1929. Kathy Oppenhuizen** (*ZIP code: 49460*)
- 1930. Samuel Appel** (*ZIP code: 90006*)
- 1931. Evan Jane Kriss** (*ZIP code: 94965*)
- 1932. sam robson** (*ZIP code: 28923*)
- 1933. Michael C. Ford and Richard B. Marks** (*ZIP code: 95076*)
- 1934. Samuel Newman** (*ZIP code: 21044*)
- 1935. Samuel Durkin** (*ZIP code: 94534*)
- 1936. Sandra Kirkland** (*ZIP code: 60641*)
- 1937. Sara Fisch** (*ZIP code: 85260*)
- 1938. Sarah Hafer** (*ZIP code: 98684*)
- 1939. Sarah Wong** (*ZIP code: 97267*)
- 1940. Brenda Psaras** (*ZIP code: 11940*)
- 1941. John Taylor** (*ZIP code: 18030*)
- 1942. Anaundda Elijah** (*ZIP code: 93401*)
- 1943. Tamara Saarinen** (*ZIP code: 98335*)
- 1944. Sayrah Namaste** (*ZIP code: 87110*)
- 1945. Steve Bloom** (*ZIP code: 94122*)

**1946. Kathleen Eaton** (ZIP code: 19709)

**1947. Richard Scheffler** (ZIP code: 53014)

**1948. Susan Chinn** (ZIP code: 11205)  
Don't make port drivers pay for new zero emission trucks!

**1949. David Houlton** (ZIP code: 97496)

**1950. Robert Schuster** (ZIP code: 97007-6587)

**1951. Scott Barlow** (ZIP code: 94087)

**1952. Scott Jennings** (ZIP code: 70118)

**1953. Sandra Christopher** (ZIP code: 91505)

**1954. Janice Vieth** (ZIP code: 91724)

**1955. Scott Miller** (ZIP code: 54956)

**1956. Sharon Deuchars** (ZIP code: 85541)

**1957. Sylvia Duncan** (ZIP code: 75075)

**1958. Stephen Dutschke** (ZIP code: 40207)

**1959. Arnold Schultz** (ZIP code: 80012)

**1960. Sean Edmison** (ZIP code: 98052)

**1961. Dalia Jaramillo** (ZIP code: 90032)  
These huge corporations are "buying" the equipment with the workers' wages. Seems these greedy practices are part of the plan to keep workers poor

**1962. William Cumming** (ZIP code: 11111)

**1963. Joel Hildebrandt** (ZIP code: 94705)

**1964. Juan Serrano** (ZIP code: 90022)  
Please help our port drivers to have a decent job with benefits and avoid the misclassification on all companies supporting the good companies with union and make the big companies pay for the new clean trucks not the driver

**1965. Seth Snapp** (*ZIP code: 98225-3316*)

**1966. Cruz Gomez** (*ZIP code: 90601*)

**1967. Barbara Bailly** (*ZIP code: 53715-2176*)

**1968. Stephanie Farkash** (*ZIP code: 80014-1188*)

**1969. Sharon Fetter** (*ZIP code: 98371*)

**1970. Michele Meyer** (*ZIP code: 94590*)

**1971. Stephen Greenberg** (*ZIP code: 959592856*)

**1972. Steve Gilmartin** (*ZIP code: 94702*)

**1973. Mary Bushur** (*ZIP code: 63010*)

**1974. Shahna Misailegalu** (*ZIP code: 92557*)

**1975. Elana Levinson** (*ZIP code: 11375*)

**1976. Sherry Halbrook** (*ZIP code: 12020*)

There is a reason why America's super wealthy 1 percent is just getting richer off the work and the earnings of everyone else. Americans know it and we will not tolerate further exploitation. Companies must pay their own way. Stop trying to always pass the tab to somebody else.

**1977. Shoshanah Stone** (*ZIP code: 99515*)

**1978. David Peterson** (*ZIP code: 95112*)

**1979. S. B.** (*ZIP code: 14850*)

**1980. An anonymous signer** (*ZIP code: 90212*)

**1981. Sharon Longyear** (*ZIP code: 10598*)

**1982. Sharyn Dreyer** (*ZIP code: 80206*)

**1983. Shearle Furnish** (*ZIP code: 72223*)

**1984. Sheila McCandlish** (*ZIP code: 98273*)

- 1985. Gary Shephard** (*ZIP code: 76148*)
- 1986. Robert Cox** (*ZIP code: 98223*)
- 1987. edie bruce** (*ZIP code: 94530*)
- 1988. Tony Shugailo** (*ZIP code: 60513*)  
Stop those bullies from raping people on their pay ??
- 1989. Shirley Shirron** (*ZIP code: 22827*)
- 1990. Lynn Shoemaker** (*ZIP code: 53190*)
- 1991. Sharon Paltin** (*ZIP code: 95454*)
- 1992. Stephen Hunt** (*ZIP code: 35242*)
- 1993. Siamak Vossoughi** (*ZIP code: 94115*)
- 1994. Siddharth Mehrotra** (*ZIP code: 93010-1322*)
- 1995. Joe Myers** (*ZIP code: 43026-1750*)
- 1996. doug busch** (*ZIP code: 85704*)
- 1997. Liane Rudberg** (*ZIP code: 91506*)
- 1998. Silvia Hall** (*ZIP code: 33431*)
- 1999. Silvia Martinez** (*ZIP code: 90806-2534*)
- 2000. Christine Sepulveda** (*ZIP code: 92802*)
- 2001. Elizabeth Kelly** (*ZIP code: 30720*)
- 2002. D. Singer** (*ZIP code: 94607*)
- 2003. Jeanne Schlatter** (*ZIP code: 43812*)
- 2004. Brad Knight** (*ZIP code: 91342*)
- 2005. Joan Sitomer** (*ZIP code: 06611*)

**2006. Virginia Collins** (*ZIP code: 94577-1833*)

!!!

**2007. Shelton Jenkins** (*ZIP code: 28561*)

**2008. Sharon Lieberman** (*ZIP code: 95412*)

**2009. Sharon Baker** (*ZIP code: 80133*)

**2010. William Skirbunt-Kozabo** (*ZIP code: 23831*)

**2011. Sharon Laabs** (*ZIP code: 92037*)

**2012. Dennis Jones** (*ZIP code: 28754*)

**2013. Sharon Davlin** (*ZIP code: 21212-1802*)

We all must fight mega-corporations for our jobs and our lives.

**2014. Steve Leigh** (*ZIP code: 98122*)

**2015. Suzanne Erickson** (*ZIP code: 95370*)

**2016. Susan McMullen** (*ZIP code: 91945-1327*)

**2017. steve lucas** (*ZIP code: 78704*)

**2018. Lauren Kay** (*ZIP code: 48108*)

**2019. Erin P** (*ZIP code: 93010*)

**2020. Michelle Miranda** (*ZIP code: 95060*)

**2021. Susan LoFurno** (*ZIP code: 14580*)

**2022. Sundae Shields** (*ZIP code: 93036*)

**2023. Stephanie Steinschaden** (*ZIP code: 1230*)

**2024. Janet Parkins** (*ZIP code: 94611*)

**2025. Gail Caswell** (*ZIP code: 94109*)

**2026. Sonia Alvarez-Oppus** (ZIP code: 95110)

**2027. Brad Jolly** (ZIP code: 80603)

**2028. David Pedersen** (ZIP code: 94590)

**2029. Ed Fiedler** (ZIP code: 78758)

**2030. Karen Toyohara** (ZIP code: 91941)

**2031. Michael Speciale** (ZIP code: 28803)

**2032. SPENCER ADAMS** (ZIP code: 90034)

**2033. Martha Spencer** (ZIP code: 28712)

**2034. Nancy Lang** (ZIP code: 08759)

**2035. Josephine Scherer** (ZIP code: 87107-4513)

**2036. Rick Sprout** (ZIP code: 13905)

**2037. Susan Rautine** (ZIP code: 93940)

**2038. George Young** (ZIP code: 90806)  
Great job

**2039. Steve Simpson** (ZIP code: 91007)

**2040. s kaehn** (ZIP code: 94601)

**2041. Susan williams** (ZIP code: 33952)

**2042. Stacey Graham** (ZIP code: 49058)

**2043. Stacy Maher** (ZIP code: 94705)

**2044. Stan Squires** (ZIP code: V6L 1T8)

The working class fought for the 8th hour working day in the late 1800s. Now it has been eroded. The struggle needs to continue for the rights of working people.

**2045. Rick Romito** (ZIP code: 98229)

- 2046. Janet Tice** (*ZIP code: 27516*)
- 2047. stephen sivonda** (*ZIP code: 24426*)
- 2048. Stephen Moyer** (*ZIP code: 17901*)
- 2049. John Stephens** (*ZIP code: 48170*)
- 2050. John Steponaitis** (*ZIP code: 94109*)
- 2051. Steve Stallone** (*ZIP code: 94605*)
- 2052. steve kranz** (*ZIP code: 98290*)
- 2053. Steven Serikaku** (*ZIP code: 60660*)
- 2054. Steven Mcnair** (*ZIP code: 06378*)
- 2055. Steven Ray** (*ZIP code: 92675*)
- 2056. Steve Nutter** (*ZIP code: 90291*)
- 2057. Steve Overton** (*ZIP code: LE19 3GP*)
- 2058. Steve Rosin** (*ZIP code: 91101*)  
Now is cool
- 2059. Stephen Smith** (*ZIP code: 11105*)
- 2060. Steve Osowecki** (*ZIP code: 06451*)
- 2061. Sue Whitlock** (*ZIP code: 42503*)
- 2062. George Hurst** (*ZIP code: 07090-1666*)
- 2063. Christopher Bryant** (*ZIP code: 98052*)  
The things we will do to one another . . .
- 2064. casee maxfield** (*ZIP code: 90028*)
- 2065. Diane Garetz** (*ZIP code: 55343*)



- 2066. Ann Stratten** (*ZIP code: 91941*)
- 2067. Marjorie Streeter** (*ZIP code: 94501*)
- 2068. Maris Bennett** (*ZIP code: 94509*)
- 2069. Subrata Sircar** (*ZIP code: 94087-1205*)
- 2070. John Zahos** (*ZIP code: 60076*)
- 2071. Susan Guild** (*ZIP code: 91411*)
- 2072. Sue Moon** (*ZIP code: 98144*)
- 2073. Sue Stromberg** (*ZIP code: 44060*)
- 2074. Blakely Sullivan** (*ZIP code: 2124*)
- 2075. Paula Summers** (*ZIP code: 95628*)
- 2076. Jon Krueger** (*ZIP code: 49201*)
- 2077. patricia keefe** (*ZIP code: 94945*)
- 2078. Kelley Scanlon** (*ZIP code: 13206*)
- 2079. Helen Bushnell** (*ZIP code: 80211*)
- 2080. susan michetti** (*ZIP code: 53572*)
- 2081. Peter Roche** (*ZIP code: 87507-1596*)
- 2082. Susan Hathaway** (*ZIP code: 90660*)
- 2083. Susanna Smith** (*ZIP code: 98122*)
- 2084. susanne berntsson** (*ZIP code: 92880*)
- 2085. Susan Walp** (*ZIP code: 91103-2722*)
- 2086. susan zeiger** (*ZIP code: 10502*)

**2087. Susan Charles** (*ZIP code: 94030*)

**2088. Suzanne Kuffler** (*ZIP code: 02543*)

**2089. Cristina Wenzl** (*ZIP code: WA*)

**2090. Steve Wozniak** (*ZIP code: 92024*)

**2091. sheila wyse** (*ZIP code: 91403*)

**2092. Sybil Grant** (*ZIP code: 90026*)

**2093. Victor Escobar** (*ZIP code: 23113*)

**2094. Frank Ball** (*ZIP code: 2486*)

**2095. Sylvia Ruiz** (*ZIP code: 90086*)

**2096. Nicholas Guarda** (*ZIP code: 02346*)

**2097. Jerry Tobe** (*ZIP code: 90034*)

**2098. Tamara Heikalo** (*ZIP code: JOK 2S0*)

**2099. Tammy Nealis** (*ZIP code: 30228*)

**2100. Leslie Smith** (*ZIP code: 78666*)

**2101. Tom Emmott** (*ZIP code: 49696*)

Are you both nuts?????

Hard working people are being ignored, insulted and even fired by greed driven people like you and Target and Walmart and all the rest of them. And what happened to freedom of speech?

**2102. T Hamboyan Harrison** (*ZIP code: 21638*)

**2103. Alexandra Meyer** (*ZIP code: 82194*)

**2104. karen winnubst** (*ZIP code: 75104*)

**2105. Tara Walker** (*ZIP code: 92683*)

**2106. Taylor Smith** (*ZIP code: 45344*)

**2107. Todd Clark** (*ZIP code: 46219*)

**2108. Tom Brown** (*ZIP code: V3Y 1Y3*)

**2109. Chad Burnett** (*ZIP code: 28043*)

**2110. Tony D** (*ZIP code: NULL*)

**2111. thomas mccuiston** (*ZIP code: 38451*)

**2112. William Schlesinger** (*ZIP code: 90046*)

**2113. Alex Sanchez** (*ZIP code: 90010*)

**2114. Tedd Ward Jr.** (*ZIP code: 62675*)

**2115. Ted Page** (*ZIP code: 92399-3507*)

**2116. Theodore Voth III** (*ZIP code: 53703*)

**2117. Martha Shogren** (*ZIP code: 95472-5405*)

**2118. Temesgen Mendera** (*ZIP code: 20011*)

America is about justice, would you please put yourself in the person'sshoe for one day and test what it feels. Mr mayor please be a judge on your case. So that you will judge others. Justice beyond politics, and bread is for every one. Hope you will show mercy to those looking at you for fairness

**2119. Noel Orr** (*ZIP code: 98155*)

It's so past time for big businesses to step up and do the right thing! The small working person cannot have all of the expenses dumped on them and still survive!!

**2120. Rerry Badger** (*ZIP code: 93446*)

**2121. Teresa L Bryan** (*ZIP code: 98626*)

**2122. Teri Lunn** (*ZIP code: 94954*)

**2123. Terrill Maguire** (*ZIP code: 95501*)

**2124. Terry Haight** (*ZIP code: 92308*)

Im Terry (The Dude)! Im support!

**2125. Elizabth Terzakis** (*ZIP code: 94607*)

**2126. Eugene TeSelle** (ZIP code: 37205-2520)

**2127. tess fraad** (ZIP code: 10009)

**2128. B. Thomas Diener** (ZIP code: 87123-3089)

**2129. Teresa Fiallos** (ZIP code: 90034)

**2130. Tami Fosmark** (ZIP code: 98027)

**2131. T Garmon** (ZIP code: 30534)

Shame on you....why can't you do the right thing ?....

**2132. Theresa Deery** (ZIP code: 29909)

**2133. Carol Gordon** (ZIP code: 90027)

**2134. HARRISON P BERTRAM** (ZIP code: 60193-3745)

**2135. Rebecca Gindin-Clarke** (ZIP code: 80305)

**2136. Caridad Romaine** (ZIP code: 11706-8530)

**2137. Kristin Ziama** (ZIP code: 53095-4573)

**2138. Richard Metz** (ZIP code: 19038)

**2139. pat berger** (ZIP code: 04963)

**2140. Leonard Thomas** (ZIP code: 95843)

Trucking companies and their big retail customers pay for these new zero-emission trucks.

**2141. Thomas W Fleitz** (ZIP code: 40071)

**2142. Jonathan Mitchell** (ZIP code: 35757)

**2143. Thomas Wall** (ZIP code: 86326)

**2144. Tia Pearson** (ZIP code: 96786)

**2145. The Honorable Tiffany Snyder** (ZIP code: 80305-5434)

**2146. Katherine Tildes** (ZIP code: 02673)

**2147. WILLIAM O'HARE** (ZIP code: 94015)

**2148. Timothy Raymond** (ZIP code: 14607)

**2149. Tim Granger** (ZIP code: 48706)

**2150. Tirso Moreno** (ZIP code: 32703)

**2151. Matt Clark** (ZIP code: 90046)

**2152. Thomas Tizard** (ZIP code: 96734)

**2153. Judith McElwain** (ZIP code: 11720)

**2154. Tim Paul** (ZIP code: 60640)

**2155. Tom Knopf** (ZIP code: 63129)

**2156. Tom Kozel** (ZIP code: 45113)

**2157. phillip deem** (ZIP code: 44030)

America's corporations are responsible for MOST of America's problems second only to the corrupt politicians YOU vote for.

**2158. TeriLee Huff** (ZIP code: 98662)

**2159. Thomas Gillespie** (ZIP code: 90638-2440)

**2160. Lori Mulvey** (ZIP code: 49321-9523)

**2161. Tom Lyon** (ZIP code: 08081)

**2162. Tania Malven** (ZIP code: 85719)

**2163. Thomas Dunkerley** (ZIP code: 48073)

**2164. Toni Mendicino** (ZIP code: 94131)

Tax big business to fund urgently needed programs for working people and the planet! No to retaliation on René Flores, rehire him now

**2165. Tom Hagler** (ZIP code: 95616)

**2166. Timothy Mieyal** (ZIP code: 44134)

**2167. Tim Miller** (ZIP code: 95476)

**2168. Tamara Matz** (ZIP code: 90016)

**2169. Thomas Nulty Jr** (ZIP code: 92629-3007)

**2170. Todd Snyder** (ZIP code: 94115)

**2171. Danny Dyche** (ZIP code: 97123)

All necessities are rights.

**2172. Thomasjustimpeachthegoofyfool Smith** (ZIP code: 84780)

**2173. G. Thomas Hoemig** (ZIP code: 94114)

**2174. Thomas Totterdale** (ZIP code: 16667)

**2175. Tom Schaefer** (ZIP code: 14227)

**2176. Monique TONET** (ZIP code: 06300)

**2177. lisa allarde** (ZIP code: 18054-2265)

**2178. Tory Ewing** (ZIP code: 68135)

**2179. Anthony Barron** (ZIP code: 78633-5425)

**2180. Tracey Katsouros** (ZIP code: 20601)

We need clean air to breathe! And jobs that support it.

**2181. Thomas Conroy** (ZIP code: 90266)

**2182. Bert Selig** (ZIP code: 91016)

**2183. Adam Boudreaux** (ZIP code: 39466-7918)

**2184. Trina Cooper** (ZIP code: 98106)

**2185. Trina Tocco** (ZIP code: 48067)

**2186. Trina Pinkerton** (*ZIP code: 85042*)

Join René Flores, who was featured in the USA Today article Rigged, and other port truck drivers in calling for Los Angeles Mayor Eric Garcetti & Long Beach Mayor Robert Garcia to ensure that port drivers will NOT have to pay for the proposed new zero emission trucks.

**2187. Trinidad Esquivel** (*ZIP code: 92311*)

**2188. Mj Triola** (*ZIP code: 77035*)

I thought the phrase "I owe my soul to the company store" had gone out of style. This is a big city port, not a plantation. Act like you're a mayor and not a straw boss. Man up.

**2189. CINDY ZUNIGA** (*ZIP code: 92392*)

Cindy Zuniga Proud to be a Teamster Local 63 and I agree for the fight for clean air and good jobs who care for the employee's and public.

**2190. Joe Rubalcava** (*ZIP code: 92536*)

**2191. Thomas Meisenhelder** (*ZIP code: 92646*)

**2192. Terry Tedesco-Kerrick** (*ZIP code: 85016*)

**2193. Wendy Fast** (*ZIP code: 14437*)

**2194. Scott MacDougall** (*ZIP code: 94709-1519*)

**2195. Tom Walsh** (*ZIP code: 91607*)

**2196. Lorraine Brabham** (*ZIP code: 07030*)

**2197. Thomas Giblin** (*ZIP code: 13903*)

**2198. Terry Warkentine** (*ZIP code: 87110*)

**2199. Tony Wise** (*ZIP code: 29841*)

**2200. Nancy Barcellona** (*ZIP code: 90004-5312*)

**2201. andrew mcgann** (*ZIP code: 11789*)

**2202. Brian Moucka** (*ZIP code: 94515*)

**2203. Terry Yingling** (*ZIP code: 91320*)

**2204. ivana krajcinovic** (*ZIP code: 94501*)

**2205. Rohan Sabnis** (*ZIP code: 90230*)

**2206. Bill Moore** (*ZIP code: 66617*)

The whole USA is watching the treatment of these workers. Please do the right thing and support their efforts for a better working environment and a fair compensation.

**2207. Amy Zielinski** (*ZIP code: 38571*)

**2208. Urmila Padmanabhan** (*ZIP code: 94538*)

**2209. Frank Santangelo** (*ZIP code: 07508*)

**2210. AARON PEARL** (*ZIP code: 91001*)

It's time to correct the status of port truck drivers to the employees they are.

**2211. Richard Sadowsky** (*ZIP code: 50322*)

**2212. Valerie Justus-Rusconi** (*ZIP code: 95076-0129*)

**2213. Crystal Powers** (*ZIP code: 85614*)

**2214. Donna Bookheimer** (*ZIP code: 19518*)

**2215. Valerie Beard** (*ZIP code: 95820*)

**2216. Victor Sytzko** (*ZIP code: 07410*)

**2217. Victoria Miller** (*ZIP code: 91436-1541*)

**2218. Bret Smith** (*ZIP code: 95063*)

**2219. Nelson Stockdill** (*ZIP code: 48198-3038*)

**2220. Victoria Hamlin** (*ZIP code: 94619*)

**2221. Victor Nepomnyashchy** (*ZIP code: 91343-2325*)

**2222. Ellie larson** (*ZIP code: 53572-1965*)

**2223. Sergi Goldman-Hull** (*ZIP code: 94601*)



**2224. Virginia Mendez** (*ZIP code: 33160-4800*)

**2225. Vladimir Strugatsky** (*ZIP code: 95404*)

**2226. vernon mzhickteno** (*ZIP code: 66061*)

**2227. Vince Snowberger** (*ZIP code: 80027*)

**2228. Harold Robinson** (*ZIP code: 35160*)

**2229. Erica Schmitt** (*ZIP code: 94544-6120*)

**2230. Victoria Ward** (*ZIP code: 93105*)

**2231. Matthew Lipschik** (*ZIP code: 11229*)

**2232. Michael Balsai** (*ZIP code: 19118*)

**2233. Wesley Higdon** (*ZIP code: 76028-9998*)

**2234. Susan Wald** (*ZIP code: 11969*)

**2235. Felicia Walker** (*ZIP code: 36695*)

**2236. Kevin Walsh** (*ZIP code: 06443*)

**2237. Esther Jones** (*ZIP code: 92677*)

**2238. Ann Wasgatt** (*ZIP code: 95678*)

**2239. Steve S** (*ZIP code: 20560*)

**2240. Harold Watson** (*ZIP code: 65802*)

**2241. Walter Birdwell** (*ZIP code: 78578*)

**2242. William Johnson** (*ZIP code: 91214*)

**2243. NANCY NEELY** (*ZIP code: 91730*)

**2244. Lisa Piner** (*ZIP code: 92626*)

**2245. Richard Rheder** (*ZIP code: 12498*)

**2246. William Nusbaum** (*ZIP code: 55426*)

**2247. Jusef White** (*ZIP code: 94536*)

**2248. Lisa Jester** (*ZIP code: 98685*)

**2249. Dan Wicht** (*ZIP code: 55432-4541*)

**2250. William Schirmacher** (*ZIP code: 18052*)

**2251. William De La Torre** (*ZIP code: 90806*)

**2252. William Hassig** (*ZIP code: 60056*)

**2253. William Korbel Korbel** (*ZIP code: 13165*)

**2254. winifred genovese** (*ZIP code: 11414*)

**2255. Will Tuttle** (*ZIP code: 95448*)

**2256. Marcia Bailey** (*ZIP code: 34698*)

The companies need to buy the trucks that their drivers use!

**2257. Steven Wimer** (*ZIP code: 98908*)

**2258. betty winholtz** (*ZIP code: 93442*)

**2259. Jaime Marshall** (*ZIP code: 90404*)

**2260. Wendy Wittl** (*ZIP code: 93105*)

**2261. William Fast** (*ZIP code: 66070*)

**2262. Wayne Langley** (*ZIP code: 75050*)

**2263. William Maynard** (*ZIP code: 20715*)

**2264. Bill Brady** (*ZIP code: 60185-6703*)

**2265. Willard Mittelman** (*ZIP code: 30605*)

**2266. William Obrien** (ZIP code: 97005)

**2267. Wolfgang Loera** (ZIP code: 98005)  
In Solidarity with Port Truck Drivers!

**2268. William Hofford** (ZIP code: 97280)

**2269. James Barry** (ZIP code: 19454)

**2270. Mike Gazillo** (ZIP code: 89128)

**2271. William G Rose Jr** (ZIP code: 95118-2206)

**2272. Patty Ridenour** (ZIP code: 45419)

Disrespect and humiliation dealt to employees by their employers is happening far too often these days. And the gap gender pay, not to mention the wealth gap between the average worker and management, is destroying this country. This issue cries out for attention and resolution.

**2273. Stevie Sugarman** (ZIP code: 90265)

**2274. Wendy Thompson** (ZIP code: 48234)

**2275. Clifton McMillan Jr.** (ZIP code: 35080)

**2276. Wayne Wathen** (ZIP code: 80130)

**2277. Teant Jones** (ZIP code: 46815)

**2278. Timothy Spurlin** (ZIP code: 63701)

**2279. xiomara santos** (ZIP code: 10458)

**2280. Jon Anderholm** (ZIP code: 95421)

**2281. Melissa Hayes** (ZIP code: 90066)

**2282. Yolanda Stern Broad PhD** (ZIP code: 15701)

**2283. Jerry Orr** (ZIP code: 19610)

**2284. Maria Elena Yepes** (ZIP code: 91755)

It is unrealistic to place the burden on truck drivers to pay for zero emissions trucks. The mega-stores should be responsible for this requirement.

**2285. Irving Shapiro** (*ZIP code: 90630*)

**2286. Betty\_Ann Duggan** (*ZIP code: 8540*)

**2287. Yngvild Hansen** (*ZIP code: 5055*)

**2288. Yoav Getzler** (*ZIP code: 91607*)

**2289. Amy Greene** (*ZIP code: 46992*)

**2290. Lou Orr** (*ZIP code: 98155*)

The regular working person is barely making it in today's world and yet, large corporations keep piling expenses on them! These big businesses need to take responsibility for their own expenses and be supportive of the working person!

**2291. Ysaura Bernal-Enriquez** (*ZIP code: 95361*)

Trucking companies should pay emissions fees not truckers.

**2292. Jack Coulehan** (*ZIP code: 91764*)

**2293. Renee Maxwell** (*ZIP code: 65203*)

**2294. SCOTT STRAND** (*ZIP code: 54889*)

**2295. Zola Packman** (*ZIP code: 27605*)

**2296. Michael Skidmore** (*ZIP code: 60660*)

**2297. Sally Roberts Wilson** (*ZIP code: 26508*)

**2298. brian meyer** (*ZIP code: 08731*)

**2299. Mary Able** (*ZIP code: 96056*)

## **CALIFORNIA CLASS 1 RAILROAD ASSOCIATION**

September 18, 2017

Port of Long Beach  
Attn: Heather Tomley  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Port of Los Angeles  
Attn: Chris Cannon  
425 S. Palos Verdes St.  
San Pedro, CA 90731

**RE: San Pedro Bay Ports Draft Final 2017 Clean Air Action Plan Update**

Dear Ms. Tomley and Mr. Cannon:

The California Class 1 Railroads (the Railroads), comprised of Union Pacific Railroad and BNSF Railway, appreciate the opportunity to comment on the Draft Final Clean Air Action Plan Update (Draft CAAP Update). The Railroads have a long history of investing in feasible, cost effective, and safe technologies that have helped reduce NOx and diesel particulate matter emissions at the San Pedro Bay Ports (Ports) by more than 50% since 2005.

The Railroads applaud the Ports of Los Angeles and Long Beach for once again voluntarily providing guidance to help the region achieve its clean air goals and identify potential strategies to reduce air pollution.

The Railroads support the efforts of the Ports to seek ways to reduce emissions to zero wherever practical, and we continue to evaluate new technologies for feasibility, safety, and cost effectiveness. While zero emission technologies may become feasible for some railroad activities in the future, battery powered long-haul locomotives are not feasible.

The Railroads are concerned that the Draft CAAP Update does not address either the cost-effectiveness or the market share growth necessary to pay for these strategies, which have an estimated cost of an additional \$14 billion. We believe these extraordinary costs could be significantly higher than estimated. The final CAAP should provide accurate cost estimates, including changes in operations and maintenance costs, the full costs associated with alternative fuels or electricity, and a better estimate of technology replacement costs given

actual equipment ratios. In addition, the final CAAP should be technology and fuel neutral, analyze a broader range of technology options that includes the cost effectiveness and total cost for each option, and identify who would pay for all necessary equipment and infrastructure – the private sector cannot absorb these extraordinary costs.

Every year, shippers and cargo owners have more opportunities to divert cargo away from the Ports. The Railroads are concerned that unless the Ports keep a tight rein on costs, cargo diversion will increase, jobs and economic benefits associated with port activity will decrease, growth at the Ports will remain low, and there will be insufficient revenue to pay for new technology. Railroad international volume has yet to return to 2006 levels, and thousands of locomotives have been removed from service. This continuing cargo diversion could lead to increased global greenhouse gas emissions.

In addition, the Railroads ask that the Ports remove their support for U.S. EPA to “limit federal preemption on locomotive engines to the initial useful life.” Given the Railroads’ fleet mix, this provision is not relevant.

We appreciate the partnership we have with the Ports and your commitment to increase on-dock rail, which we believe brings significant benefit to the region by reducing emissions, congestion, and infrastructure costs. We look forward to working toward our common goals.

Sincerely,



Peter Okurowski  
On behalf of Union Pacific Railroad and BNSF Railway



**Pacific Region**  
5315 22<sup>nd</sup> Avenue NW  
Seattle, WA 98107

PHONE: 206.257.4723  
EMAIL: [ccostanzo@americanwaterways.com](mailto:ccostanzo@americanwaterways.com)

Charles P. Costanzo  
*Vice President – Pacific Region*

Sept. 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Re: Draft Final 2017 Clean Air Action  
Plan Comments

Dear Ms. Tomley and Mr. Cannon:

On behalf of the American Waterways Operators, the national trade association for the tugboat, towboat and barge industry, thank you for the opportunity to comment on the Draft Final 2017 Clean Air Action Plan (CAAP) promulgated jointly by the ports of Los Angeles and Long Beach.

The U.S. tugboat and barge industry safely and efficiently moves over 800 million tons of cargo each year, including more than 60 percent of U.S. export grain, energy sources, and other bulk commodities that are the building blocks of the U.S. economy. The fleet consists of nearly 5,500 tugboats and towboats, and more than 31,000 barges of all types. These vessels transit 25,000 miles of inland waterways, the Great Lakes, and the Atlantic, Pacific and Gulf Coasts. Tugboats also provide essential harbor services in ports and harbors around the country.

The tugboat, towboat and barge industry provides the nation with safe, secure, cost effective, and environmentally-sustainable means of transportation for America's domestic commerce. Many AWO members operate towing vessels in Puget Sound, moving freight and reducing congestion on Washington's highways and railroads while producing fewer pollutants than trucks and trains. In addition, harbor, ship assist and crew boats perform lightering, shipdocking, tanker escort, bunkering, marine construction and other services in ports throughout Puget Sound, supporting the maritime industry that is critical to the nation's economy. AWO's 350 member companies are proud to be part of an industry that is the safest and most fuel-efficient, and has the smallest carbon footprint of any surface transportation mode. We are deeply committed to building on the natural advantages of marine transportation

Mr. Cannon and Ms. Tomley  
September 18, 2017  
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and leading the development of higher standards of marine safety and environmental protection.

Many AWO members work in the ports of Los Angeles and Long Beach and several are also port tenants. Our members are proud to work in partnership with the ports and regulators in Southern California to improve air quality and support the growth of maritime trade in the region.

AWO's comments today are greatly informed by our abiding commitment to environmental stewardship and our proven track record of leading the towing industry on a journey of continuous improvement and operational excellence in the area of marine safety. AWO understands that the maritime, supply and logistics industries have partnered with the ports of Los Angeles and Long Beach for more than a decade to achieve significant reductions in pollutants and greenhouse gases. In fact, the Draft CAAP praises industry for its efforts to reduce air emissions at the ports. AWO supports these efforts and looks forward to seeing them continue long into the future.

In spite of this progress and the notable partnership between the ports and industry, AWO is nonetheless concerned by the following shortcomings of the Draft CAAP:

- A lack of information or clarity with respect to the commercial availability or affordability of identified emission-reduction technologies;
- The uncertainty of the draft plan's overall cost;
- A reliance on federal and state grants to fund costly programs but no specificity on where, how or when these resources will become available;
- The absence of any analysis regarding the ports' future competitiveness if it were to implement the policy proposals;
- The document's lack of technology and fuel neutrality; and,
- The lack of information on the air quality benefits that would result from these programs.

In sum, AWO is concerned that the Draft CAAP imposes unrealistic goals and fails to sufficiently clarify a feasible path forward for businesses engaged in commerce with the ports of Los Angeles and Long Beach. Further, the DRAFT CAAP asks an industry with a proven track record of partnership and compliance to assume extraordinary costs with little regard for whether business volumes in the port will allow companies to sustain these necessary investments.

Should you have any questions or need any additional information, please feel free to reach me by at (206) 257-4723 or by email at [ccostanzo@americanwaterways.com](mailto:ccostanzo@americanwaterways.com)



Mr. Cannon and Ms. Tomley  
September 18, 2017  
Page 3

Sincerely,

A handwritten signature in blue ink, appearing to read "Charles P. Costanzo". The signature is fluid and cursive, with the first name "Charles" and last name "Costanzo" clearly distinguishable.

Charles P. Costanzo  
Vice President – Pacific Region

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero

Foreign Trade Association  
6216 E. Pacific Coast Hwy. #407  
Long Beach, CA 90803  
Tel 888-223-6459 Fax 310-220-4474  
info@foreigntradeassociation.com  
www.foreigntradeassociation.com



September 18, 2017

## **RE: Comments Regarding Clean Air Action Plan 3.0**

On behalf of the Foreign Trade Association, we submit this letter regarding the Clean Air Action Plan. The FTA is the oldest organization promoting the growth of international trade in Southern California. It acts as an informative resource and networking center for its members, and monitors and advocates legislative issues on a state and federal level.

First, I think it is important to acknowledge the efforts of port staff to conduct a complete and thorough outreach process. Without a doubt, this Clean Air Action Plan (CAAP) feels like a much more inclusive process engaging all stakeholders to ensure that all parties are heard.

Our organization has thoroughly reviewed the document and while we support the purpose of the CAAP to improve air quality and pave the way for more environmentally sustainable operations for decades to come, we have a few concerns for the ports to consider before final adoption of any CAAP.

### **Competitiveness**

First and foremost, it is the mission of the twin ports to move cargo. Second to moving cargo is to do so in an efficient and sustainable way. Since 2006, competing ports have seen faster growth and have increased their market share as global trade has continued to grow. There are many contributing factors, however regulatory uncertainty and cost are undoubtedly a concern for importers and exporters using the San Pedro Bay Ports.

Above all, it is necessary to preserve our competitive advantages and make an effort to both reduce emissions while increasing market share. There are certain elements of this CAAP that could drive up cost to an extent that would make it hard for our region to compete in a global marketplace. It is essential to preserve commercial sustainability while improving environmental sustainability.

### **Technology**

Foreign Trade Association | 6216 E. Pacific Coast Hwy. #407 Long Beach, CA 90803  
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A primary concern threatening the global competitiveness of our ports is the current cost and availability of technological solutions. Currently, the port estimates that the replacement cost of equipment will be between \$7-14 Billion. This cost does not lineup with creating a competitive edge for the Ports of Los Angeles and Long Beach.

The lack of availability of near-zero emission (NZE) and zero emission (ZE) technologies that have been proven and are commercially viable is cause for concern. During the first CAAP, technology that was deployed was not fully tested and proved to be insufficient for port operations. This was exacerbated by the exorbitant cost and stringent deadlines.

We do applaud the ports addressing the need for pilot programs and establishing regular check-ins to diagnose the commercial viability of technology. Above all, we implore the ports to remain technology neutral and to allow industry to participate in pilot programs and remain flexible on the adoption milestones for NZE and ZE technologies. It is the industries using the technology that should decide which ones make the most sense for their respective business needs.

## **Efficiency**

Before implementing costly new technologies that are largely unproven, the ports need to create more efficiencies to current port operations. By moving cargo in a more efficient manner, there is the opportunity for both increased productivity and increased capacity within the same constructs we operate in today. This will help with both a reduction of emissions, as well as increased earning ability for companies operating in the port allowing for more available private capital to invest in new technology.

The Draft CAAP states several areas of needed improvement including increased on-dock rail, faster truck turn times, and the implementation of dynamic technology solutions such as portals. We encourage the continued effort to explore and adopt efficiency measures that help the short and long term success of the twin ports.

## **Funding**

The final area of concern is funding for the overall costs. The Draft CAAP identifies several areas of possible funding solutions including public and private monies. There is substantial concern where the \$7-14B will come from to fund much of this technological overhaul at the ports. There is no guarantee for state or federal funding, and private industry cannot foot this bill without passing the cost along to customers and consumers. This creates a great concern to the ability to maintain competitiveness.

One of the major successes of the first CAAP, was the amount of grant money made available for early adopters. The cost of the program was far less onerous than the current Draft CAAP outlines, and roughly half of the investment came from public funding sources. To properly implement new technology, it needs to be available, affordable, and there needs to be incentives available for the early adopters who serve as the quality control and initial investors in new technology.

## **Conclusion**

In conclusion, we think that a balanced and cautious approach that allows for successful implementation of new technologies in a commercially viable method is necessary. The top priority of the ports should be to maintain competitiveness while implementing strategies to move cargo in a manner that is both more efficient and more sustainable. We ask that the ports work with industry to help develop and test new technology, and not to deploy new technology until it is both proven and the cost makes the technology commercially viable.

Thank you for the opportunity to comment on the Draft CAAP 3.0. We look forward to continued work in partnership with the ports to insure its success.

Thanks,

A handwritten signature in black ink, appearing to read 'W LaBar', with a long horizontal flourish extending to the right.

Weston LaBar  
Executive Director

September 18, 2017

Mr. Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Ms. Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Mr. Cannon and Ms. Tomley:

On behalf of the undersigned organizations, representing manufacturers, farmers and agribusinesses, wholesalers, retailers, importers, exporters, distributors, and transportation and logistics providers who use the ports of Los Angeles and Long Beach, we are submitting the following comments on the Draft 2017 Clean Air Action Plan (CAAP) Update.

The Ports of Los Angeles and Long Beach have achieved large reductions in pollutants and greenhouse gases over past 10-plus years. The efforts by the ports and all parties in the supply chain have been commendable – as the Draft CAAP states. These efforts continue today.

While the ports and stakeholders must continue to build upon the successes achieved so far, we are significantly concerned with several aspects of the Draft Clean Air Action Plan Update. These include the lack of information with respect to the commercial availability of specified technologies, the uncertainty of the draft plan's cost, the absence of any analysis regarding the ports' future competitiveness, the exclusion of certain technologies and fuels, and the lack of a cost benefit analysis on the air quality benefits that would result from this program. Ironically, these are issues which are identified within the report, but for the most part deemed unimportant.

We believe the ports will face significant challenges as indicated in the Draft Final Clean Air Action Plan Update document itself. Some examples of these challenges are noted below:

- “Keeping the Ports economically competitive amidst this transition to more sustainable goods movement will be challenging.” (*page 22*)
- “...and these strategies will place an enormous financial burden on the Ports and goods movement industry.” (*page 27*)
- “These costs represent a significant expense for the Ports and the industry. No one entity or organization appears able to fund or finance that expenditure.” (*page 9*)

In comparison to other North American port gateways, Los Angeles and Long Beach have lost market share during the past decade. The reasons for the loss of market share and stagnant growth are many. Layering tens of billions of dollars in costs on the supply chain without any corresponding programs to offset the additional cost will be disincentive for shippers and cargo owners to use these gateways.

Indeed, the only affirmative response to the billions of proposed cost increases in the draft document is to seek limited state or federal funding to help minimize the \$14-plus billion in cost

impacts or to expand the CAAP's requirements and associated costs onto the Ports of Los Angeles and Long Beach's competitors through "... state or federal mandates, in order to minimize impacts to economic competitiveness for our customers." The net effect would be to increase the cost on a national basis for all importers and exporters.

While the CAAP's goals are laudable and well intentioned, given the hyper-competitive nature of global commerce, we would recommend the following actions by the Ports of Los Angeles and Long Beach be taken before adoption of these new programs:

- Conduct a thorough evaluation of the proposed measures' cost effectiveness and the CAAP's possible negative impacts on port competitiveness;
- Include the use of ultra-low emission technologies and all electrification options to achieve significant emissions reductions in a cost-effective manner;
- Receive firm commitments of state and federal monies for research and development options for zero and near-zero emissions equipment, without limitations, before moving forward;
- Fully analyze the significant burden on the Ports' energy system and cyber security threats to both Ports if they were to be fully electrified and the impact to the trade community in the event of power disruption.

Without these changes, alternative trade gateways will become more attractive to the international trade community.

We appreciate the past efforts to successfully reduce port-related emissions and look forward to working with all interested parties in making the ports more efficient, competitive and environmentally sustainable.

Sincerely,

Agriculture Transportation Coalition  
Airforwarders Association  
Almond Alliance of California  
American Apparel & Footwear Association  
American Association of Exporters and Importers  
American Chemistry Council  
American Cotton Shippers Association  
American Home Furnishings Alliance  
American Import Shippers Association  
America Pyrotechnics Association  
Association of Bi State Motor Carriers, Inc.  
Auto Care Association  
California Business Properties Association  
California Class I Railroads  
California Farm Bureau Federation  
California Fresh Fruit Association

California Hispanic Chambers of Commerce  
California Retailers Association  
CAWA – Representing the Automotive Parts Industry  
Corn Refiners Association  
Fashion Accessories Shippers Association  
Footwear Distributors & Retailers of America (FDRA)  
Foreign Trade Association  
Future Ports  
Gemini Shippers Association  
Global Cold Chain Alliance  
Halloween Industries Association  
Home Furnishings Association  
International Association of Movers (IAM)  
International Association of Refrigerated Warehouses  
International Refrigerated Transportation Association  
International Warehouse Logistics Association

Juvenile Products Manufacturers Association  
Los Angeles Customs Brokers and Freight  
Forwarders Association  
Meat Import Council of America  
NAIOP SoCal - the Commercial Real Estate  
Development Association  
National Association of Chemical Distributors  
National Association of Egg Farmers  
National Cattlemen's Beef Association  
National Chicken Council  
National Council of Farmer Cooperatives  
National Customs Brokers and Freight  
Forwarders Association of America  
National Cotton Council  
National Fisheries Institute  
National Industrial Transportation League  
National Latina Business Women Association-  
Inland Empire  
National Oilseed Processors Association  
National Onion Association  
National Pork Producers Council  
National Retail Federation  
National Shippers Strategic Transportation  
Council (NASSTRAC)  
New Jersey Motor Truck Association  
North American Meat Institute  
NYNJ Forwarders and Brokers Association  
Oregon Dairy Farmers Association  
Pacific Coast Council of Customs Brokers and  
Freight Forwarders  
Pacific Merchant Shipping Association  
PPAI - Promotional Products Association International  
Retail Industry Leaders Association  
Specialized Furniture Carriers  
Tea Association of the U.S.A., Inc  
The Hardwood Federation  
Travel Goods Association  
USA Poultry & Egg Export Council  
U.S. Fashion Industry Association  
U.S. Hide, Skin and Leather Association  
Vinyl Institute  
Western Growers  
Western States Petroleum Association  
Western States Trucking Association

CC: The Honorable Eric Garcetti, Mayor of Los Angeles  
The Honorable Robert Garcia, Mayor of Long Beach  
Gene Seroka, Executive Director, Port of Los Angeles  
Mario Cordero, Executive Director, Port of Long Beach  
Port of Los Angeles Harbor Commission  
Port of Long Beach Harbor Commission

September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, California 90815

Subject: Draft Final 2017 Clean Air Action Plan Update Comments

Dear Mr. Cannon and Ms. Tomley:

Despite a difficult decade for the maritime industry, we have successfully reduced emissions in the San Pedro Bay faster and in a greater amount than any other industrial sector. Over the past decade, diesel particulate matter emissions are down an incredible 87%. Even more astonishing, DPM is down 96% for trucks and cargo-handling equipment, the primary focus of this Clean Air Action Plan Update. This leaves 4% of remaining emissions that the CAAP Update proposes to reduce at a cost of \$14 billion; a cost that undoubtedly understates the true costs of the CAAP and a cost that puts at risk the 1 in 9 jobs in the region that have made the San Pedro Bay ports the economic engine of Southern California.

With that in mind, and on behalf of the members of the Pacific Merchant Shipping Association (PMSA), including ocean carriers and marine terminal operators serving the ports of Long Beach and Los Angeles, PMSA submits the following comments on the Draft Final 2017 Clean Air Action Plan (CAAP) Update. In summary, we request that the ports make the following changes to the CAAP Update:

- Analyze the Update for its impact on competitiveness.
- Develop a competitiveness goal and integrate the goal within the CAAP.
- Establish a Financial Feasibility goal and criteria for each of the proposed actions.
- Align CAAP measures with their stated goals and do not place unnecessary burdens on the industry that will only delay and significantly increase the costs of needed emission reductions.
- Evaluate these proposals within the context of California's Cap and Trade Program.
- Include a pathway for both ultra-low emission technologies and all electrification options for achieving significant emissions reductions in a cost-effective manner.
- Remove efficiency measures from the CAAP and recommend that these measures be addressed under the Supply Chain Optimization forum.
- Participate in the development of an amended At-Berth Regulation that takes into account emission reduction, competitive and economic needs, and logistical and technical hurdles of the maritime industry that avoids cargo diversion and loss of jobs.
- Retain the 20 nm incentive for the VSR program.
- Eliminate the differentiated fee structure that will reduce competitiveness.
- Reconsider PMSA's comments in the attached March 2017 letter on the Discussion Document.
- Assure that implementation of CAAP Update measures will not divert cargo and vessels, ultimately increasing global GHG emissions.



PMSA incorporates by reference our previously submitted comments on the CAAP Discussion Document in March of this year. To that end, we are appending our original comment letter and supplementing those comments with the following comments on the CAAP Update. We were disappointed to see that our previous comments were largely ignored in the Draft Final CAAP Update.

As a general comment, and similar to previous comments provided to the Ports, PMSA renews its request to modify the CAAP, as detailed below, to focus on commercially available technology supported by national or state emissions standards, coupled with clearly defined mechanisms of implementation which are financially feasible and economically competitive. These were the principles that served as the basis of success for the original CAAP. Unfortunately, the draft update to the CAAP abandons those principles and instead relies on speculative non-existent technology and arbitrary dates without accommodation for the economic and financial realities confronting the Ports' tenants and customers.

#### Competitiveness

Only through cargo growth can the CAAP's emission reduction goals be fully realized. Without robust and sustained cargo growth, costs for current tenants and customers will inevitably increase. Given the substantial increases in costs anticipated, the competitiveness of this gateway is at risk.

That risk to competitiveness also puts at risk job growth related to the San Pedro Bay ports. One in nine jobs in Southern California is tied to the ports. That number should be higher. After a decade of no cargo growth and continual loss of market share, the ports have not contributed to the economic recovery of the Southern California region. PMSA is happy to see that, after 11 years of languishing, 2017 will be a record year for San Pedro Bay cargo volume – the first since 2006.

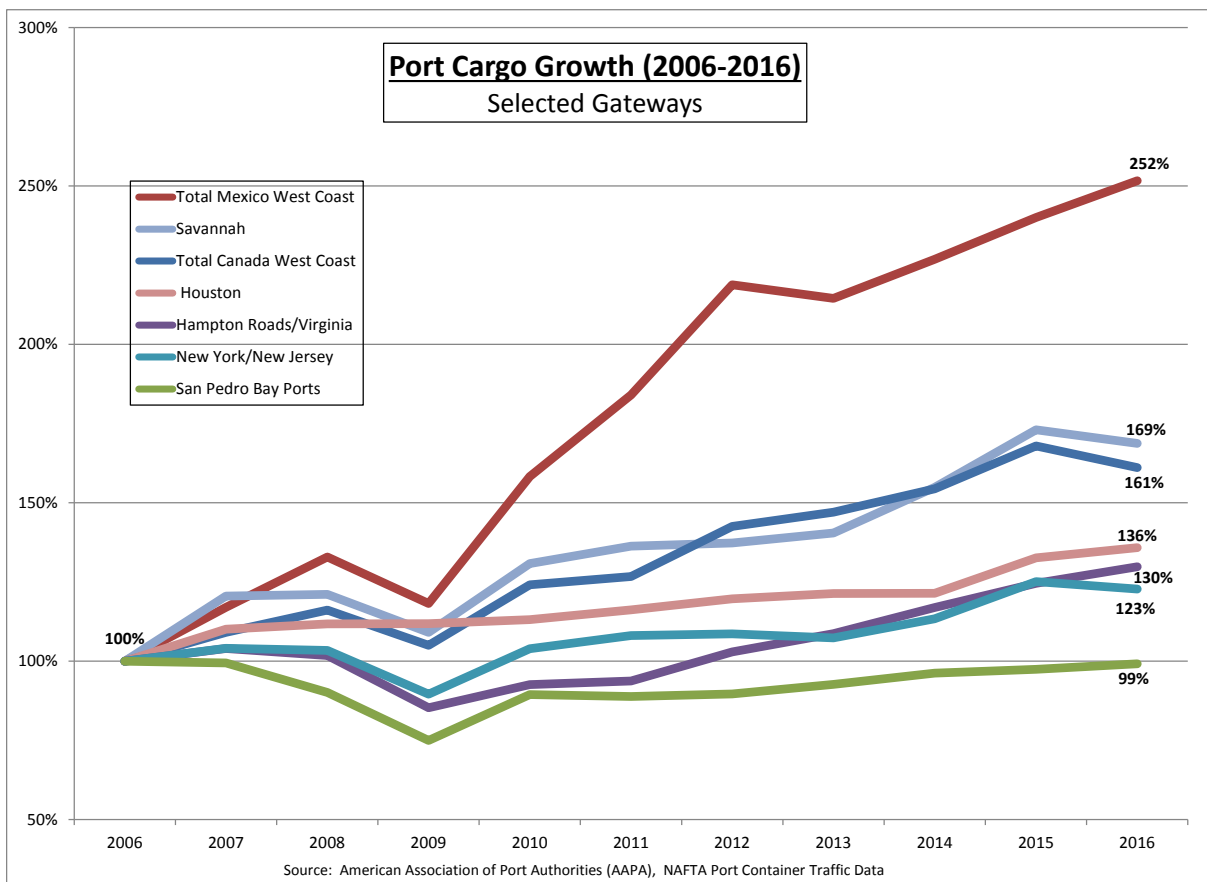
Inexplicably, the Draft CAAP Update ignores the ports' anemic growth and the competitive pressures facing San Pedro Bay. In terms of both market share and total cargo throughput the past decade has been exceptionally challenging for the Ports. This year will be the first year since 2006 that San Pedro Bay will exceed its decade-old cargo volume peak, but it is still fundamentally behind the market share it held in 2006. While volume growth and demand strength at other gateways have characterized their pre- and post-recession positions, the CAAP contains naïve statements like:

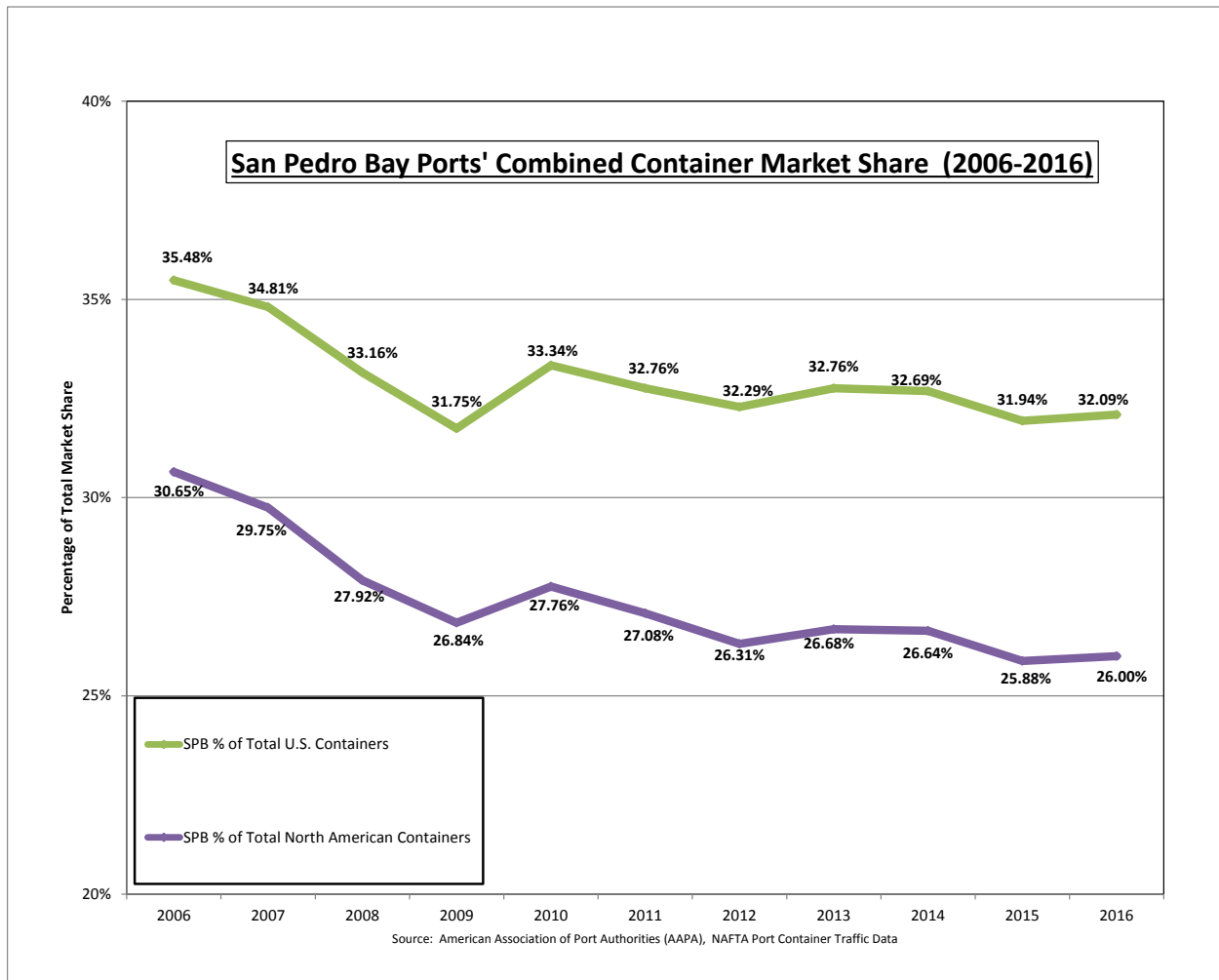
*“While Chart 2 shows that the San Pedro Bay's share of transpacific imports fell from 58.2% in 2007 to 56.1% in 2009, Chart 3 shows that this was primarily due to the San Pedro Bay ports experiencing a greater drop of volumes during this period, not due to competing gateways taking volumes away from the San Pedro Bay (Chart 3).”*

This explanation might be plausible if San Pedro Bay's market share had immediately recovered following the recession. Instead, market share continued to decline as overall container volumes stagnated; a clear indication that shippers are choosing other gateways. However one wishes to

characterize it, San Pedro Bay has experienced no growth (in total volumes) and negative growth (in market share) over the past decade (see chart below).

And, San Pedro Bay faces growing threats to its future competitiveness as well. In 2006, Prince Rupert was not even operational; but by 2016, they had grown to over 700,000 twenty-foot equivalent (TEUs) containers. Just three weeks ago, Prince Rupert unveiled their facility expansion increasing their capacity from 850,000 TEUs to 1.35 million. Also last month, a 14,400-TEU capacity container ship transited the expanded Panama Canal, later calling PANYNJ under a raised Bayonne Bridge. If industry expectations are correct that the 14,000-TEU class vessel will be the future workhorse of trans-Pacific trade, there are now no infrastructure barriers for east and gulf coast ports to compete with San Pedro Bay.





PMSA requests again, given this lack of growth, that before this update to the CAAP is finalized, that **staff analyzes the draft for its impact on competitiveness.** In addition, the **ports should develop a competitiveness goal**, and integrate the goal into the CAAP to improve the ability of this gateway to attract and retain cargo.

In addition, we renew our concerns about the cost of this program, estimated to be at least \$14 billion. **Where will the funding come from and what will the ports do to ensure that they remain competitive with other trade gateways while imposing these costs on their customers and tenants?** The CAAP does not establish any economic feasibility criteria or standards for the implementation of its program with respect to the financial feasibility of the programs.

Instead, the CAAP contains conflicting statements about the cost impacts to its customers ranging from expressions of concern to those of a casual indifference. To require port tenants and customers to

spend tens of billions of dollars, greater certainty as to the economic and competitive impacts of these requirements is needed.

The economic analysis in the CAAP Update is generally deficient and candid about how little is actually known about the potential economic impacts of the CAAP's proposals on the Ports' tenants, its customers, and its own bottom line. While the conclusions of the Economic Analysis Addendum implies that not much will change if the CAAP Update is fully implemented there is little to no basis for these conclusions.

As the Addendum itself concedes, "the CAAP is a high-level planning document and ***does not contain details on implementation, timing, or dollar amounts for proposed incentives or rate-based disincentives. Without these details, it is difficult to construct a robust economic analysis with any certainty.***"

If the Final CAAP Update does not contain a specific requirement to develop an economic competitiveness goal, a metric to evaluate the goal, or a process to integrate consideration of this goal into the CAAP's program implementation, then there will have not been any substantive analysis of the CAAP's economic impacts at all. If no economic impact consideration has been developed either at this preliminary planning stage or at the specific, detailed implementation stage, then the ports are effectively avoiding all effective economic analysis altogether. Such an outcome would simply be untenable.

#### Goals of the Clean Air Action Plan

In our March 3, 2017 comment letter on the Discussion Document, PMSA expressed concerns that the CAAP update failed to enunciate a new or updated connection to any business rationale for the measures proposed.

The goals of the original CAAP were clear, and that plan was successful because it aligned the ports' business goals of expediting project delivery and new infrastructure development with their environmental goals of significantly reducing emissions from port operations. The connection of the revised goals of the Clean Air Action Plan and the proposed new measures identified to achieve those goals in this Update is unclear.

None of the measures identified in the CAAP Update are tied to the old or new goals that have been laid out. No discussion is provided to examine what measures are needed to meet the goals. Rather than focusing on strategies needed to accomplish stated goals, the CAAP seems focused on driving a single technology outcome: zero-emissions by electrification. This is a mandate that is not necessary to achieve the ports', regions', or State's air emission reduction goals.

As an example of this lack of consistency and clarity of goal-setting in the CAAP Update, the ports have announced a new goal tying greenhouse gas reductions to the State's goals of a 40% reduction by 2030 and an 80% reduction by 2050. However, the CAAP Update immediately abandons these goals by

requiring a 100% reduction in GHG emissions from cargo handling equipment (CHE) by 2030 with no explanation given for the deviation from the 80% reduction by 2050 Goal that is in place for the rest of the State of California. No rationale has been provided as to why marine terminal operators must comply with a more aggressive schedule than that required for every other industry in California with respect to GHGs, or with the Ports' own adoption of this goal.

Further, electrification is not necessary to achieve the criteria and GHG emission reductions needed to meet State and federal goals. Both California and U.S. EPA have committed to consider standards for the next generation of emission control technologies. These ultra-low emission technologies are 99% cleaner than equipment deployed prior to the original Clean Air Action Plan.

PMSA requests that in the revised CAAP document, port staff clearly align the measures in the CAAP with their stated goals and not place undue and unnecessary burdens on this industry that will only delay and significantly increase the costs of the needed emission reductions, these **air quality goals must be subject to economic competitiveness and financial feasibility goals** as well.

#### CAAP and California's Cap-and-Trade Program

As we have already stated, PMSA is concerned that the CAAP seeks to reduce GHG emissions from CHE by 100% by 2030; this is inconsistent with the state's 80% by 2050 GHG reduction goal and far beyond what is contemplated in the state's Sustainable Freight Action Plan. Support for this goal now rests on the CAAP being developed in support of CARB's "up to 100%" zero-emissions CHE by 2030 regulation. However, no such regulation presently exists, and no draft regulations are expected to be presented to the CARB Board until 2019 at the earliest. At this time, there is no way to predict what the schedule for implementation of this requirement can or should be or what the percentage of compliance will ultimately be. The ports should not predetermine the outcome until all of the research on costs, cost-effectiveness, and the potential for GHG Emissions increases due to leakage of business as a result of economic competitiveness impacts is complete.

Instead of claiming to support a state regulation which has not yet been developed, the CAAP Update should evaluate how its proposals will work within the context of another current, existing, and successful emissions reduction program: Cap and Trade. To the degree that the maritime industry accelerates GHG emission reductions, it may be that our sector unnecessarily expends billions to "beat" the State mandated goals while having no measurable effect on total State-wide emissions, much less global levels.

Compare this outcome with the effectiveness of the existing Cap and Trade program, whereby the State of California determines the amount of permissible GHG emissions in the State through the issuance of allowances. Port tenants already participate in this program through their fuel and electricity purchases. All fuel and electricity use in the State must be covered by a GHG allowance. The State will meet its GHG goals by incrementally reducing the amount of allowances issued each year. If port tenants are forced to reduce their GHG emissions ahead of the State mandate, those allowances will become available for

other companies to use. In effect, port tenants will be subsidizing other California industries and in no way accelerating State-wide GHG emissions reductions.

The most cost-effective approach would be for the port's strategy to match the glide path established by CARB to achieve 80% below 1990 levels by 2050, and to allow for flexibility in the CAAP such that when the costs of GHG emissions reductions at the Ports exceed the cost-per-ton of making equivalent reductions via the Cap and Trade market that alternative compliance measures be considered.

PMSA requests that the final CAAP Update document clearly **align the measures in the CAAP with their stated goals of reduction of GHG emissions by 40% by 2030 and 80% by 2050.**

#### Cargo Handling Equipment

PMSA reiterates all of our original comments on the cargo-handling equipment (CHE) proposals in the CAAP Update as submitted in our March comment letter. Unfortunately, none of those comments have been addressed in this draft final version of the CAAP Update.

We remain disappointed that the analysis of costs to electrify CHE is based on unfounded assumptions that significantly underestimate total costs. These assumptions include:

- No growth in cargo volumes.
- 1:1 cargo handling equipment replacement, which would need to rely on instantaneous charging, a non-existent technology, or battery swapping, an incredibly expensive technology the costs of which are not included.
- Cost estimates based on projections for equipment that has never been built, tested or in commercial production.
- Unrealistic time frames that require the introduction of new technologies that currently do not exist to be in commercial production that does not impact the competitive standing of the ports and terminals, coupled with the design, permitting and construction of the supporting landside and/or vessel infrastructure.
- No improvements in terminal efficiency.

Given what we know, these assumptions are unrealistic. Ten years of unsuccessful demonstrations of electrified CHE, should have informed the analysis in some way. Despite that work, none of the limitations of electrified equipment are included in the analysis. For example, there are terminals today that work three shifts – essentially around-the-clock operations. Even if electrified equipment could last two full shifts – which none can do – it would still require a greater than 1:1 replacement ratio to meet a terminal operating three shifts. The CAAP would end up costing the trade community more money but with no corresponding beneficial increase in cargo throughput, velocity or density.

Possibly the most curious assumption is that of no growth. PMSA has repeatedly raised concerns about the lack of growth and the impossibility of the CAAP Update to expect vast new private business investments in new equipment and infrastructure without growth. And growth cannot be taken for

granted with regard to its impacts to economic competitiveness and financial feasibility. Yet here the Update appears to incorporate “no growth” as a basic assumption going forward, as it does not consider any range of potential future growth scenarios. Such projections, along with assumptions about efficiency and productivity of the different pieces of equipment which are actually commercially available at that time, are necessary to determining the financial feasibility of the true costs of any investment in any newly proposed equipment.

To date, the only substantive estimate of the cost of moving to zero-emission technologies across San Pedro Bay is the Moffat & Nichol study commissioned by PMSA in response to the State’s development of the Sustainable Freight Action Plan. That analysis put the additional capital costs of moving to automated zero-emission technologies (the only zero-emission technology available today) at \$18 billion over 30 years plus billions in added operating costs. In fact, it is the only known solution that can achieve the ports’ stated goal of electrification by 2030.

Regardless of the estimate, the total cost will be in the many billions of dollars. How will these costs be paid? How will these costs be absorbed without impacting competitiveness? The ports have not even examined possible sources of funding to accomplish these goals. Even if the ports’ fundamentally flawed analysis were taken at face value, \$4 billion is an insurmountable financial burden. Considering the losses this industry is facing, the constraints facing even the current capital programs the ports are engaged in, and the lack of volumetric and market-share container growth, the resources do not exist from either private or port revenue sources to achieve the ports’ goals within the proposed timeframe.

Finally, it is impossible for any company to develop a capital investment program with unknown technology. The CAAP Update leaves terminal operators with no path forward. The CAAP Update goes so far as to state, “Moreover, the longer it takes to install the infrastructure, the less time the operators have to purchase new equipment, which concentrates their costs into a few years and increases their financial burden.” No sensible terminal operator can make additional capital investments knowing that at any moment the ports may make demands that sweep away that investment. By relying on unknown technology, the ports may have seriously constrained new investment while the forecast for new technology remains uncertain.

PMSA requests that the final CAAP document **must include a pathway for CHE that includes both ultra-low emission technologies and all electrification options** for achieving significant emissions reductions in a cost-effective manner and **align the measures in the CAAP with the CAAP’s stated goal and the State of California’s goal of reduction of GHG emissions by 40% by 2030 and 80% by 2050.**

#### Universal Port Truck Appointment System & Mandatory Truck Turn Times

The CAAP Update has adopted a view of commoditized marine terminal services where port facilities should no longer compete on the basis of service and cost that best addresses their customers’ specific needs. Instead, the ports seek to homogenize customer service by mandating a universal port truck appointment system and truck turn time requirements. By way of example, the ports point to Port Metro Vancouver (PMV) as an example of what can be achieved. However, the PMV program requires a

90-minute turn time for a single transaction, not the proposed 60-minute turn time for a dual transaction. In addition, there are many other fundamental differences that increase the level of system complexity in San Pedro Bay versus PMV. For example, there are four PMV container terminals versus 12 San Pedro Bay container terminals. Other operational differences include chassis provided by the trucking companies and stored off dock, a significant percentage of empty containers are stored at off dock yards, and controlled access to port roads preventing gate queues reducing congestion, none of which are true in San Pedro Bay. Because off-peak gates are already in place, a 60-minute turn time can only be achieved through increased labor or reduced volume. Unfortunately, today's freight rates do not support increased labor and the lack of growth in San Pedro Bay has spread rising labor costs over stagnant volumes. In addition, a 60-minute turn time requires marine terminals to modify their business practices, but excludes changes in the business practices and employment relationships of the port drayage industry, distribution facilities, and cargo owners.

Unless the ports also wish to set metrics for freeway transit times punishable by fines, the ports should work with their terminal customers to update the terminal operation model. Peel-off operations are already improving terminal efficiency and reducing container dwell times. By way of analogy, FedEx does not ask if the customer wants the products ordered, but rather delivers the products ordered on the assumption the products are desired and does so in a manner that is most efficient for the entire logistics process. Marine terminals should not simply serve as waterfront warehouses. Instead, operations across the entire supply chain should become more efficient, requiring changes for every company's operations. Isolated fines for one segment will not accomplish these goals.

As we have all learned from recent experiences with the accommodation of larger vessels, improving efficiency in a single element of the supply chain often comes at a cost of decreased efficiency in other parts of the system. For these reasons, PMSA applauds the desire for greater efficiency but does not believe that the CAAP is the proper forum to address these issues. The Supply Chain Optimization forum includes all the necessary operational and technical experts needed to make recommendations on improving efficiency throughout the port and supply chain.

**PMSA strongly opposes these operational mandates and demands that these efficiency measures be removed from the CAAP.** Instead, we request that the CAAP affirmatively recommend that these measures, and other efficiency improvement measures, be further addressed under the Supply Chain Optimization forum.

#### Expanded Shore Power

The CAAP Update proposes to support CARB's expansion of the At-Berth Regulation beyond those vessel types already covered by the regulation. Like the reference to support of CARB's zero-emission CHE rulemaking referenced above, such support is pre-mature. CARB is only in an exploratory phase with respect to what amendments will be forthcoming to the At-Berth regulation, and the only thing upon which the Port or its customers can reasonably rely at this point is that a draft Regulation will be forthcoming in late summer of 2018.



Until the details of any future proposed regulatory amendments are known, PMSA is concerned that this measure may further divert cargo from Southern California if it is pursued too aggressively. Previous reviews by the ports and CARB have revealed that it is not cost-effective to place at-berth controls on vessel types like break bulk, auto carrier, and dry bulk. This is primarily because the emissions from these sources are so small, such vessels make few if any repeat visits, and the cost to control is very expensive. Further, these vessel types typically do not provide regularly scheduled service like container vessels or cruise ships and their cargo operations often preclude a static shore based power supply.

Unfortunately, alternative technologies are not a panacea. While there are currently no systems certified by CARB for use on non-containerships, other issues also remain. To actually meet an “every vessel” standard as initially proposed, there would need to be a system in place for every single berth in San Pedro Bay in order to ensure capacity for 100% of all calls. Who will fund the development and deployment of these technologies? If there isn’t one for every berth, will the port demand vessels remain at anchor until a system becomes available? Given the position outlined in the CAAP Update, the ports have a responsibility to address these questions. Without a doubt, a poorly crafted mandate would result in diversion of impacted ships to terminals outside San Pedro Bay or outside California. As many non-container ships often deal in price-sensitive commodities, increased cost to use San Pedro Bay port facilities may eliminate profit margins and will be taken into account.

In addition to participating in the development of an amended At-Berth Regulation, the San Pedro Bay ports must ensure that CARB takes into account the economic impacts of proposed amendments. By advocating for an unknown regulatory scope, the ports of Los Angeles and Long Beach will be directly impacting other ports in California. These ports, significantly smaller in scale and resources, will be put in jeopardy by positions that the San Pedro Bay ports take.

In order to expand shore power beyond those vessel types that are not found to be cost-effective by the ports or CARB, PMSA believes that incentives may be the best way to achieve expanded use of at-berth controls without risking cargo diversion. Regulation that results in cargo diversion will only lead to increased GHG emissions (see PMSA’s Greenhouse Gas Route Comparison Tool developed by Starcrest Consulting Group and attached infographic) and job loss. Cargo moved through east coast and gulf coast ports will have a higher greenhouse gas footprint than cargo moved through west coast ports. It is important that any regulation does not reduce California greenhouse gas emissions by increasing them elsewhere. Any proposal resulting in cargo diversion would cause California to lose twice: economically and environmentally. Diversion is even more likely for non-containerships.

PMSA requests that the San Pedro Bay Ports participate in the development of **an amended At-Berth Regulation that takes into account emission reduction, competitive, and economic needs of the maritime industry and that avoids cargo diversion.**

#### Vessel Speed Reduction Program

The Vessel Speed Reduction program (VSR) has been one of the most successful voluntary emission reduction programs in the maritime industry. With compliance at approximately 90%, thousands of tons

of pollutants have been cost-effectively eliminated. The draft discussion document proposes to eliminate the financial incentive associated with slowing down within 20 nautical miles (nm) of the ports and focusing on incentivizing speed reduction for the full 40nm.

PMSA is concerned that eliminating the 20nm incentive will not increase compliance for the 40nm distance, and would instead recommend maintaining both sets of VSR incentives. Given constraints like vessel schedules, labor shifts, and tides limit a vessel master's ability to slow down from 40nm, the elimination of the 20nm incentive may only eliminate the incentive to slow for the 20nm leg of the voyage. If this were the case, total emissions could increase.

The text of the CAAP Update seems to recognize this issue and provides a nuanced view on the matter, with the stated objective: "Maximize participation in VSR for all vessels transiting within 40 nm of Point Fermin." The strategies that are discussed leave open the possibility of retaining a 20 nm incentive, recognizing that some carriers cannot comply with the 40 nm goal due to operational limits. But staff statements and the CAAP Update presentation have stated, "Modify Vessel Speed Reduction Program to incentivize only 40 nm participation." Why does the CAAP present two different approaches on VSR?

The ports should also address why they are advocating for a state-wide vessel speed reduction regulation. There is questionable benefit to other areas of the state and the program in San Pedro Bay has been tremendously successful. Why is the port seeking regulatory risk and penalty for their customers when there is no need?

PMSA requests that the ports **retain the 20 nm program goal for the reasons described in the CAAP Update.**

#### Clean Ship Program

This proposal to collect higher fees on Tier 0 and Tier 1 vessels calling San Pedro Bay would likely result in no real changes in emissions but higher costs for customers in the short-term and higher GHG emissions and lower Port revenues in the long-term. Neither of these outcomes achieves the goals of the CAAP Update, and this proposal should not be implemented.

Vessels are deployed to trade routes due to the ability to fill a ship. Fees, fines and penalties that attempt to alter the economics of vessel deployment will likely be ineffective due to the significant costs incurred by vessels operators in the short term. However, the ports' fees will only impose costs that carriers will pass along to their cargo-owner customers, who will actively consider other gateways to move their goods in the long-term, which will cause vessel and cargo diversion and result in higher GHG emissions and lower port revenues. Alternatively, if the Ports set the fees, fines, and penalties so as to drive away these vessels in the short-term then they are guaranteeing that there will be higher global GHG emissions (the ships do not cease to exist when they do not call the San Pedro Bay, they just steam on alternative routes), and will not result in improved efficiency or increase the level of service at ports.

As way of example, the draft final CAAP Update provides information on Norwegian and Swedish schemes. However, there is no discussion of what vessels have responded to these schemes and under what circumstances. There is no discussion of whether these vessels are captive ferry vessels rather than cargo vessels trading internationally. In addition, there is no discussion of how much of that cargo volume is captive versus discretionary to those ports. With such a large share of discretionary cargo volume, the San Pedro Bay ports are at risk of diversion due to imposing higher fees. There is a real question if differentiated rates can be set in a manner that does not reduce these ports' competitiveness while still altering the behavior of ocean carriers.

Ultimately, a proposal that diverts cargo is self-defeating. Higher costs that result in cargo diversion will only lead to the unintended consequence of increased GHG emissions (again, see PMSA's Greenhouse Gas Route Comparison Tool developed by Starcrest Consulting Group) and job loss.

These issues are magnified for non-liner vessel types, where disincentivizing use of a vessel group (Tier 0 or I) could result in delays for California cargos, and increase costs and GHG emissions if vessels must travel longer distances to pick up these cargos. Both GHG and criteria pollutants should be considered.

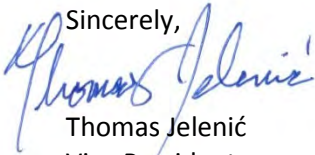
PMSA requests that because the CAAP Update does not demonstrate that such fees would not reduce competitiveness and would achieve the intended GHG emissions reductions goals of the CAAP Update, that **the Clean Ship Program proposal be eliminated.**

### Conclusion

The CAAP Update is in many ways a paradoxical document. It seeks to transform the technology on the waterfront while ensuring basic operations do not evolve to meet changing demands. It claims to be technology neutral, but clearly favors one technology to the exclusion of all others. It requires much higher levels of private investment, but proposes that such investments occur while projecting no future levels of cargo growth.

For better or worse, the maritime industry is rapidly evolving and will likely look radically different in a decade's time. What made the previous CAAP successful in such an environment was its dedication to reasonable goals and principles which were aligned with the Ports' business goals. With that in mind, PMSA submits the preceding comments and requests that the ports revise the CAAP Update to address these concerns.

Sincerely,



Thomas Jelenić  
Vice President

Attachment: PMSA Draft 2017 CAAP Update Discussion Document Comments, March 3, 2017  
PMSA Greenhouse Gas Route Comparison Tool Infographic

cc: The Honorable Robert Garcia, Mayor, City of Long Beach  
The Honorable Eric Garcetti, Mayor, City of Los Angeles  
Gene Seroka, Executive Director, Port of Los Angeles  
Mario Cordero, Executive Director, Port of Long Beach  
Port of Los Angeles Harbor Commission  
Port of Long Beach Harbor Commission

March 3, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, California 90815

Subject: Draft 2017 CAAP Update Discussion Document Comments

Dear Mr. Cannon and Ms. Tomley:

On behalf of the members of the Pacific Merchant Shipping Association (PMSA), including ocean carriers and marine terminal operators serving the ports of Long Beach and Los Angeles, PMSA submits the following comments on the draft 2017 Clean Air Action Plan (CAAP) Update Discussion Document.

The turmoil of the last year has been a capstone to a difficult decade in the shipping industry. It is estimated that this industry has lost \$10 billion in each of the last two years. Despite the losses this industry has successfully reduced emissions faster and in a greater amount than any other industrial sector. Marine terminal operators and ocean carriers did so in part because the path laid out in the original CAAP was based on known, commercially available technology that was supported by national or state emissions standards coupled with clearly defined mechanisms. The draft update to the CAAP abandons those principles and relies on speculative technology and arbitrary dates. In order to lay out a successful path with its marine terminal operator and ocean carrier partners, the ports need to substantially revise the concepts contained in the Clean Air Action Plan and rely on known technologies to achieve greater emission reductions.

#### Competitiveness

Over the past ten years, the environmental accomplishments have been incredible. Through a concerted effort by PMSA's members, the region has received the rewards of cleaner air. Unfortunately, over that same timeframe, we have not seen continued growth. In fact from 2006, when the CAAP was adopted to 2016, total throughput for the San Pedro Bay complex is still down. Looking at the decade preceding the adoption of the CAAP, there was the tremendous growth that made these two ports so successful. From 1996 to 2006, volumes through the San Pedro Bay Complex increased 174%. Unfortunately, since 2006 there has been no growth. Total throughput for San Pedro Bay is actually down nearly 1% over the past 11 years.

This phenomenon is not just a function of the Great Recession. In 2015 (the latest year the AAPA has complete data for), the San Pedro Bay Complex's share of the U.S./Canada market has dropped to 28.5%. That represents a nearly 4% drop in market share. This is a significant drop in market share, and this port complex would now be moving two million more TEUs through San Pedro Bay if the 2006 market

share had been maintained. That lost market share represents lost jobs, lost revenue, and lost taxes. If this industry has any hope in paying for these improvements, it is through growth. Only through growth and re-capturing market share will there be the resources necessary to make the investments envisioned by the CAAP. For this reason alone, the ports must increase their competitiveness.

Finally, the updated CAAP points to California's Sustainable Freight Action Plan as a source for setting its goals. The state Sustainable Freight Action Plan identifies increased competitiveness as one its goals and recognizes that it is a crucial component to achieving sustainability. Unfortunately, the CAAP does not do likewise. Therefore, PMSA requests that before this update to the CAAP is finalized, staff analyze the draft for its impact on competitiveness, develop a competitiveness goal, and integrate the goal within the CAAP to boost the competitiveness of this gateway.

#### Goals of the Clean Air Action Plan

The goals of the original CAAP were clear and that plan was successful because it aligned the ports' business goals of expediting project delivery and new infrastructure development with their environmental goals of significantly reducing emissions from port operations. The connection of the revised goals of the Clean Air Action Plan and the proposed new measures identified to achieve those goals is unclear. The CAAP update also fails to enunciate a new or updated connection to any business rationale for the measures proposed.

While the discussion document does identify the need to achieve emission reductions in order to achieve attainment with federal air quality standards and to meet California's greenhouse gas (GHG) reduction goals, these are broad measurements of state and regional air quality, not measurements of the ports' success at reducing emissions alone. Moreover, a severe mismatch exists between the stated goals of the CAAP update and the supporting measures.

For example, California has enacted SB32 which seeks to reduce GHG emissions to 40% below 1990 levels by 2030, yet the draft discussion document is seeking a 100% reduction in GHG emissions from cargo handling equipment (CHE) over the same period. No rationale has been provided as to why marine terminal operators must comply with a more aggressive schedule than that required for every other industry in California with respect to GHGs.

Similarly, the draft discussion document focuses on industry's "fair share" contribution to meeting federal air quality standards. To meet these standards, the SCAQMD's 2016 Air Quality Management Plan (AQMP) identifies ultra-low NO<sub>x</sub> technologies as being sufficient to meet air quality standards. As you know, the AQMP has been the product of years of work involving many stakeholders to identify needed strategies to achieve attainment. Again, the CAAP requirements well exceed the baseline requirements, and no rationale has been provided why our industry should bear an additional burden beyond the reductions necessary needed to achieve attainment with federal standards.

Rather than focusing on strategies needed to accomplish stated goals, the CAAP seems focused on driving a single technology option: electrification. This is a technology mandate that is not necessary to

achieve the ports', regions', or State's goals. Accordingly, PMSA requests that in the revised CAAP document, port staff clearly align the measures in the CAAP with their stated goals and not place undue and unnecessary burdens on this industry that will only delay and significantly increase the costs of the needed emission reductions.

### Cargo Handling Equipment

The draft discussion document lays out a proposal to move all CHE in San Pedro Bay to zero-emission equipment by 2030. In addition to not explaining why such drastic cuts over such an aggressive schedule need to occur and the mismatch with state and federal goals, there are several issues that the discussion document does not adequately address in recommending this proposal.

#### *Cost*

Neither the ports nor industry can adequately plan without a comprehensive understanding of the costs. To date, the only substantive estimate of the cost of moving to zero-emission technologies across San Pedro Bay is the Moffat & Nichol study commissioned by PMSA in response to the State's development of the Sustainable Freight Action Plan. That analysis put the additional capital costs of moving to automated zero-emission technologies (the only zero-emission technology available today) at \$18 billion over 30 years plus billions in added operating costs. Considering the losses this industry is facing, the constraints facing even the current capital programs the ports are engaged in, and the lack of volumetric and market-share container growth, the resources do not exist from either private or port revenue sources to achieve the ports' goals within the proposed timeframe. There are also exceptionally limited state and federal public funding sources for assisting in this type of equipment purchase, and there is even an effort to restrict the use of public funds dealing with improvements to port efficiency. PMSA requests that the upcoming CAAP document outline the costs of this measure and most likely sources of funding.

#### *Planning & Permitting*

The goal of moving to electrification by 2030 is less than 13 years from now. Yet, the discussion document does not describe how planning and permitting will happen. The only discussion of planning is suggestion that marine terminal operators submit procurement plans in 2020, the same year that the ports will conduct feasibility analyses. On its face, this proposal is unworkable. Procurement planning must follow, not be concurrent with any feasibility analysis. Second, asking marine terminal operators in 2020 to submit procurement plans for 2030 will be an illusory process for most terminals, given the plans will be for a time period beyond the end of their current lease terms.

Furthermore, even if there are no lease interruptions for a facility between 2020 and 2030, terminals cannot begin procurement planning without understanding the quantity and type of infrastructure that the ports will be constructing at marine terminals. As part of the next CAAP document, we request the ports to lay out their infrastructure plans across the port, which must include the necessary timeframe for California Environmental Quality Act (CEQA) review and

permitting in addition to an allowance for infrastructure development. Projects of this scale typically require years to successfully move through the planning and permitting process. The ports goals must reflect the tremendous planning, permitting, infrastructure construction, and technology deployment effort which will be necessary across all the marine terminals in San Pedro Bay, mindful of current and future lease obligations, within the next 13 years.

#### *Technology*

As previously stated, electrification is not necessary to achieve the criteria and GHG emission reduction needed to meet State and federal goals. Both California and U.S. EPA have committed to consider standards for the next generation of emission control technologies. These ultra-low emission technologies are 99% cleaner than equipment deployed prior to the original Clean Air Action Plan. Unfortunately, a focus on technology like electrification will mean that the final 1% of emission reductions will cost tens of billions of additional dollars. PMSA requests that in the next CAAP document, port staff evaluate both ultra-low emission technologies and electrification options for achieving significant emissions reductions.

#### *Stranded Assets & Lease Terms*

The draft discussion document recognizes the issue of stranded assets. The problem of stranded assets continues to grow as we move toward proposed deadlines. While the discussion document proposes a procurement plan as a means of mitigating stranded asset impacts, the useful life of most terminal equipment, which is currently in service, will be longer than the time until the CAAP's proposed deadline. The proposed timelines will also likely strand newer CHE purchased between now in 2030, which is required to be replaced under the California Air Resources Board's CHE rule, thus penalizing these purchases. Marine terminal operators need to be able to comply with existing rules and have the ability to plan and make economic use of their investment. If they are unable to do so, the CAAP will measurably harm the competitiveness of the San Pedro Bay port complex.

The need to make economic use of capital investment also raises the fact that the remaining term of existing leases may preclude the ability to invest billions in existing facilities. Leases will need to be extended for longer terms, in order to have sufficient time to recoup the costs of new, expensive investment.

#### *Incentives*

Much of the equipment on terminals today and planned for the near future has been and will be purchased as a result of previous CAAP measures or regulatory requirements. These requirements have already forced marine terminal operators to sacrifice years of useful life and their capital investment in the equipment. The ports have either directed this or are already the beneficiaries and fully aware of State's requirements. Facing a new round of forced obsolescence, the ports need to work with their partner tenants to find and provide incentive funding for new equipment. Terminal operators' business models are based on making economic use of their capital investments. If that equation changes, it directly impacts terminals' financial viability. Terminal operators are unable to charge their customers for



unanticipated regulatory requirements or loss of capital investment. As a result, incentives are critical to make the transition to a new round of capital equipment investment successfully.

#### *Feasibility Analysis & Other Analyses*

The draft discussion document proposes feasibility analyses to examine the availability of technology to replace existing terminal equipment. PMSA agrees that this is a necessary step. The next draft document should reflect the current status of what technology is feasible to accomplish the stated goal. Ultimately, no one understands better what is feasible, whether from an operational perspective, financial perspective, durability perspective, or other aspect, than a marine terminal operator. As a result, PMSA requests that the ports establish feasibility processes in consensus with PMSA's members with respect to both the technological and financial constraints regarding CHE introduction. In addition, PMSA requests that all supporting studies, whether economic or technical, be subject to industry review and comment. PMSA would be happy to continue to serve as the liaison to marine terminal operators and ocean carriers.

#### Terminal Operations

One of the major departures of the draft discussion document from prior versions of the CAAP is its dive into terminal operations with the goal to boost efficiency. However, some of the measures would actually decrease terminal efficiency, likely increasing congestion and increasing emissions. While efficiency measures will typically reduce emissions, it can only be successful by looking at system-wide efficiencies throughout the entire supply chain. As we have all learned from recent experiences with the accommodation of larger vessels, improving efficiency in a single element often comes at a cost of congestion in other parts of the system. For these reasons, PMSA applauds the desire for greater efficiency but also very strongly recommends that most efficiency measures be removed from the CAAP and that the CAAP affirmatively recommend that these measures be further addressed under the Supply Chain Optimization forum. The Supply Chain Optimization forum includes all the necessary operational and technical experts needed to make decisions on improving efficiency throughout the port and supply chain.

#### *Green Truck Priority*

The CAAP proposes to have marine terminal operators change their operations to provide a "Green Truck Priority" service in order to create an incentive for truck owners to invest in cleaner trucks. PMSA has several concerns regarding this measure. First, it is unclear why marine terminal operators, who have their own proposed obligations under the CAAP, should bear the burden of incentivizing other companies' cost of compliance. Second, while the discussion document places a significant amount of focus on efficiency, this measure would actually reduce terminal efficiency. Any measure that would require terminals to reserve gate lanes, labor, appointment slots, or other aspects of terminal operations to a select group will only reduce efficiency. Efficiency is achieved by streamlining operations and reducing multiple workflows throughout a facility. If the ports are serious about such a program, the ports need to provide incentive funding to marine terminal operators to provide the necessary benefits to

truck owners. Any program proposed by the ports should not only improve service to truck operators, it should also improve terminal efficiency. For example, a peel off operation where the truck operator takes the next available container would improve both terminal and truck efficiency. Without offering such an incentive, the ports should not expect terminal operators to help fund emission reductions from another logistics sector.

#### *Expand On-dock Rail*

PMSA supports efforts to increase on-dock rail use. On-dock rail will be an important tool to increase efficiency and provide a competitive advantage to the San Pedro Bay ports. PMSA looks forward to working with both ports to increase on-dock percentages.

#### *Electric CHE Charging standards*

PMSA recognizes the value in developing universal charging standards for electric CHE. When such an effort begins, the ports should include PMSA's members to ensure that the technology adopted is consistent with terminal operational needs.

#### *Green Terminal Recognition Program*

PMSA supports efforts to develop a green terminal recognition program that recognizes the ongoing efforts of marine terminal operators to increase efficiency and reduce emissions. The success of a green terminal program may hinge on the incentives that the ports will offer. In an environment of terminal overcapacity, terminal customers seek the lowest possible cost. Existing recognition programs do not carry the appeal they previously did due to the industry's structural overcapacity. Additionally, any such recognition program will not succeed if it pits one logistics provider against another; for example, attempting to optimize truck operations at the cost of vessel operations efficiency.

#### *Equipment Idling*

PMSA supports the goal of reducing idling. Idling reductions will not only reduce emissions, it will also reduce fuel consumption and operating costs. Before the ports embark on a specific program to reduce idling, however, more work needs to be done to determine the baseline. The idling emissions presented in both ports' annual emissions inventories are only modeled assumptions and do not reflect the real-world amount of idling occurring. Since those assumptions were determined, most equipment has been fitted with idle-limiting devices. Such devices may have already substantially cut idling and associated emissions.

PMSA also recommends that the ports engage with the Pacific Maritime Association (PMA), which deals with labor-related matters on the waterfront. The ports should work with PMA to determine if training is required and the requirements and confines of the current labor agreement.

Finally, once the magnitude and extent of idling emissions become known, the ports must incorporate this into the inventories, and then evaluate whether further expenditures to reduce

idling are justified, or if the money is better spent on replacing equipment with newer technology. Ultimately, there are limited resources to be spent on reducing emissions.

### Ocean-going Vessels

Vessels are one of the most challenging emissions sources in the ports. As we have seen in the past decade, vessels rotate into and out of different services depending on economic conditions and trade flows. As a result, strategies that depend on fixed installation of technologies on California-bound vessels (as opposed to relying on technologies of international use) are subject to disruption when vessel redeployment is needed. As an example, shore power remains a California-only strategy, and is inflexible, costly and has a long lead time for vessel retrofits. Changing trade flows have meant that investment on specific vessels has been rendered useless when economic conditions dictate that a retrofitted vessel is redeployed. As the ports look to future controls, PMSA cannot over-emphasize the need for the ports to find strategies that provide more operational flexibility and can be harmonized with international efforts.

### *Vessel Speed Reduction*

The Vessel Speed Reduction program (VSR) has been one of the most successful voluntary emission reduction programs in the maritime industry. With compliance at approximately 90%, thousands of tons of pollutants have been cost-effectively eliminated. The draft discussion document proposes to eliminate the financial incentive associated with slowing down within 20 nautical miles (nm) of the ports and focusing on incentivizing speed reduction for the full 40nm. PMSA is concerned that eliminating the 20nm incentive will not increase compliance for the 40nm distance, and would instead recommend maintaining both sets of VSR incentives.

Given the discrepancies in participation, PMSA would suggest that the ports assess why some vessels are unable to participate at 40nm, but do meet the speed targets within 20nm. This should be done prior to making any significant changes to the program to ensure the changes do not lead to unintended consequences or be counter-productive. To the degree that constraints like vessel schedules, labor shifts, and tides limit a vessel master's ability to slow down from 40nm, the elimination of the 20nm incentive may only eliminate the incentive to slow for the 20nm leg of the voyage. If this were the case, total emissions could increase. Another aspect of the program to consider is the all or nothing approach of assessing fleet-wide compliance to determine eligibility for the financial incentive. For example, if one service of an ocean carrier requires it to not comply with the VSR due to other constraints (e.g., the need to make a tide window or start of shift at Oakland, or a Panama Canal appointment), that may result in the entire fleet losing out on the financial incentive. Without the fleet-wide financial incentive there would be no incentive for other services of the same ocean carrier to reduce speed. This effect may be amplified by eliminating the 20nm incentive and focusing on the harder to achieve 40nm incentive. A vessel-by-vessel approach may help maximize participation in the future. Connection of VSR to higher dollar value programs such as POLB's Vessel Dockage Waiver Program or PANYNJ's CVI program could also increase participation.

*Dirty Ship Fee*

A proposal to collect a fee on Tier 0 and Tier 1 vessels calling San Pedro Bay would only create a negative impression the ports are developing a revenue scheme. Vessels are deployed to trade routes due to the ability to fill a ship. Fees, fines and penalties that attempt to alter this risk are ineffective due to the significant costs incurred by vessels operators when they are unable to fill a ship.

As the port knows, there is a glut of ship capacity. A recent Wall Street Journal article on shipbuilding states that shipbuilders “are all suffering from a global slump that may not end until 2019”. With the industry facing multi-year losses in the many billions of dollars, the ports’ fees will only impose costs that will serve to have shippers and carriers consider other gateways to move their goods and will not improve efficiency or increase the level of service at ports.

Ultimately, a proposal that diverts cargo is self-defeating. It is only through continued growth that the ports, marine terminal operators, and ocean carriers will be able to pay for the environmental improvements we are all seeking to make in San Pedro Bay. In order to find ways to encourage specific vessel types to call on the ports, and bring more cargo, PMSA suggests that the ports investigate whether specific, significant incentives may be developed.

From a GHG perspective, for non-liner vessel types incentivizing use of a limited vessel group (Tier II or III) could result in delays for California cargos, and increase costs and GHG emissions if vessels must travel longer distances to pick up these cargos. Both GHG and criteria pollutants should be considered.

*Expanded Shore power*

The draft discussion document proposes to expand the use of shore power beyond those vessel types already covered by CARB’s At-Berth Regulation. PMSA is concerned that this measure may needlessly divert cargo from Southern California. Previous reviews by the ports and CARB have revealed that it is not cost-effective to place at-berth controls on vessel types like break bulk, auto carrier, and dry bulk. This is primarily because the emissions from these sources are so small, such vessels make few if any repeat visits, and the cost to control is very expensive. Further, these vessel types typically do not provide regularly scheduled service like container vessels or cruise ships do. As a result, it would not be difficult to divert such ships to terminals outside San Pedro Bay. As these vessels often deal in price-sensitive commodities, increased cost to use San Pedro Bay port facilities will be taken into count.

Finally, CARB has committed to explore this under a state-wide regulation. If CARB finds that there are vessels that are cost-effective to control, San Pedro Bay ports would at least be on a level-playing field with other California ports. In order to expand shore power beyond those vessel types that are not found to be cost-effective by the ports or CARB, PMSA agrees that incentives may be the best way to achieve expanded use of at-berth controls without risking cargo diversion.

### *Energy Efficiency Incentives*

PMSA supports the idea of developing incentives to encourage the installation of emission control technologies and operational efficiencies that reduce both criteria pollutants and GHG emissions. The idea of multiple ports participating in such an incentive program is particularly worth exploring. Many incentive programs have been unsuccessful due to the inability to deliver sufficiently compelling incentives. With multiple ports participating, it may be worthwhile for such a program to deliver more compelling incentives. However, there are hurdles to such programs. First, the programs must be simple to participate in. If the recordkeeping costs consume much of the incentive, the program will lose its impact. New vessel data collection and communications systems could enable such a program, and the program could be structured to incentivize installation of such systems. However clear requirements and low administrative burden are critical to success in these days of reduced vessel company staffs. Second, such programs must take into account early action. Any program that fails to do so would penalize those who have already taken steps to reduce emissions or improve efficiency while rewarding later actors.

Finally, the ports and industry must work with the State of California to harmonize rules with international standards. The draft discussion document gives an example of the use of seawater scrubbers as an advanced technology that could significantly reduce emissions, but a technology that is not formally permitted under California's Ocean-going Vessel Fuel Rule. Since operating a scrubber and using distillate fuels both cost money, ocean carriers cannot be reasonably expected to do both, even though scrubber technology may provide greater emissions benefit. This represents an opportunity to harmonize rules and obtain greater emission reductions at lower costs. PMSA hopes that the ports will partner in this effort.

### CAAP and Indirect Source Rules

The ports need to address what happens with the CAAP with regard to the possible adoption of indirect source rules (ISRs) by local or state regulatory agencies. While the ports and PMSA are in agreement that ISRs would harm any collaborative approach, it is unclear how the ports intend to handle CAAP implementation in the event that an ISR is adopted. Marine terminal operators and ocean carriers cannot reasonably be engaged in a collaborative approach to reducing emissions when faced with a regulatory scheme that may require other measures that will likely limit growth. Even if ISRs are not adopted in the near term, the current draft 2016 Air Quality Management Plan proposes to consider them at the end of a one year stakeholder process. The ports' partners deserve a clear statement of what the ports' expectations are in the event of a competing regulatory scheme.

### CAAP and California's Cap-and-Trade Program

One of PMSA's major concerns with the CAAP is the aggressive schedule for reducing GHG emissions from CHE. The proposal appears to be far more aggressive than the State's program. More importantly, as long as fuels are a component of the State's Cap and Trade Program, total state-wide GHG emissions will be determined by the number of allowances auctioned by CARB. In essence, were all port GHG

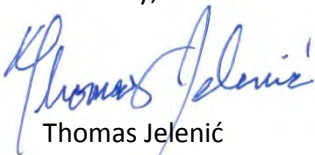
emissions eliminated, the allowances for those averted emissions would be available to other GHG sources (possibly at lower cost) and California's total GHG emissions would remain unaffected following the glide path established by the State for the reduction in GHG allowances.

In addition, it is counter-productive to our collective efforts and the economic success of the ports, and environmentally unnecessary, for the ports to force GHG emissions reductions at its operations if the costs of achieving reductions exceed the cost of reducing those emissions from other sources. In other words, when GHG emissions can be reduced at the cheapest cost per ton then everyone in the economy, and at the ports, are better off in the long-term.

Given these two maxims of the existing state GHG regulatory program, that fuels are already paying into the state program and that other cost-effective emissions reductions may be available to achieve additional emissions reductions, Port staff needs to evaluate how their proposals will work within the context of Cap and Trade. To the degree that the maritime industry accelerates GHG emission reductions, it may be that the maritime industry unnecessarily expends billions to "beat" the State mandated goals while having no measurable effect on total State-wide emissions, much less global levels. In all likelihood, the most effective approach would be for the port's strategy to match the glide path established by CARB to achieve 40% below 1990 levels by 2030, and to allow for flexibility in the CAAP when the costs of GHG emissions reductions at the Ports exceed the cost-per-ton of making equivalent reductions via the Cap and Trade market.

PMSA looks forward to continuing its work with the ports on the update to the Clean Air Action Plan.

Sincerely,

A handwritten signature in blue ink that reads "Thomas Jelenić". The signature is fluid and cursive, with the first name being more prominent.

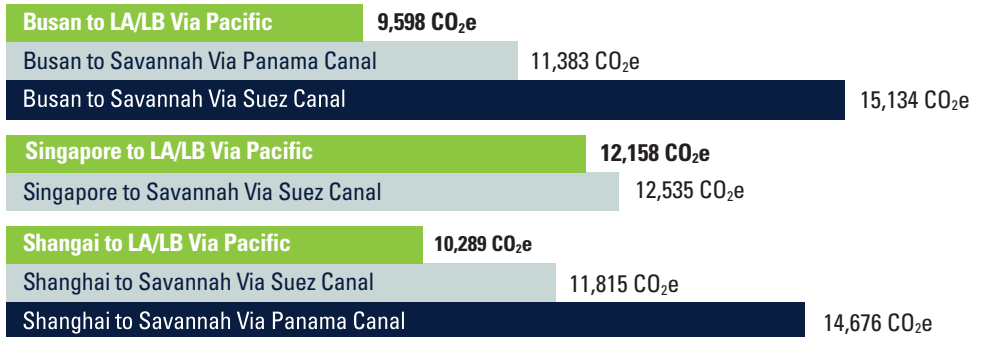
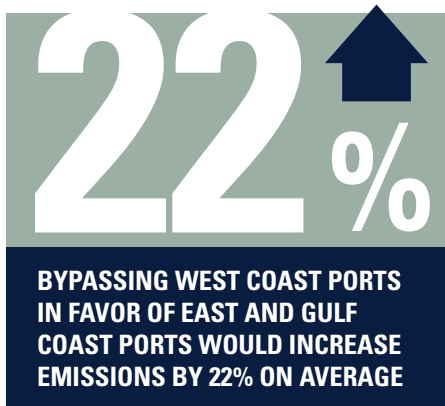
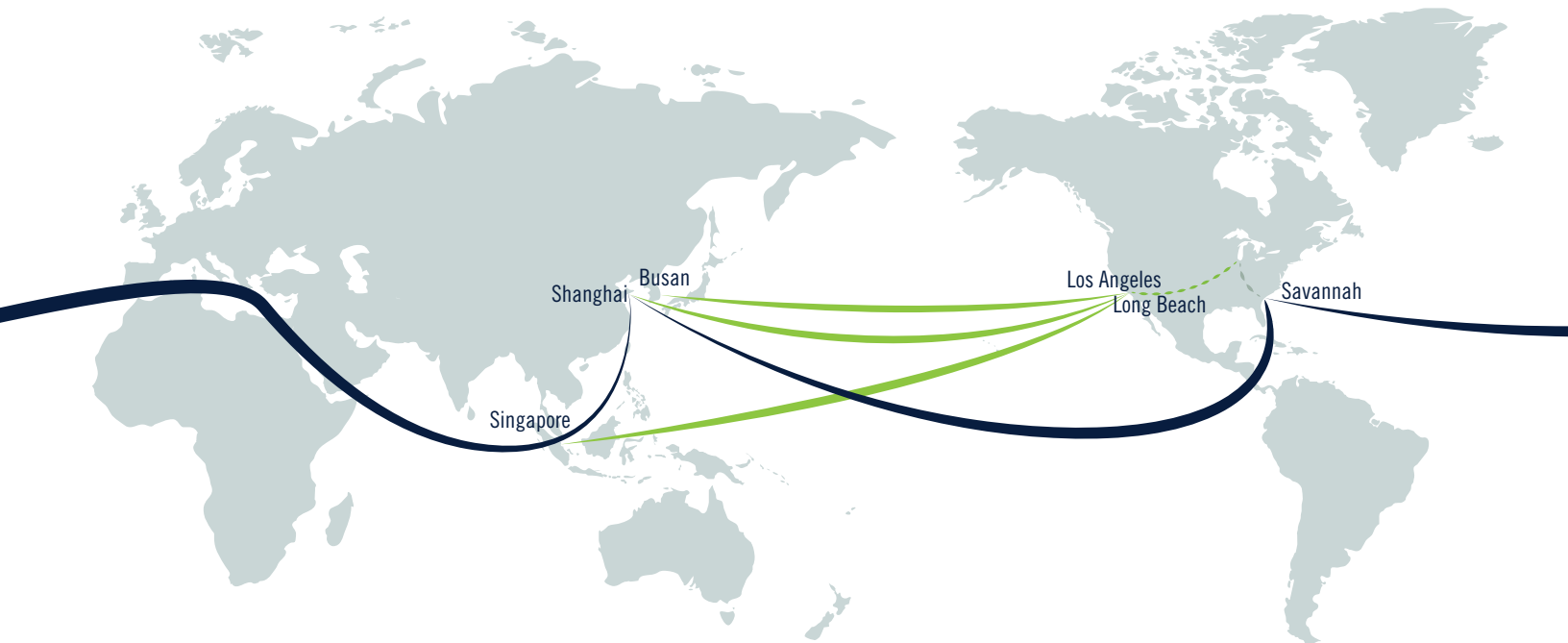
Thomas Jelenić  
Vice President

cc: Gene Seroka, Port of Los Angeles  
Mike DiBernardo, Port of Los Angeles  
Duane Kenagy, P.E., Port of Long Beach  
Rick Cameron, Port of Long Beach

# A GLOBAL PERSPECTIVE

## PROPOSED CALIFORNIA POLICIES MAY INCREASE GREENHOUSE GAS EMISSIONS DUE TO CARGO DIVERSION

Ships are the most environmentally-friendly means of moving cargo as they have the smallest greenhouse gas footprint of any transportation mode. California is a destination for cargo thanks to its proximity to Asia. On average, greenhouse gas emissions are **22% higher when shippers bypass a California port** for East Coast or Gulf Coast ports. If California policy proposals do not consider the global impacts of their rules, efforts to reduce GHG emissions in California may have the unintended effect of diverting cargo to other ports.



As calculated from the Starcrest Greenhouse Gas Route Comparison Tool. The emissions presented in this comparison are estimates of emissions that would result from the diversion of 10,000 TEUs across a string of 8,000-TEU vessels for illustrative purposes.

**1** California ports are the most direct route to inland U.S. destinations. Using California ports delivers jobs and prosperity to our communities. It also results in the lowest carbon footprint. **Moving cargo through an East Coast port to Chicago instead of a California port could increase emissions 86%.**

**2** Policies that make California ports uncompetitive will drive cargo to other gateways and increase greenhouse gas emissions. **Cargo that moves through a Gulf Coast port instead of a California port on its way to Memphis could increase greenhouse gas emissions by 47%.**

**3** California ports have not experienced growth in the past decade and have lost market share to East Coast and Gulf Coast ports. **If California ports had maintained their previous market share from 2006, more than FIVE HUNDRED THOUSAND metric tons of GHG emissions would be avoided annually.**

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# SIEMENS

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Our reference	Wi
Date	September 18, 2017

## Clean Air Action Plan 2017 - DRAFT

To whom it may concern,

Creating a zero emission goods movement future and continue focusing on advancing clean technologies to reduce emissions and combat climate change is in alignment with the vision of the Siemens eHighway department. Therefore the Siemens eHighway department supports the Clean Air Action Plan 2017 (CAAP) in general.

Nevertheless the Siemens eHighway department identified two fields for improvement to assure a success of the proposed Clean Air Action Plan by the San Pedro Bay Ports:

- *Technology neutral:* The current CAAP states that the ports are not mandating a particular technology pathway or a certain type of operation. This statement is to be supported at first glance since for example the eHighway solution (overhead catenary system to provide wayside power to electric trucks) is a backbone technology and compatible with and complementary to other alternative fuel technology. Nevertheless the technology neutrality should only focus those technologies, which are able to achieve the long-term CAAP goals of zero-emissions. With a focus on the future deployment of alternative fuels that are low- or zero-emitting not only at the point of use but also across the entire supply chain, both with regards to air pollutant and carbon dioxide (CO<sub>2</sub>) emissions, as a means to address multiple energy policy goals. According to the International Energy Agency this will be only electricity and hydrogen. And since the Ports will also serve in an advocacy role to help reduce barriers for applicants and ensure funding awards will be targeted for priority projects in support of the CAAP goals it is necessary to limit the funding to those technologies. According to CARB the investment in bridge technologies will limit the possibilities to be technology neutral for zero emission. Therefore the Siemens eHighway department argues vehemently for an adaption of the CAAP in terms of the focus technologies.
- *Timeline:* The current CAAP says that in the next few years, there is still a need to develop and demonstrate the zero- and near-zero-emissions technologies. That is correct as well as the statement that zero-emissions trucks are still in the testing and demonstration phase. Nevertheless the current CAAP says also that near-zero-emission technologies are expected to be commercially available and mass produced in the next few years, the zero-emission trucks may not be available for some time. The second part of the statement is not correct and cannot be supported by the Siemens eHighway department. Zero-emission technology is already available and used or will be used soon on public roads (please have a look at the following table). These are so far demonstration projects and not real commercial projects, but according to an upcoming report from the Confederation of German Industry the overhead catenary solution for heavy

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Managing Board: Joe Kaeser, Chairman, President and Chief Executive Officer; Roland Busch, Lisa Davis, Klaus Helmrich,  
Janina Kugel, Cedrik Neike, Michael Sen, Ralf P. Thomas  
Registered offices: Berlin and Munich, Germany; Commercial registries: Berlin Charlottenburg, HRB 12300, Munich, HRB 6684

duty vehicles will be commercially available and mass produced after the completion of the three German field trials in 2022. Therefore the Siemens eHighway department argues vehemently for a change of the timeline for the availability of zero-emission technology in the CAAP.

*Table: Highway routes and used hybrid trucks*

<b>Route and Country</b>	<b>Length electrification</b>	<b>Amount and type of hybrid truck</b>	<b>Operation since</b>	<b>Funding</b>
Groß Doelln, Germany	1,24 miles, one direction	2 serial hybrid class 8 rigid truck; 1 class 8 tractor truck with 120-kWh-battery	2012	BMUB
E16 Gävle, Sweden	1,24 miles, one direction	2 parallel hybrid class 8 tractor truck (Scania)	2016	Trafikverket
Carson (CA), USA	1 mile, two directions	1 fully electric truck; 1 CNG-hybrid; 1 parallel class 8 tractor truck (Volvo)	2017	South Coast Air Quality Management District
A5 Hesse, Germany	3,11 miles, two directions	n.a.	2019	BMUB
A1 Luebeck, Germany	approx. 3,11 miles, two directions	n.a.	2019	BMUB
B462 Gaggenau, Germany	approx. 4,35 miles, two directions	n.a.	2019	BMUB
<i>Total amount</i>	<i>Approx. 14,05 miles</i>	<i>8 heavy duty vehicles with current collector (pantograph)</i>		

Sincerely yours,

Siemens Aktiengesellschaft

Benjamin Wickert  
Head of Business Development eHighway



San Pedro Bay Ports  
caa@cleanairactionplan.org  
September 18, 2017

**Subject: Tesla, Inc.'s Comments regarding San Pedro Bay Ports Clean Air Action Plan 2017 DRAFT Final**

To Whom It May Concern:

Tesla, Inc. (“Tesla”) is pleased to submit written comments to the San Pedro Bay Ports (“Ports”) in response to the request for comment on the recent “San Pedro Bay Ports Clean Air Action Plan 2017 DRAFT Final” document (“CAAP”). We commend the Ports for undertaking the challenge to draft a plan that promotes continued emission reduction associated with the maritime goods movement, in order to reduce the freight industry’s impacts on local communities and help the State and region meet their goals for air quality improvements. Tesla also commends Mayor Garcetti and Mayor Garcia for their commitment to a zero-emissions good movement future, and for their strong support of the CAAP. We share the belief the CAAP is part of a necessary shift in the way we think about sustainable port planning, and we look forward to continued collaboration with the Ports toward a zero emissions future.

**I. Background**

Tesla, an American company headquartered in Northern California, is the world’s leading manufacturer of fully electric, highway-capable vehicles (“EVs”) and EV powertrains. The Company maintains research and development, manufacturing, and production facilities in California and Nevada. Tesla was instrumental in reviving interest in EV technology with its introduction of the Tesla Roadster in 2008, the Model S in 2012, and the Model X in 2015. With each model, the Company proved that modern EVs could deliver performance, range, technology, safety, and style in a completely emissions-free vehicle. Tesla recently released the Model 3 car, which captures these same attributes in a mass-market vehicle. Tesla is currently focused on the upcoming reveal of its all electric heavy-duty truck, which leverages all of the investments made in the light-duty side over the last 10 years to create a safer and cleaner vehicle for drivers and the public.

**II. Comments**

As a company committed to advancing EV technology and accelerating the transition to sustainable energy, Tesla believes that the Ports are in a unique position to catalyze the

transition to zero emission in the goods movement sector. The current CAAP goes a long way in spurring that transition and can act as a model for Ports' around the world. To that end, we offer the following comments to strengthen the CAAP: 1) Encourage more aggressive timelines for zero-emission trucks 2) Position the feasibility assessments as a means to accelerate the CAAP deadline, rather than extend it 3) Continue to prioritize investments in electrical infrastructure to bring additional power to the ports.

### **1. Encourage more aggressive timelines for zero-emission trucks**

As currently written, the CAAP does not differentiate between near-zero and zero emissions standards until 2035. Financial inducements and near-term requirements are the same for both types of vehicles, even though the Ports ultimate goal is zero-emissions. We do not seek to discourage the adoption of near-zero emission vehicles if the alternative is a traditional diesel powered truck. However, we firmly believe the value proposition for zero emission trucks will accelerate quickly in the coming years, becoming a viable alternative to both diesel and near-zero emission technologies. If the Ports ultimate goal is zero-emissions, we encourage policies that will accelerate the adoption of those technologies.

One appropriate place to differentiate between zero and near-zero emissions are in the requirements that begin in 2023. The CAAP proposes that new trucks entering the Ports Drayage Truck Registry must be near-zero emissions or better; it also assesses fees for all trucks entering the ports' terminals, with exemptions for trucks that meet this near-zero standard or better. The CAAP proposes waiving the annual \$100 per truck registration fee for near-zero and zero-emission vehicles, effective upon adoption of the tariff. As the CAAP notes, the aggregate saving could be substantial, particularly for larger fleets. We encourage the Ports to consider differentiating between trucks that are near-zero and zero emissions, given the greater environmental benefits of the latter.

Tesla also recommends hastening the timing of the interim goals leading to 2035. The CAAP proposes a final zero-emissions requirement in 2035, with interim goals in 2018 and 2023. This creates a 12 year gap between the last interim goal and the final requirement. Heavy duty-trucks, on average, do not have a 12 year lifespan. Analysis on drayage truck operators at the Ports' of Los Angeles and Long Beach found that the majority of trucks turnover every 3-10 years. It's not unreasonable to expect that fleets will go through two purchasing cycles between 2023 and 2035, and the Plan has no date in place to accelerate adoption of zero-emission vehicles during that time. Tesla recommends that the Ports add an additional interim date with set goals between 2023 and 2035, to further encourage fleets and drivers to adopt zero-emission vehicles.

### **2. Position the feasibility assessments as a means to accelerate the CAAP deadline, rather than extend it**

The Ports propose a Clean Trucks Program that maximize near-term benefits. To complement that strategy, the CAAP proposes a series of feasibility assessments every 3 years, outlined in the supporting document "Framework for Feasibility Assessments." As written, these feasibility assessments are primarily aimed at identifying challenges and gaps in current technologies, and providing an avenue to delay goals and timelines if advancements in technology move slower than anticipated. Tesla recommends that the CAAP also create an avenue to accelerate the goals and timelines if these feasibility assessments find



that technology and supporting infrastructure have advanced faster than anticipated. Tesla further recommends that the Ports formalize how these feasibility assessments might be used to adjust the goals and timelines as needed.

**3. Continue to prioritize investments in electrical infrastructure to bring additional power to the ports.**

The CAAP states that the only-near zero emissions engines currently available are fueled by natural gas, with diesel-fueled near-zero engines likely to become available in 2020. However Tesla is confident that zero-emissions electric trucks will also become a commercially viable option within this 2020 timeframe.

In order for zero-emission trucks to achieve the widest adoption in the coming years, the Port should consider supporting easily accessible refueling infrastructure for zero-emission trucks including high-powered and extensive charging infrastructure, which will provide an avenue for those without dedicated fueling or charging solutions to transition to zero-emission technology. Such installations will only be possible if the Port continues to prioritize investments in increasing its electrical capacity to support the broader trend of port electrification.

We also urge the Ports to consider whether locating this refueling or charging infrastructure onsite could increase freight efficiencies such that zero-emission trucks could accommodate more trips per day. Such efficiencies would naturally enhance the value proposition of these vehicles leading to a quicker overall adoption of the technology.

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The CAAP represents the future of Port clean air standards. Tesla fully supports the Ports leadership in drafting this document and tackling an issue that is critical to meeting the State's clean air and greenhouse gas emission reduction goals. We look forward to working with the Ports more on this important matter.

Thank you.

Sincerely,



Daniel Witt  
Senior Manager, Business Development and Policy  
Tesla, Inc.



September 18, 2017

Mr. Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Ms. Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Mr. Cannon and Ms. Tomley:

Carmichael International Service and our employees in Los Angeles depend on the safe, competitive, and efficient movement of cargo through the Ports of Los Angeles and Long Beach for our livelihoods. We are located in Los Angeles. We are greatly concerned with several aspects of the Draft Clean Air Action Plan Update which threaten our business and many others, and our customers.

The draft plan's cost is uncertain, analysis of impact on the ports' future competitiveness is absent. Certain technologies and fuels are excluded, and the air quality benefits are not defined. We fear that all additional costs will fall to the importers, exporters and service providers. Layering tens of billions of dollars in fees on the supply chain will be disincentive for shippers and cargo owners to use California gateways and encourage them to try other options that compete for the two South Bay Ports' business.

In comparison to other North American port gateways, Los Angeles and Long Beach have lost market share during the past decade. While the CAAP's goals are laudable and well intentioned, given the hyper-competitive nature of global commerce, we would recommend the following actions by the Ports of Los Angeles and Long Beach be taken before adoption of these new programs:

- Conduct a thorough evaluation of the proposed measures' cost effectiveness and impacts on port competitiveness;
- Include the use of ultra-low emission technologies and all electrification options to achieve significant emissions reductions;
- Receive firm commitments of state and federal monies for research and development options for zero and near-zero emissions equipment, without limitations, before moving forward;
- Fully analyze the significant burden on the Ports' energy system and cyber security threats to both Ports if they were to be fully electrified and the impact to the trade community in the event of power disruption.

Please consider these changes. They are critical to our company and our employees here in Southern California.

Sincerely,

Todd Boice  
President



**EVERGREEN SHIPPING AGENCY (AMERICA) CORPORATION**  
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September 18, 2017

Mr. Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Ms. Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon:

I am writing to you today to express my concerns with the Draft Clean Air Action Plan 2017.

As you know, Evergreen is a loyal tenant/customer of Port of Los Angeles and Long Beach going back to 1978 and has always been considering San Pedro Bay Ports as our most important base port for our operation in North America.

Ocean carriers have partnered with the ports of Los Angeles and Long Beach for more than a decade to achieve significant reductions in pollutants and greenhouse gases from vessels. In fact, the Draft CAAP praises industry for its successful efforts to reduce air emissions. I wholeheartedly support these efforts and look forward to seeing them continue long into the future.

In spite of this significant progress and the partnership between the ports and industry, this plan is proposing to add \$14 billion in costs at a time when the industry is struggling to return to financial profitability. Following review of the Draft CAAP 2017, I have serious concerns with the plan as it is proposed:

- Adding \$14 billion in costs will not increase the competitiveness of this gateway and will make it difficult to attract discretionary cargo.
- Where will the money come from and who will pay for these costs?
- The Vessel Speed Reduction has been one of the most successful voluntary emission reduction programs. We encourage you to retain the existing program.
- The operational requirements for appointments and mandatory turn times with penalties on both parties will only create a burdensome administration process and not increase the efficiency of the gateway. By including efficiency measures in the CAAP, the ports have turned their back on their stakeholder driven process in the Supply Chain Optimization forum. Instead of bringing the stakeholders together to find solutions, these requirements increases conflict between the truckers and marine terminal operators.

Over a decade ago, the first Clean Air Action Plan challenged industry to deliver on an ambitious set of goals. Companies rose to the challenge and achieved substantial emission reductions. We would like to continue this collaboration on a program that allows zero and near zero emission technologies on an achievable time frame. This will allow the San Pedro Bay gateway to be competitive in the global marketplace while being a leader in environmental sustainability.

Should you have any questions or need any additional information, please feel free to reach me by at (714 ) 822-6992 or by email at [jasonhsu@evergreen-shipping.us](mailto:jasonhsu@evergreen-shipping.us)

Sincerely,



Jason Hsu

Senior Vice President –D  
Pacific Southwest Region

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero  
Steve Wang, Evergreen Shipping Agency (America) Corp.





Elizabeth Warren, Executive Director  
P.O. Box 768  
San Pedro, CA 90733-0768  
www.FuturePorts.org

September 18, 2017

**Sent via email**

CAAP@cleanairactionplan.org

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**P2S Engineering, Inc.**  
Tara Voss  
**Keesal, Young & Logan**

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Mr. Cannon and Ms. Tomley,

FuturePorts appreciates the opportunity to comment on the Draft Final Clean Air Action Plan Update (Draft CAAP Update).

FuturePorts is an advocacy organization whose members represent a broad range of goods movement industry businesses operating throughout the Southern California region. Members range from small to large companies in the goods movement supply chain sector, from engineering and construction companies and their suppliers, to labor, and transportation providers.

FuturePorts is dedicated greening and growing the San Pedro Bay Ports by realizing their modernization in order to maintain their competitiveness through the successful completion of their development programs allowing for the economically viable and environmentally sustainable growth of the Ports.

**ADVISORY BOARD MEMBERS**

George Kieffer  
FuturePorts Founding Member  
**Manatt, Phelps & Phillips, LLP**  
Fran Inman  
**Majestic Realty Co.**

The goods movement industry is the #1 economic engine and jobs creator for the state of California, creating millions of direct and indirect jobs. FuturePorts’ members have a vested interest in an economically viable and sustainable supply chain from the waterfront throughout the entire distribution network.

**PARTNERING ORGANIZATIONS**

Bay Planning Coalition  
Inland Empire Economic Partnership  
Long Beach Area Chamber of Commerce  
Los Angeles Area Chamber of Commerce  
Los Angeles County Business Federation  
Los Angeles County Economic Development Corporation  
Pacific Merchant Marine Council-Navy League of the United States  
San Pedro Chamber of Commerce  
South Bay Association of Chambers of Commerce  
Wilmington Chamber of Commerce

Below are our comments on the Draft Final 2017 Clean Air Action Plan:

1. ***The Draft CAAP Update should include accurate cost estimates.*** The Draft CAAP Update requires 100% use of only zero-emissions electric cargo handling equipment at marine terminals by 2030. The San Pedro Bay Ports (Ports) have estimated incremental costs of between \$8.4 billion and \$14 billion for new technologies and infrastructure investments and incentive programs to implement the Draft CAAP Update strategies (and this estimate assumes that the technology-forcing requirement will result in zero-emission technologies that are tested and commercially available, which is not assured). As an initial matter, FuturePorts believes the actual costs of the Draft CAAP Update strategies could be significantly higher than estimated by the Ports. In fact, the only substantive cost estimate of moving to zero-emission technologies across San Pedro Bay is [a Moffatt & Nichol study](#) commissioned by the Pacific Merchant Shipping Association (PMSA) which estimated the additional cost of moving to automated zero-emission technologies (the only zero-emission technology available today) at tens of billions of dollars.

Accordingly, FuturePorts opposes the CAAP Update unless it is amended to include accurate cost estimates, including changes in operations and maintenance costs, the full costs associated with alternative fuels or electricity, and a better estimate of technology replacement costs given actual equipment ratios.

2. ***The Draft CAAP Update should include a competitiveness action plan.*** The Draft CAAP Update does not address the market share growth necessary to pay for the billions of dollars it will cost to implement Draft CAAP Update strategies. Unlike other ports in North America, the San Pedro Bay Ports have not seen any cargo growth between 2006 and 2016 and have seen a decrease in market share for discretionary cargo. Discretionary cargo accounts for approximately half of the throughput at the San Pedro Bay Ports and therefore the costs of implementing the Draft CAAP Update puts approximately half of the Ports' cargo at risk. Thus, the increased costs will decrease competitiveness and continue the ongoing trend of the San Pedro Bay Ports losing market share, and jobs and economic benefits associated with Port activity will decrease.

Accordingly, FuturePorts opposes the Draft CAAP Update unless it is amended to include a competitiveness action plan which identifies who would pay for all necessary equipment and infrastructure as the private sector cannot absorb these extraordinary costs alone.

3. ***The Draft CAAP Update should include a cost-effectiveness analysis.*** According to PMSA, cargo-handling equipment represents only 0.0747 percent of California's total greenhouse gas emissions. As the Ports estimate that it will cost up to \$14 billion to implement the Draft CAAP Update strategies, this begs the question of how much must be spent by industries and businesses to achieve a zero-emissions standard state-wide and whether there are more cost-effective means to achieve emissions reductions. Moreover, given the certainty that the private sector alone cannot fund the proposed transition to zero or even near-zero emissions, we request that the use of public funds be scrutinized in a manner that ensures regional co-benefits in advancing attainment of NAAQS in the South Coast Air Basin.

Accordingly, FuturePorts opposes the Draft CAAP Update unless it is amended to include a comprehensive cost-effectiveness study, including the incremental cost-effectiveness of going from near-zero to zero emissions that addresses these issues.

4. ***The Draft CAAP Update should be technology and fuel neutral.*** The final CAAP Update should be technology and fuel neutral, and analyze a broader range of technology options (including near-zero technologies) that include the cost effectiveness and total cost for each option, and identify who would pay for all necessary equipment and infrastructure. The Draft CAAP Update’s aggressive timeline (the Draft CAAP Update states a “large portion of the costs must occur within the next 5-7 years”), for example, does not allow terminal operators to capture the full usefulness of their existing equipment and these costs must be taken into account. Furthermore, because of an all-electric technology mandate, operators will not be able to utilize near-zero emissions equipment which may already be available. Moreover, there is no guarantee sufficient zero-emission technologies will be developed, tested and commercially available under the Draft CAAP Update’s timeframes.

FuturePorts therefore opposes the Draft CAAP Update unless it is amended to be technology and fuel neutral, and allows for the use on near-zero emissions technologies.

5. ***Unintended consequences on global emissions.*** According to an [August 2017 Starcrest Consulting Group \(Starcrest\) study](#) prepared for PMSA, increased costs of proposed regulations may influence cargo owners to utilize other gateways, resulting in unintended consequences. In fact, the Starcrest analysis found that greenhouse gas emissions may be 22 percent higher if cargo originating from Asia bypasses the San Pedro Bay Ports in favor of ports on the East Coast and Gulf Coast, with final destinations of Chicago, St. Louis and Memphis. The Starcrest study and related infographic are attached hereto.
6. ***The Draft CAAP Update’s mandates are unfunded.*** According to the Economic and Workforce Considerations for the Clean Air Action Plan 2017 Update, “in order to give terminal operators ample time to purchase the necessary equipment and put it in use by 2030, the Ports have assumed a 5-year window for the installation of electrical infrastructure in the San Pedro Port complex from roughly 2018 to 2022. This timeframe results in annual costs to the Ports of about \$400 million.” The current budgets for the Port of Los Angeles and the Port of Long Beach for fiscal year 2018 do not account for these costs. Thus, the Draft CAAP Update’s own mandates currently are unfunded.
7. ***Compliance with laws.*** Before the measures in the Draft CAAP Update are implemented, an analysis should be performed to determine compliance with federal, state and local laws, including CEQA.



FuturePorts appreciates the opportunity to comment on the Draft CAAP Update, and we look forward to further engaging with the Ports and other parties on working on solutions to the challenges facing our Ports, our businesses, and our community.

Sincerely,

A handwritten signature in black ink that reads "Elizabeth Warren".

Elizabeth Warren  
Executive Director  
FuturePorts

Cc: FuturePorts Board of Directors

## CAAP Comment from Green Marine

---

**Time:** Mon, 18 Sep 2017 19:09:59 +0000  
**From:** Eleanor Kirtley <Eleanor.Kirtley@green-marine.org>  
**To:** "CAAP@cleanairactionplan.org" <CAAP@cleanairactionplan.org>  
**CC:** David Bolduc <David.Bolduc@allianceverte.org>  
**Subject:** CAAP Comment from Green Marine  
**Attachments:** msg-8781-412.html (4k)



To the Ports of San Pedro Bay,

Green Marine is honored to be listed as a credible, voluntary recognition program for Green Terminals (Section 3.1 of the DRAFT Clean Air Action Plan 2017 Update).

Celebrating our 10th anniversary this year, we currently have over 250 members in our four membership categories: Supporters, Associations, Partners, and over 110 Participants. Participants are ship owners, port authorities, terminal operators, Seaway corporations, and shipyards. Our terminal operators and stevedores operate over 50 locations across the US and Canada. Green Marine certified ports and terminals on the West Coast include: Port of Hueneme, Port of Seattle, Vancouver Frasier Port Authority, DP World Prince Rupert, Kinder Morgan's Westridge Terminal, Neptune, and Global Container Terminals' Vanterm and Deltaport. We would welcome new participants in LA and Long Beach.

Our mission is to advance environmental excellence, and we are a partnership across sectors and stakeholders in the maritime industry. While we maintain our focus as a voluntary environmental certification program, we also support partnerships and collaborations with other initiatives that also share our mission.

Regards,

**Eleanor Kirtley, PhD, LEED AP, PE**

eleanor.kirtley@green-marine.org

**Green Marine**

West Coast Program Manager

Seattle, WA

206.409.3943

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info@harborassn.com  
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September 18, 2017

**RE: Comments Regarding Clean Air Action Plan 3.0**

On behalf of the Harbor Association of Industry & Commerce, I would like to submit this letter regarding the Clean Air Action Plan. The Harbor Association of Industry & Commerce (HAIC) was established in 1975 to be a collective voice and advocate for the harbor business community. HAIC is a non-profit industrial and commercial trade association which serves as a united voice on trade, transportation, energy, environmental and land-use issues affecting the harbor business communities.

First, I think it is important to acknowledge the efforts of port staff to conduct a complete and thorough outreach process. Without a doubt, this Clean Air Action Plan (CAAP) feels like a much more inclusive process engaging all stakeholders to ensure that all parties are heard.

Our organization has thoroughly reviewed the document and while we support the purpose of the CAAP to improve air quality and pave the way for more environmentally sustainable operations for decades to come, we have a few concerns for the ports to consider before final adoption of any CAAP.

**Competitiveness**

First and foremost, it is the mission of the twin ports to move cargo. Second to moving cargo is to do so in an efficient and sustainable way. Since 2006, competing ports have seen faster growth and have increased their market share as global trade has continued to grow. There are many contributing factors, however regulatory uncertainty and cost are undoubtedly a concern for importers and exporters using the San Pedro Bay Ports.

Above all, it is necessary to preserve our competitive advantages and make an effort to both reduce emissions while increasing market share. There are certain elements of this CAAP that could drive up cost to an extent that would make it hard for our region to compete in a

global marketplace. It is essential to preserve commercial sustainability while improving environmental sustainability.

## **Technology**

A primary concern threatening the global competitiveness of our ports is the current cost and availability of technological solutions. Currently, the port estimates that the replacement cost of equipment will be between \$7-14 Billion. This cost does not lineup with creating a competitive edge for the Ports of Los Angeles and Long Beach.

The lack of availability of near-zero emission (NZE) and zero emission (ZE) technologies that have been proven and are commercially viable is cause for concern. During the first CAAP, technology that was deployed was not fully tested and proved to be insufficient for port operations. This was exacerbated by the exorbitant cost and stringent deadlines.

We do applaud the ports addressing the need for pilot programs and establishing regular check-ins to diagnose the commercial viability of technology. Above all, we implore the ports to remain technology neutral and to allow industry to participate in pilot programs and remain flexible on the adoption milestones for NZE and ZE technologies. It is the industries using the technology that should decide which ones make the most sense for their respective business needs.

## **Efficiency**

Before implementing costly new technologies that are largely unproven, the ports need to create more efficiencies to current port operations. By moving cargo in a more efficient manner, there is the opportunity for both increased productivity and increased capacity within the same constructs we operate in today. This will help with both a reduction of emissions, as well as increased earning ability for companies operating in the port allowing for more available private capital to invest in new technology.

The Draft CAAP states several areas of needed improvement including increased on-dock rail, faster truck turn times, and the implementation of dynamic technology solutions such as portals. We encourage the continued effort to explore and adopt efficiency measures that help the short and long term success of the twin ports.

## **Funding**

The final area of concern is funding for the overall costs. The Draft CAAP identifies several areas of possible funding solutions including public and private monies. There is substantial concern where the \$7-14B will come from to fund much of this technological

overhaul at the ports. There is no guarantee for state or federal funding, and private industry cannot foot this bill without passing the cost along to customers and consumers. This creates a great concern to the ability to maintain competitiveness.

One of the major successes of the first CAAP, was the amount of grant money made available for early adopters. The cost of the program was far less onerous than the current Draft CAAP outlines, and roughly half of the investment came from public funding sources. To properly implement new technology, it needs to be available, affordable, and there needs to be incentives available for the early adopters who serve as the quality control and initial investors in new technology.

### **Conclusion**

In conclusion, we think that a balanced and cautious approach that allows for successful implementation of new technologies in a commercially viable method is necessary. The top priority of the ports should be to maintain competitiveness while implementing strategies to move cargo in a manner that is both more efficient and more sustainable. We ask that the ports work with industry to help develop and test new technology, and not to deploy new technology until it is both proven and the cost makes the technology commercially viable.

Thank you for the opportunity to comment on the Draft CAAP 3.0. We look forward to continued work in partnership with the ports to insure its success.

Thanks,

A handwritten signature in black ink, appearing to read 'W LaBar', with a long horizontal flourish extending to the right.

Weston LaBar  
Executive Director





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September 18, 2017

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Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, California 90815

Subject: Comments to 2017 Draft Clean Air Action Plan

Dear Mr. Cannon and Ms. Tomley:

Carrix, Inc., the parent company of SSA Marine, Inc. and its affiliates, appreciates the opportunity to offer the following comments regarding the 2017 draft Clean Air Acton Plan (CAAP) proposed by the Port of Los Angeles and the Port of Long Beach (Ports). We hope that the Ports continue to engage with all stake holders in implementing the draft CAAP and in engaging with regulatory agencies, including CARB, in the best interest of the Ports and the industries that they support.

**(1) Long Term Competitiveness of Ports and Cargo Diversion**

As a long-term tenant of San Pedro Bay Ports, our primary concern related to the draft CAAP proposal is maintaining the commercial competitiveness of the ports with a substantially increased cost structure for terminal operators and other stakeholders. As highlighted in the draft CAAP information, the Ports already face competitive challenges from the Harbor Maintenance Tax (HMT) and managing the most highly regulated environment in the Americas. Maintaining the competitiveness of the ports is critical to our business and the jobs of our valued union and non-union workforce.

Given these concerns, we encourage the Ports to retain as much flexibility in the plan as possible. Considering the costs associated with the draft CAAP, it may be necessary to adjust expectations in the future to prevent the diversion of cargo to more competitive ports.

## **(2) CAAP Cost Impact & Available Funding Sources**

The Ports have estimated the total investment required by the draft CAAP to range from \$8.5 - \$14 billion in order to cover infrastructure investment, technologies, and incentive programs necessary to support the strategies outlined in the draft CAAP. This investment in infrastructure is so massive it could never be supported by the balance sheets of terminal operators, nor would it be possible to recover necessary revenue from ocean carriers through increased rates.

The Ports have suggested in the draft CAAP that they intend to work closely with federal, state, and local governments to secure funding. That approach is commendable, one we highly encourage, and has worked in the past, such as through Federal "Tiger" grants. However, such an effort is unlikely to generate the magnitude of financial support necessary to meet the requirements of the draft CAAP. We believe that Federal and State support will prove challenging to come by given stretched budgets and competing priorities, particularly if infrastructure investments commence in the next five-to-seven years.

If funds are not available from government sources, we encourage the Ports to have a funding contingency plan and to consider other options to meet the funding requirements, including those highlighted in item (3) below.

## **(3) Zero Emissions Cargo Handling Equipment Requirements**

We are in support of taking reasonable steps to improve air quality in the region and to cooperate with the Ports and the community to achieve realistic and achievable CAAP objectives. In fact, we are currently working with the Port of Long Beach to repower nine rubber-tired gantry cranes to electric power and we have been at the forefront of industry efforts to address environmental needs.

The draft CAAP documents acknowledge that it could cost up to \$2 billion if terminals were to convert to zero emissions cargo handling equipment over what they would typically spend on diesel equivalents. An additional \$2 billion would be necessary for infrastructure costs, resulting in total cargo handling equipment costs of approximately \$4 billion.

In our view, there is an important distinction between directed innovation due to regulatory requirements and market or industry based innovation. In other words, industry is often most efficient at pursuing innovation with appropriate incentives. In this regard, the Ports are encouraged to focus on a risk/reward calculation for tenants. A much more in-depth evaluation is necessary to ascertain how funding can be achieved. In this regard, full consideration should be given to raising funds from a combination of sources including, but not limited to, federal tax credits for the use of near or zero emissions cargo handling equipment, the use of private public partnerships to generate funds for infrastructure investment, considering how terminals may be able to generate energy to offset total emissions, and reducing minimum annual guarantees (MAG's) for a designated period to assist terminal operators in funding cargo handling equipment upgrades.

## **(4) Zero Emissions Cargo Handling Equipment for Conventional Operations**

As you know, the conventional terminal business model is completely unlike that of a container terminal with even lower margins and less revenue to support capital improvements. Clearly a different model

will be required. Moreover, the carriers calling these terminals (unlike container liner vessels that consistently make port calls as part of a dedicated schedule) are often infrequent visitors and, more importantly, will not be capable of connecting to shore-side power.

#### **(5) Vessel At-Berth Emission Reductions**

The Ports have estimated that it may cost approximately \$144 million to provide emission-control systems for all non-container terminals.

Berth technology alternatives for non-containerized vessels are far from complete. These technology upgrades represent the only means of compliance for vessels making occasional calls when they are not configured for shore-side power. There are only two alternative technologies for container ships that can be used to comply with the proposed at-berth regulation and one land based system that is being developed for non-container ships.

There obviously needs to be a vast increase in alternative emission control capability, otherwise market demand will far exceed alternative technology supply.

#### **(6) Universal Port Truck Appointment Systems**

As you know, WCMTOA is moving toward an industry solution for appointments. We encourage the Ports to coordinate efforts with the industry in this regard. We also believe it is important to recognize that not all terminals are in need of appointments simply because of how their operations are evolving. As an example, more-and-more trans-load imported container volumes are being transported to distribution centers by the "Peel-Off" method where appointments are not required. The Peel-Off method allows a driver to arrive at the terminal to pick up any container in a pre-sorted stack for a particular beneficial cargo owner (i.e., Walmart, Cosco, Target, etc.) or for groups of beneficial cargo owners, as is done today at certain facilities, without having to make an appointment.

Peel-Off is a more convenient, efficient, and logical way to manage containers, particularly for trans-loaded moves that are drayed off of the terminal. More importantly, Peel-Off can easily be achieved, resulting in improvements to all stakeholders with a more efficient use of assets such as trucks, land and cargo handling equipment. We believe Peel-Off is an operational solution that will increase container throughput, minimize turn-times, and can be accomplished at little cost. Peel-Off is the way that all containers should eventually be managed at Ports, and we encourage the Ports to fully support these initiatives.

#### **(7) "Vancouver Model" & Punitive Fines**

We would also like to address the so called "Vancouver Model" where penalties are levied when turn times are not achieved. We do not believe this type of model is appropriate for the San Pedro Ports for many reasons, including:

1. The scale of the truck turns and overall throughput in San Pedro Ports is much larger than in Vancouver.
2. The Vancouver program is managed by a federal entity, which the Ports are not.
3. If the objective is to sharply reduce turn-times, a much better solution would be to implement a Port wide Peel Off program.

4. A sixty-minute turn-time for a dual move is completely arbitrary and without operational basis. The more container throughput, the more likely it is that a terminal will not be in a position to consistently perform a dual move within that arbitrary timeframe.
5. There is a methodical process inside the terminal gates to manage containers that makes safety the highest priority of terminal operators. We are a heavy industry and have zero tolerance for those that do not observe safety rules inside our terminals. There are no exceptions. The fact is, however, that when the Ports attempt take punitive measures and fine terminals under the guise of improved productivity, it is human nature that some people will want to cut corners in order to avoid paying a fine, and that is where safety has the potential to be jeopardized. This is not the right message for our industry.

**(8) Clean Truck Fees**

To our knowledge, there has been no conversation with terminals about a fee paid by dray trucks when they fail to meet a near zero emission standards or better by 2023. There is clearly sufficient time to engage in that conversation. Presumably this discussion will occur between the Ports with WCMTOA, which we would encourage.

Thank you for considering our views.

Cordially yours,



Jaime Neal  
Senior Vice President

cc: Ms. Lou Anne Bynum  
Ms. Tracy J. Egoscue  
Ms. Lori Ann Guzman  
Ms. Bonnie Lowenthal  
Mr. Frank Colonna  
Mr. Mario Cordero



INTERNATIONAL TRANSPORTATION SERVICE, INC.

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1281 PIER G WAY, LONG BEACH, CALIFORNIA 90802-6353 USA

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September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon:

I am writing to you today to express my concerns with the Draft Clean Air Action Plan 2017. International Transportation Service, Inc. (ITS) has been a tenant of the Port of Long Beach since 1971. ITS has been providing stevedore and terminal related services to K-Line and many other carriers calling our Pier G facility over the past 46 years.

ITS has partnered with the ports of Los Angeles and Long Beach for more than a decade to achieve significant reductions in pollutants and greenhouse gases. Specifically, ITS was the first terminal operator tenant with the Port of Long Beach to incorporate environmental covenants into our preferential lease agreement demonstrating our commitment to improving the health of the environment. In fact, the Draft CAAP praises industry for its successful efforts to reduce air emissions. ITS wholeheartedly supports these efforts which align with our company's values, and look forward to seeing them continue long into the future.

In spite of this significant progress and the partnership between the ports and industry, this plan is proposed at a time when cargo volumes have been stagnant for the past 10 years and the industry is in a major restructure struggling to return to financial profitability.

Following review of the Draft CAAP 2017, ITS has serious concerns with the plan as it is proposed:

- **Adding \$14 billion in costs will not increase the competitiveness of this gateway and will make it difficult to retain or attract discretionary cargo.** From Prince Rupert to Mexico and now a newly expanded Panama Canal are all viable options to carriers and shippers.

- **Where will the money come from and who will pay for these costs?**
- **The requirement to have all cargo handling equipment be zero emission by 2030** is a major concern. A high density container handling equipment solution currently being implemented at Middle Harbor Terminal is the only proven model. However a project of that scope will require approximately 15 years to complete for a facility of the size of our Pier G terminal. If ITS were to be able to justify and invest the \$1.4 billion required to build this solution then we will have already missed the 2030 deadline for full electrification. The technology is not available today to replace existing container handling equipment with electric models. Further and no less important is the difficulty financing expensive and unproven equipment which will not provide any increased efficiencies.
- **The Draft CAAP leaves us unable to plan for the future** based on an unavailable technology mandate. It is impossible for our company to develop a capital investment program with unknown technology. With no known path forward we are concerned that the very aggressive 2030 full electrification deadline will not be achievable. If you approve the CAAP in November, it still leaves marine terminal operators in a “wait and see mode” because of the CAAP’s reliance on technology that does not exist. It makes it difficult to plan for the future and is an impediment not faced by our competition.
- **The operational requirements for mandatory turn times and appointments with penalties on both parties will only create more burdensome rules and not increase the efficiency of the gateway.** By including service performance measures in the CAAP, the ports are adding even further capital investment costs along with significantly higher operating costs to a program with an already untenable financial burden.

ITS is committed to continued progress in improving the environment. ITS is of the opinion that significant opportunities to improve emissions can be realized if a holistic approach is taken with respect to reengineering the cargo handling operating methodologies across the regional supply chain. We truly believe that if ALL stakeholders participate in a solution we will achieve the emission reductions we’re all seeking and that we will also far exceed the service and efficiency goals we need to realize in order to bare the financial cost.

Short of that, we support a balanced approach of continuing towards a zero emission goal while maintaining a competitive gateway. We request that you extend the date for these zero emissions requirement to 2050 or allow “near zero” technology which is 90% cleaner than today’s equipment to be used instead of an “all electric zero” mandate.

Should you have any questions or need any additional information, please feel free to reach me by phone at (562) 590-6840 or by email at [sean.lindsay@itslb.com](mailto:sean.lindsay@itslb.com)

Sincerely,

A handwritten signature in black ink, appearing to read "Sean Lindsay". The signature is fluid and cursive, with the first name "Sean" written in a larger, more prominent script than the last name "Lindsay".

Sean Lindsay  
Chief Operating Officer  
International Transportation Service, Inc.

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero

September 18, 2017

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, California 90815

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Subject: Comments to 2017 Clean Air Action Plan

Dear Ms. Tomley and Mr. Cannon:

Matson Navigation Company, Inc. and its affiliates appreciate the opportunity to offer the following comments regarding the 2017 Clean Air Acton Plan (CAAP) proposed by the Port of Long Beach and the Port of Los Angeles (Ports). We hope that the Ports continue to engage with all stake holders in developing the CAAP and in engaging with regulatory agencies, including CARB, in the best interest of the Ports, your tenants, and the industries that you support.

Matson has been both a long time user and tenant at the Ports. We appreciate the Ports' efforts to work for clean air which is something that is important for all who work and live in the area. Matson was an early adopter of cold ironing and operates under a current Green Port lease with POLB. Matson is a proud recipient of several CAAP awards. We applaud the Ports for the highly successful 2006 CAAP that "reduced diesel particulate matter up to 85%, cut nitrogen oxides in half, eliminated 97 percent of sulfur oxides, and shrunk greenhouse gases an average of 12 percent." We are supportive of continuing to work on the successful development of the path to further reduce emissions. Enormous progress has already been made at the Ports in this area through the 2006 CAAP.

Our concern with the CAAP draft is with the presupposed solutions, uncertainty and impacts it would have on port, terminal and vessel operations. Matson views the current CAAP draft as unrealistic, overly aggressive and failing to provide to port tenants and customers a meaningful and economic path to compliance. It is difficult for carriers and terminal operators to make decisions for long term capital investment with such uncertainty and unknown technology.

We are supportive of the comments on the draft being submitted by PMSA and Carrix Inc., the parent of our terminal operator. Total remodeling of terminal operations requires a substantial investment of both time and money and the technology to comply with the proposed requirements is not currently commercially available. Unless there is substantial funding available from state and federal authorities to fund this project and a clear availability of compliant technology, terminal operators may be reluctant to continue to operate in the Ports. We see the following as fundamental faults:

- **Fuel neutral** – The CAAP should allow both ultra-low emission technologies and electrification options for achieving significant emissions reductions in a cost-effective manner.
- **Technology neutral** - CAAP requirements should permit manned as well as automated equipment.



- **Competitiveness impact** – The CAAP draft needs further analysis as to its impact on competitiveness, and should include a competitiveness goal within the CAAP to boost the competitiveness of this gateway.
- **Financial feasibility** – The CAAP should establish a financial feasibility goal and criteria for each of the proposed CAAP requirements.
- **Operational Requirements** - We do not need a mandate to tell us how to run our terminal. Matson is the most efficient terminal with sub 30-minute turn times and night gates 4 days/wk. Further regulation and appointment requirements will add cost and degrade our already superior terminal services.
- **Jobs in region and CA** – Already impacted by the ports loss of market share over the past ten years, the potential for additional negative impact of the CAAP requirements on jobs in the region and in California also should be recognized.

Thank you for considering our views.

Cordially yours,



Ronald J. Forest  
President

cc: PMSA President, John McLaurin [jmclaurin@pmsaship.com](mailto:jmclaurin@pmsaship.com)  
 Port of Long Beach Executive Director Mr. Mario Cordero [Mario.Cordero@polb.com](mailto:Mario.Cordero@polb.com)  
 Port of Long Beach Harbor Commission President Lou Anne Bynum [louanne.bynum@polb.com](mailto:louanne.bynum@polb.com)  
 Port of Los Angeles Harbor Commission President Ambassador Vilma [Martinez](mailto:commissioners@portla.org)  
[commissioners@portla.org](mailto:commissioners@portla.org)  
 Port of Los Angeles Executive Director, Gene Seroka [gene\\_seroka@portla.org](mailto:gene_seroka@portla.org)  
 Port of Long Beach Harbor Commission Vice President Ms. Tracy J. Egoscue  
[Tracy.egoscue@polb.com](mailto:Tracy.egoscue@polb.com)  
 Port of Long Beach Harbor Commissioner Ms. Lori Ann Guzman [Loriann.guzman@polb.com](mailto:Loriann.guzman@polb.com)  
 Port of Long Beach Harbor Commissioner Ms. Bonnie Lowenthal [Bonnie.lowenthal@polb.com](mailto:Bonnie.lowenthal@polb.com)  
 Port of Long Beach Harbor Commissioner Mr. Frank Colonna [Frank.colonna@polb.com](mailto:Frank.colonna@polb.com)



## **MITSUBISHI CEMENT CORPORATION**

### **LONG BEACH TERMINAL**

1150 Pier F Ave., Long Beach, CA 90802-6252

Tel: 562-495-0600 Fax: 562-495-5929

September 18, 2017

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

*Via E-mail: CAAP@cleanairactionplan.org*

#### **Re: Comments on Draft Final 2017 Clean Air Action Plan**

Dear Ms. Tomley and Mr. Cannon,

Mitsubishi Cement Corp. (MCC) appreciates this opportunity to comment on the Draft Clean Air Action Plan (Draft CAAP). MCC is a longstanding tenant of the Port of Long Beach. During our tenure here, we have prided ourselves on being a leader in environmental stewardship, alongside the Ports, and we are committed to continuing this stewardship into the future as we look forward to the expansion of our existing cement import terminal. We believe it is possible for the Ports and tenants to strike a balance between environmental leadership and fostering a robust Port economy that continues to drive our regional economy. Toward that end, the CAAP's goals, while admirable, must be implemented with greater consideration to numerous factors critical to businesses, and to MCC in particular. We are particularly concerned that CAAP provisions concerning zero-emissions or near-zero-emissions trucks have not adequately considered feasibility, cost and other important factors. We request that the Ports consider our comments, and those of other affected Port tenants, and revise the Draft CAAP and associated documents, in particular the Preliminary Cost Estimates for Select Clear Air Action Plan Strategies (Cost Estimate), before taking final action.

#### **I. Zero- and Near-Zero-Emissions Trucks**

The Draft CAAP proposes that trucks serving the Port will transition to near-zero and ultimately zero-emissions engines by 2035. As the Draft CAAP acknowledges, “[t]here is still significant effort needed for these zero- and near-zero-emission technologies to become feasible and commercialized.”<sup>1</sup> Although the Ports point to “promising” demonstrations of these new technologies, it is uncertain when or whether these pilot projects will demonstrate the feasibility of the technology for specific tenant requirements. Load weight and haul trip length vary greatly from tenant to tenant depending upon the type of goods, and whether the load is bound for the local, regional or national market. There is a wide gap between the technology becoming feasible for demonstration purposes, whenever that actually occurs, and the ability for businesses to then transition their fleet entirely. Additionally, there are existing and emerging

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<sup>1</sup> Draft CAAP, p. 30.

technologies that appear to have been omitted from the Draft CAAP without discussion or explanation, thereby potentially foreclosing consideration of alternative ways to achieve the CAAP's goals. Finally, the Cost Estimate to implement these goals is exceptionally incomplete such that it risks misleading both the public and the decision makers about the economic viability of these goals.

**a. Suitability of zero- and near-zero-emissions trucks for specific purposes.**

Trucks serving MCC's terminal are heavy-duty Class 8, which are the heaviest class of on-road trucks. Trucks serving MCC typically travel from throughout the greater Los Angeles area to MCC's facility, where bulk cement is loaded and hauled to a destination within the region. These trucks travel more than 200 miles in the course of a day as they make various trips throughout the Los Angeles basin. Based on the information in the Draft CAAP, it is not clear that any demonstration projects currently planned or ongoing for either Class 7 or Class 8 trucks have or will be able to show that the trucks can provide the range necessary to serve MCC's facility, particularly for zero-emissions vehicles.

Additionally, it is our understanding that trucks whose primary power comes from a battery unit are heavier than trucks with conventional engines. This additional weight reduces the payload the battery-powered trucks can haul, necessitating more trucks on the road to haul the same amount of goods. This, in turn, creates additional traffic and fugitive dust from tire and brake wear, as well additional emissions from non-zero emissions vehicles caught up in the traffic.

Finally, as discussed below, the implementation of these potential technologies poses major infrastructural, logistical and operational hurdles.

**b. Early selection of technology to achieve truck fleet goals.**

The Ports intend to "identify a long-term schedule so that the trucking industry can know the expectations and can plan ahead for new equipment purchases..."<sup>2</sup> However, the Draft CAAP does not commit to a particular type of technology to pursue in implementing these interim and ultimate goals of near-zero-emissions and zero-emissions, respectively. For example, near-zero emissions technologies could include compressed natural gas (CNG), liquefied natural gas (LNG) and electric hybrid vehicles, while zero-emissions technologies could be electrification or emerging technologies such as hydrogen fuel cells. These technologies require differing infrastructure. Because of the significant capital investment required not only for the equipment but for the

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<sup>2</sup> Draft CAAP, p. 31.

infrastructure and potential changes to operations and logistics, it is critical to have certainty as we move forward.

We urge the Ports to reach a decision as early as possible as to which technology will be pursued, so that terminal facilities (and tenants' or their customers' off-site facilities) can prepare accordingly. On the other hand, we recognize that the technologies are still emerging and demonstration projects are ongoing. Therefore, the CAAP must be flexible in the event that the selected technology does not become commercially feasible until later than the timeline proposed in the Draft CAAP. Forcing premature implementation of technology can cause extensive disruption in Port and terminal activities.

With respect to the various technologies available or emerging, we understand that CNG, LNG and hydrogen fuel may align with the Ports' clean trucks objectives, but there is little, if any, discussion of these technologies in the Draft CAAP. The decision-making behind the Ports' exclusion of these technologies is not documented in the Draft CAAP or associated documents, and we request that the Ports inform the public in more detail about their analysis and decision making with respect to these technologies, particularly as they relate to the clean truck goals.

**c. Infrastructure and operational considerations.**

If and when the near-zero and zero-emissions truck technology is sufficiently "demonstrated," the technical feasibility and cost effectiveness is likely to remain uncertain in light of the need for adequate infrastructure, as well as the operational and logistical considerations of employing this new technology. The Draft CAAP has acknowledged that "providing fueling or charging infrastructure to support the use of zero-emissions trucks will take major planning and funding..."<sup>3</sup> However, the document does not evaluate the magnitude of key factors such as (1) the availability of infrastructure, such as charging stations, and (2) the logistics of the truck trips themselves, including charging time necessary.

For example, given the current state of the technology, it is not at all certain what the range of heavy duty electric trucks could be, and when charging would have to occur. Will truck drivers need to spend hours charging a vehicle mid-shift? If business hours are consumed by charging time, fleet owners would have to expand their fleets to haul the same amount of goods as they did before this operational interruption. Based on our initial research into the nascent technology of heavy-duty electric trucks, we believe that if heavy-duty electric trucks have a range of less than 200 miles (allowing for a round trip in Southern California), the infrastructure costs to support this type of vehicle would be doubled, because it will be necessary to charge the vehicles at both ends of the trip. This,

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<sup>3</sup> Draft CAAP, p. 33.

in turn, would introduce extreme inefficiencies because a truck may not be able to make its necessary trips in a single day.

Port tenants who will have to rely on off-site electrical infrastructure (rather than on-site) will likely face increased operating costs because of the extra trips needed for off-site charging. Extra off-site charging stops would also contribute to increased traffic, thereby increasing emissions from the other, non-zero-emissions vehicles along the route.

A thoughtful assessment of these challenges is critical to developing a sustainable and clear path forward, and we request that the Draft CAAP be revised to include a meaningful discussion on this topic. MCC will be happy to participate further in this conversation as it is developed.

#### **d. Expansion of the Cost Estimate.**

The Cost Estimate only considers the capital costs associated with equipment upgrades, and does not include operational costs or estimates for fueling and charging infrastructure for heavy-duty trucks, which the Ports recognize “is likely to exist outside the Harbor Districts and throughout the region.”<sup>4</sup> However, a partial cost evaluation – one that does not include infrastructure and inefficiency costs – risks misleading the public and decision makers about the true economic impact of this path. An incomplete picture of costs to implement certain technologies also has potential to foreclose consideration of different approaches achieving the CAAP’s goals.

We request that the Draft CAAP and the Cost Estimate be revised to more fully develop estimated cost calculations for the entire truck fleet transition, including infrastructure changes and operating costs associated with delays and operating inefficiencies for the changes proposed (e.g. truck electrification). Similar cost estimates should be documented for demonstration projects in order to inform potential fleet-wide implementation costs.

A cost effectiveness analysis of implementation of these new technologies would also be valuable to the Ports’ tenants, the public and the decision makers. For all technologies that are under consideration, we suggest that a detailed cost estimate (including all potential impacts) be prepared that evaluates the cost of reducing emissions (including PM10, NOx, and GHGs), on a dollars-per-ton-of-emissions-reduced basis. This information should be presented in a way that allows readers to compare the technologies and their relative cost effectiveness. The sources of funding to accomplish the Draft CAAP’s goals are not identified at this time, but it is in everyone’s interest to direct funds toward those projects and technologies that will have the greatest impacts per dollar spent.

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<sup>4</sup> Cost Estimate, p. 3.

In addition, a cost-*benefit* analysis should also be considered for “zero emissions” and “near zero emissions” technologies. The evaluation of the various technologies may reveal that there comes a point of diminishing returns, and achieving the last percentages of emissions reductions imposes a steep cost. This would allow the public and the decision makers to consider whether a given cost was justified or if, in light of the above-mentioned cost-*effectiveness* analysis, funds could be better spent on another component. Currently, the Draft CAAP’s Cost Estimate provides little in the way of this type of analysis.

## **II. At-Berth Emissions Technologies**

The Draft CAAP proposes to reduce at-berth vessel emissions through the use of shore power and so-called “bonnet” systems that capture and treat emissions from the ships’ stacks. The Ports anticipate this technology to develop in concert with the California Air Resources Board’s At-Berth Emissions Regulation, currently expected to be revised in 2018.

We understand from the Draft CAAP that the Ports will be encouraging innovation in this area, and we agree with that goal. Since this technology is newly emerging, we hope the Ports encourage and welcome a variety of technologies that meet the goals of the Draft CAAP. We urge the Ports to remain flexible as innovative emissions control systems are developed. Not all systems will work for all terminals, and remaining open and supportive of creative solutions to at-berth emissions control systems not only has the potential to increase competition and cost effectiveness in the future, but also reflects the diversity of the Ports’ tenants.

MCC recognizes that the Draft CAAP is a high-level document that may evolve, however, we respectfully request that the Ports continue to refine the Draft CAAP. It is uncertain, from the Draft CAAP documents, how these goals will be implemented by the Ports and their tenants, and what the true costs will be. We look forward to continuing this dialogue, and thank the Ports for consideration of our comments.

Sincerely,



Michael W. Jasberg  
Executive Vice President and  
Chief Operating Officer  
Mitsubishi Cement Corporation

Re: Comments on Draft Final 2017 Clean Air Action Plan  
September 18, 2017

cc: POLB Harbor Commission President, Lou Anne Bynum  
POLB Executive Director, Mario Cordero  
POLA Harbor Commission President, Ambassador Vilma Martinez  
POLA Executive Director, Gene Seroka



Sept. 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, CA 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon:

I am writing to you today to express my concerns with the Draft Clean Air Action Plan 2017.

Ports America is the largest terminal operator and stevedore in the United States, operating in more than 42 ports and 80 locations. Ports America's terminal operations and stevedoring services include container, bulk, breakbulk and project cargo; world-class cruise terminals; intermodal facilities, and RoRo operations. Ports America is also a leader in generating Public-Private Partnerships (PPP) in the United States Seaport industry, and recognizes the importance of working closely with Port Authorities to address unique labor, governance, financing, and other elements of the particular port system.

Marine terminals have partnered with the ports of Los Angeles and Long Beach for more than a decade to achieve significant reductions in pollutants and greenhouse gases. In fact, the Draft CAAP praises industry for its successful efforts to reduce air emissions. I wholeheartedly support these efforts and look forward to seeing them continue long into the future.

In spite of this significant progress and the partnership between the ports and industry, this plan is proposed at a time when cargo volumes have been stagnant for the past 10 years and the industry is in a major restructure struggling to return to financial profitability.

Following review of the Draft CAAP 2017, I have serious concerns with the plan as it is proposed:



- Adding \$14 billion in costs will not increase the competitiveness of this gateway and will make it difficult to attract discretionary cargo.
- Where will the money come from and who will pay for these costs?
- The requirement to have all cargo handling equipment be zero emission by 2030 is a major concern since the technology is not available today and it is difficult to finance expensive equipment which will not provide any increased efficiencies.
- The Draft CAAP leaves us unable to plan for the future based on an unavailable technology mandate. It is impossible for our company to develop a capital investment program with unknown technology.
- The operational requirements for mandatory turn times and appointments with penalties on both parties will only create more burdensome rules and not increase the efficiency of the gateway. By including efficiency measures in the CAAP, the ports have turned their back on their customer driven process in the Supply Chain Optimization forum. Instead of bringing the stakeholders together to find solutions, these requirements increases conflict between the truckers and terminal operators.

Ports America supports a balanced approach of continuing towards a zero emission goal while maintaining a competitive gateway. We request you to extend the date for these zero emissions requirement to 2050 or allow “near zero” technology which is 90% cleaner than today’s equipment to be used instead of an “all electric zero” mandate.

Should you have any questions or need any additional information, please feel free to reach me at (310) 519-2355 or by email at [peter.dunton@portsamerica.com](mailto:peter.dunton@portsamerica.com)

Sincerely,



Peter Dunton  
Chief Operating Officer  
Pacific Gulf Division

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero



Sept. 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
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Port of Long Beach  
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**Re: Draft Final 2017 Clean Air Action Plan Comments**

Dear Ms. Tomley and Mr. Cannon:

I am writing to you today to express my concerns with the Draft Clean Air Action Plan 2017. We, Yusen Terminals, operate a container terminal providing stevedore and terminal services to eight largest shipping lines including our shareholder, Nippon Yusen Kabushiki Kaisha (NYK). The company was founded in 1991 and currently handles over 1.4 million TEUs (16% of total container throughput in the Port of Los Angeles) annually contributing over 48 million dollars per year as revenue paid to the Port.

Marine terminals have partnered with the ports of Los Angeles and Long Beach for more than a decade to achieve significant reductions in pollutants and greenhouse gases. In fact, the Draft CAAP praises industry for its successful efforts to reduce air emissions. I wholeheartedly support these efforts and look forward to seeing them continue long into the future.

In spite of this significant progress and the partnership between the ports and industry, this plan is proposed at a time when the industry is in a major restructure struggling to return to financial profitability. Following review of the Draft CAAP 2017, I have serious concerns with the plan as it is proposed:

- Adding \$14 billion in costs will not increase the competitiveness of this gateway and will make it difficult to attract discretionary cargo.
- Where will the money come from and who will pay for these costs?
- The requirement to have all cargo handling equipment be zero emission by 2030 is a major concern since the technology is not available today and it is difficult to finance expensive equipment which will not provide any increased efficiencies.
- The Draft CAAP leaves us unable to plan for the future based on an unavailable technology mandate. It is impossible for our company to develop a capital investment program with unknown technology.



- The operational requirements for mandatory turn times and appointments with penalties on both parties will only create more burdensome rules and not increase the efficiency of the gateway. By including efficiency measures in the CAAP, the ports have turned their back on their customer driven process in the Supply Chain Optimization forum. Instead of bringing the stakeholders together to find solutions, these requirements increases conflict between the truckers and terminal operators.

We support a balanced approach of continuing towards a zero emission goal while maintaining a competitive gateway. We request you to extend the date for these zero emissions requirement to 2050 or allow “near zero” technology which is 90% cleaner than today’s equipment to be used instead of an “all electric zero” mandate. We also request the ports to reinstitute the stakeholder discussion on improving efficiencies in a forum for all parties to come to the table with solutions and not just mandates on one part of the supply chain.

Should you have any questions or need any additional information, please feel free to reach me by at (310)548-8202 or by email at ammckorcle@ceresglobal.com.

Sincerely,

A handwritten signature in black ink, appearing to read 'Alan McCorkle', is written over a horizontal line.

Alan McCorkle  
Yusen Terminals, LLC

cc: POLA Harbor Commission President, Ambassador Vilma Martinez  
POLB Harbor Commission President, Lou Anne Bynum  
POLA Executive Director, Gene Seroka  
POLB Executive Director, Mario Cordero

Daimler Trucks North America LLC

Roger Nielsen  
President and CEO

September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Subject: Comments on Draft 2017 CAAP Update

Dear Mr. Cannon and Ms. Tomley:

Thank you for the opportunity to provide input as you update the Clean Air Action Plan (CAAP) and the Clean Truck Plan (CTP).

Daimler Trucks North America (DTNA) is glad to have been able to participate in the first CTP approximately 10 years ago. Through our local dealership network, we were able to deliver thousands of clean diesel trucks to the ports, as well as approximately one half of the natural gas trucks deployed in this original effort. DTNA has also had reasonable success in delivering natural gas to other customers throughout the country.

With our experience and prior success, and improved natural gas engines available to the market, DTNA is looking forward to the opportunity to continue to assist in your efforts related to the CAAP and CTP.

In 2018, we will have available for sale a new Freightliner Cascadia tractor with the Cummins Westport ISX 12G natural gas engine. By November 2017, this engine is expected to be certified by the California Air Resources Board and U.S. Environmental Protection Agency to 0.02g/bhp-hr NOx. At these low NOx levels, the environmental footprint of this Class 8 heavy-duty truck is an excellent alternative to a fully electric truck. Given the aggressive environmental goals of the CAAP and the significant near-term air quality improvement needs within Southern California, the availability of this technology is timely. It is also important to point out that this natural gas powered truck will be capable of serving the full range of needs of the port drayage market, as well as the full range of needs of many of our other customers in the U.S.

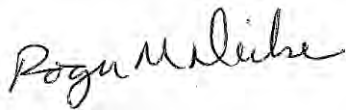
DTNA continues to aggressively research and study a range of alternative fuel options. We intend to lead the market with respect to new technologies. We hope that the current planned natural gas product offering will demonstrate strong sales and customer acceptance of alternative fuel vehicles. We therefore look forward to working with you both to achieve these near-term deployment goals.

DTNA is actively seeking supplier and production cost reductions so that we can develop an aggressive pricing strategy that will help facilitate sales of these natural gas trucks to those engaged in the LA / Long Beach port drayage business. We are also already working with our Southern California dealer to develop innovative financing packages to target customers of this technology. Given our prior experiences, we are exploring ways to also include in our product offering: ongoing maintenance, extended warranties, and access to low cost natural gas fuel. Should the Ports be interested, we look forward to sharing with you some of the details of these plans.

The Southern California ports are in a unique position to again provide the catalyst for the introduction and proliferation of new truck technology, particularly with the increasing availability of various incentive and grant programs in California. We therefore look forward to working with both ports so that we are able to achieve our mutual objectives. Through these efforts, there is no reason to believe that we cannot see a 100 percent market penetration of near zero emission truck technology in the Southern California ports by 2023, if not sooner.

We look forward to working with you both to capitalize upon this opportunity to deploy significant numbers of new natural gas vehicles in the Southern California ports as quickly as possible. With a cooperative approach, we will be able to achieve near-term scale and thus tremendous environmental benefits.

Sincerely,



Roger Nielsen  
President & CEO  
Daimler Trucks North America



September 18, 2017

Chris Cannon  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro, California 90731

Heather Tomley  
Port of Long Beach  
4801 Airport Drive  
Long Beach CA 90815

Subject: Comments on Draft 2017 CAAP Update

Dear Mr. Cannon and Ms. Tomley:

Thank you for the opportunity to provide input as you update the Clean Air Action Plan (CAAP) and the Clean Truck Plan (CTP).

Velocity Vehicle Group (VVG) is one of the largest and most successful commercial truck dealership networks in the Western United States. We provide new and used truck sales, financing, truck leasing and rental, service and repair, and a range of other services and products to our customers. In the last two decades, we have gained considerable experience selling and supporting a wide range of alternative fuel commercial vehicle platforms throughout Southern California.

VVG was intimately involved in the implementation of the first CTP, where we successfully delivered and supported approximately one-half of the natural gas trucks that were deployed into the San Pedro Bay Ports, as well as thousands of new diesel trucks. Through this original CTP effort, VVG gained incredible experience, expertise and insight into the key factors required to successfully deliver and support alternative fuel trucks in Southern California port drayage truck applications.

With our deep understanding of the Southern California port drayage market, alternative fuel truck technologies, and California's progressive policies and lucrative grant programs, VVG is exceptionally well positioned to assist the two ports to successfully implement the new Clean Truck Program.

We are extremely excited by the 2018 introduction of the Cummins Westport ISX 12G near zero emission natural gas engine, with NOx emissions of 0.02g/bhp-hr, a level that is 90% below that of the current EPA on-road heavy-duty standard. This near zero emission heavy-duty engine will be available in a Freightliner Cascadia truck; an ideal platform needed to meet a full range of port drayage duty cycles. With emissions equivalent to those associated with charging an electric truck, this truck and engine combination can also provide significantly improved air quality for Southern California.

2429 S. Peck Road Whittier CA 90601 T (562) 447-1200 [www.velocityvehiclegroup.com](http://www.velocityvehiclegroup.com)

• LA Freightliner • South Bay Truck Center • Silver State Truck & Trailer • High Desert Truck & Trailer • TransWest Truck Center • Crossroads Equipment Lease & Finance • Crossroads Small Business Solutions • California Fleet Solutions • BusWest • SelecTrucks of LA • Velocity Truck Rental & Leasing • Ontario Collision Center • Performance Truck & Trailer • Velocity Truck Center Ventura • Freightliner of AZ • SportTruckRV • Nogales Truck & Trailer • Performance One Parts • San Diego Freightliner • Miramar Truck Center • Miramar Truck Body and Equipment • Velocity Truck & Trailer Parts



While we understand the desire to have heavy-duty trucks with zero tailpipe emissions, the fact is that such technology will not likely be commercially available to meet the wide range of needs in the port drayage market for some time to come. With a fully functional Class 8 heavy-duty truck available today that can meet the full range of needs of the port drayage market – or nearly any commercial truck application for that matter - and do so with emissions equivalent to zero tailpipe emission technology of the future, we see no reason to wait to deploy such trucks as quickly and as widely as possible. As we all know, Southern California is in desperate need of the emission reductions that can be provided by this technology and we stand ready to help the Ports, AQMD, CARB and our communities to realize the gains offered by this game changing natural gas technology.

In addition to the questions about technology availability, we also have not seen a proven plan that describes how zero emission trucks can be refueled and supported once they are sold and deployed. One of the biggest lessons learned in the first CTP was that after-sales support, the ability to handle warranty claims and repairs, and the immediate availability of a robust maintenance and parts supply network is mission critical to ensuring that any new truck technology can be effectively supported in the field throughout its life.

VVG operates a robust network of 22 truck dealerships and service locations throughout Southern California, Southern Nevada and Arizona. While we primarily support the Daimler Truck suite of products via this network, the other truck brands in the market (Mack, Volvo, Peterbilt, Kenworth and Navistar) also have similar robust service networks throughout Southern California – all of which are fully equipped to support the heavy-duty natural gas trucks. We have a deep understanding of what it takes to support our customers and their trucks, whether they be diesel, natural gas, electric drive, or otherwise.

**Because of this understanding, we strongly recommend that the Ports include a robust analysis of the fueling and after-sale support and maintenance networks for any kind of advanced technology truck deployed as part of the CAAP.**

Without these critical elements in place, a plan to deploy alternative fuel trucks of any kind is highly susceptible to failure and will present great risk to the continued efficient flow of cargo and operation of the San Pedro Bay Ports.

Given VVG's significant prior experience helping our customers to successfully deploy low emission alternative fuel vehicles, combined with the near-term air quality goals of the South Coast AQMD and the similar aims laid out in the draft CAAP, there exists tremendous opportunity to accomplish all of our respective objectives via the widespread and immediate deployment of near zero emission heavy-duty natural gas trucks. Accordingly, we are working aggressively with Daimler Trucks North America (DTNA) – the manufacturer of the Freightliner Cascadia truck – to develop an aggressive strategy by which we can maximize sales of these ultra-low emission trucks to those engaged in the LA / Long Beach port drayage business. In addition, we are working to develop innovative financing packages for targeted customers of this clean technology, and we are exploring ways to also include ongoing maintenance, extended warranties, and access to low cost natural gas fuel as part of this special product offering.

As the details of the above approach become clearer in the coming weeks, we look forward to sharing our ideas and approach with you and others, such as the South Coast AQMD. Inevitably, it will be required that some form of a grant or incentive be applied to help buy down the cost of a near zero emission truck to a level where it can be made affordable to a typical port truck driver. Given the tremendous levels of grant funds available in the market today, we hope that the ports, AQMD, and/or others will be willing to work with us to identify such funding opportunities in order to successfully implement this vision for near zero emission trucks.

We look forward to working with you both to capitalize upon this unique opportunity to deploy significant numbers of near zero emission heavy-duty truck technology in the Southern California ports as quickly as possible.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Brad Fauvre', with a stylized, cursive script.

Brad Fauvre  
President  
Velocity Vehicle Group





2411 N Glassell Street  
Orange, CA 92865  
Office: (714) 632-2000  
Fax: (714) 279-7544  
[www.sarecycling.com](http://www.sarecycling.com)

September 18, 2017

THE PORT OF LOS ANGELES  
Attn: Ambassador Martinez and Harbor Commissioners  
425 S. Palos Verdes Street  
San Pedro, California 90731

THE PORT OF LONG BEACH  
Attn: President Bynum and Harbor Commissioners  
4801 Airport Plaza Drive  
Long Beach, CA 90815

Dear Harbor Commissioners,

SA Recycling is pleased to have the opportunity to comment on the 2017 Clean Air Action Plan Draft Final. The Plan seeks to usher in new era of clean air strategies that will result in the reduction of emissions from port-related sources. The Port's first and second CAAP has achieved an incredible reduction in pollutants, and reduced greenhouse gases since its inception, and all parties involved in this effort should be proud of this accomplishment. These efforts continue today. The ambitious and historic goals of this latest Plan cannot be accomplished without the cooperation of all the commercial parties and all levels of government. SA Recycling is committed to continue as a constructive partner in this endeavor.

Our recycling operations have been part of the San Pedro Bay Port Complex for over 55 years, and SA Recycling has always been at the forefront of addressing environmental concerns in connection with its operations. The Company takes its environmental commitments seriously and is looking forward to continuing to be a part of the efforts to implement the present and future goals of the Ports' Green Port initiatives.

SA Recycling urges the Ports to craft a Plan that is guided by the realities of technological advancements and financial feasibility and not fall into the trap of setting unrealistic mandates. For that reason, we are in support of the proposed three-year technology assessment period where implementation of modified or new equipment can happen in phases as the technology becomes financially feasible in the coming years. (See the Plan's Framework for Feasibility Assessment Section) This is a realistic and smart strategy, and SA Recycling would be pleased to contribute its technical know-how and experience to the Ports' efforts.

SA Recycling has serious concerns that the Plan may mandate policy where technology has yet to be developed for its unique bulk facilities. SA Recycling moves millions of tons of material annually, and our equipment is not conducive to today's electric mobile equipment. This is especially troubling, since it is reported that all of the terminal handling equipment in the SP Bay Port Complex make up only a fraction of 1% of the pollutants in the South Coast Air District. Without realistic environmental objectives that meet the test of technology and financial affordability, the high cost of implementing the Plan's mandate would put SA Recycling at a competitive disadvantage against our global competitors.

SA Recycling has always strived to be at the forefront of the industry as the company repowers its mobile equipment, often in advance of scheduled CARB mandates and has electrified all its stationary equipment. Earlier this year we celebrated the first mobile electric bulk ship loading crane in the Port Complex with a partnership grant from the EPA. The grant allowed the crane to be fully electric. We urge that the ports seek more grants and creative financing to support greener technology. The partnership that brought about the successful installation of that crane provides an excellent illustration of how public/private partnerships can work. Given the enormity of the costs and the technological challenges, we believe that the 2017 Clean Air Action Plan must contain similar partnership arrangements if it is going to achieve its goals within the target dates.

SA Recycling specifically supports the Ports' plan to establish a Proposed Universal Appointment system by 2020, which will reduce idling and the truck turn times present in the Port Complex. We have seen first-hand that the individual terminal appointment systems within the Ports work efficiently by reducing truck queuing areas that affect all businesses in the Port Complex. We support any such efforts that unify the systems together ultimately reducing emissions and urge the port to move up the timetable for this system being in place even before 2020. (*See section on Freight Efficiency in the Plan*).

SA Recycling looks forward to the finished Clean Air Action Plan and our continuing tenancy in both Ports, as well as an active participant during and after the implementation of this worthwhile effort.

Sincerely,



Terry Adams  
Director

Cc: Ms. Heather Tomley, Port of Long Beach  
Mr. Chris Cannon, Port of Los Angeles

# Section 3

## Community Stakeholders

## YES! Clean up the port air quality, regardless of cost!

---

**Time:** Wed, 19 Jul 2017 21:32:42 +0000 (UTC)  
**From:** robyn <robynisrosy@yahoo.com>  
**To:** "CAAP@cleanairactionplan.org" <CAAP@cleanairactionplan.org>  
**Subject:** YES! Clean up the port air quality, regardless of cost!

**Attachments:** msg-25671-1458.html (1k)



Please follow through with this plan to greatly improve the air quality of the port. People have suffered long enough while businesses have profited. Please improve the air at whatever cost. Profits cannot be a city's only objective. Long Beach must address the terrible polluted air of the port!

R. Hicks  
90804

## Clean Air Action Plan

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**Time:** Tue, 25 Jul 2017 18:45:52 +0000 (UTC)  
**From:** Andrew Boven <andrewboven@yahoo.com>  
**To:** "CAAP@cleanairactionplan.org" <CAAP@cleanairactionplan.org>  
**Subject:** Clean Air Action Plan

**Attachments:** msg-18188-246.html (2k)



Hello,

As a resident of Long Beach I am very concerned about the pollution generated from the Port. Therefore, I am encouraged by the plan, as it aims to reduce pollution from trucks and other resources. As someone who is considering buying a house in Long Beach or moving to a different state, this plan would encourage me to stay, as I am very concerned about establishing roots in an area with high pollution rates.

Regards,

Andrew Boven  
andrewboven@yahoo.com  
954-675-6816  
@andrew\_boven



# CITY OF CARSON

August 15, 2017

Renee Moilanen  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815  
caap@cleanairactionplan.org

**Re: Ports Clean Action Plan - Request for Presentation on the CAAP in Carson**

Dear Ms. Moilanen,

The City of Carson appreciates the opportunity to provide comments on the Clean Air Action Plan. Many residents of the City of Carson are negatively impacted by Port operations including the extensive emissions from trains and trucks utilizing the Alameda Corridor, truck routes through the City, and area freeways. Therefore, we would like to formally request a public presentation on the CAAP in the City of Carson.

The CAAP provides for many programs to address air emissions at the Ports. However, the CAAP does not adequately address the impacts of emissions associated with the extensive rail lines, truck routes, and freeways that travel immediately adjacent to residential areas and communities, as well as the extensive distribution centers, truck yards, and container yards within the City of Carson. The City of Carson is one area with a residential community located between the Alameda Corridor and the 710 freeway, both substantial port-related transportation corridors and large sources of diesel particulate emissions.

The CAAP does not sufficiently address these potential indirect impacts from transportation sources. CARB studies on rail yards show extensive health risks from diesel particulate emissions associated with rail activities and the residences of the City of Carson are substantially impacted by these port-related activities. The health risk assessments in the CAAP analyze a distance only out to 2 km and do not assess the fact that health risks are increased along rail lines and freeways, and near distribution centers, truck yards, and container yards that experience a substantial increase in usage as a result of port activities. These risks should be quantified in more detail in the CAAP and fully disclosed to the public.

Rail implementation of clean locomotives will eventually reduce some of these rail-related health risks, but the implementation of clean locomotives is expected to be substantially slower than the implementation of clean trucks. EPA estimates that clean locomotives will not become the dominant locomotive type for more than 20-30 years. Pre-emption on the part of railroad companies may also reduce the extent to which clean locomotives can be utilized.

Quantification and disclosure of indirect sources, including from rail and freeway emissions through communities such as the City of Carson, are important sources of health risk that need to be addressed.

Thank you for your important work on cleaning our ports and reducing the impacts of emissions from port activities on area communities. Please contact me about when a presentation on the CAAP in the City of Carson can be scheduled.

Sincerely,

A handwritten signature in black ink, appearing to read "ALBERT ROBLES". The signature is stylized and cursive.

Albert Robles  
Mayor

Cc: Mayor Pro Tem Lula Davis-Holmes  
Councilmember Elito Santarina  
Councilmember Jawane Hilton  
Councilmember Cedric Hicks  
City Manager Ken Farfsing  
Community Development Director John Raymond  
Planning Manager Saied Naaseh  
City Attorney Sunny Soltani



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Lena Tam\*

San Francisco Public Defender  
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San Mateo County  
Board of Education Member  
Rod Hsiao\*

\*APALF alumni

August 15, 2017

Port of Los Angeles  
425 S. Palos Verdes Street  
P.O. Box 151  
San Pedro, CA 90733

Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

RE: Strengthening the CAAP for Clean Air NOW

Dear Port of Long Beach and Port of Los Angeles Commissioners,

The current draft of the Clean Air Action Plan (CAAP) sets zero-emissions targets for 2035, but doesn't start incentivizing trucks to switch to lower emissions solutions until 2023. This delay will result in significant detrimental health outcomes, not only to the communities surrounding the Ports, but to the entire Southern California region.

The Asian Pacific American Leadership Foundation (APALF) was founded to empower communities of color to bring about true narrative change at the community and decision-maker level. APALF also coordinates outreach and education campaigns for other organizations wishing to empower communities of color to build shared advocacy for health equity.

Los Angeles has the worst air pollution in the nation, and we owe it to our communities to clean up our air immediately. The freight industry is responsible for as much as 40% of this pollution – diesel trucks are literally poisoning our communities. And air pollution doesn't stop at the city limits. Diesel trucks leave the ports and drive up the 710 freeway corridor, through the San Gabriel Valley and on into the Inland Empire, polluting these communities as well. And while this pollution affects all residents, the majority of freeway adjacent communities are communities of color – especially in the San Gabriel Valley, home to one of the largest concentrations of Asian Pacific Americans in California.

Yet technology currently exists to make port trucks 90% to 99% cleaner – right now. APALF encourages the Ports to accelerate the CAAP – start incentivizing trucks in 2018, not six years from now, and utilize the most advanced technology available to get diesel trucks off our roads immediately. Together we can bring clean air to our neighborhoods now, stem rising asthma rates and provide a healthy environment for Harbor communities and the rest of Southern California.

Sincerely,

Jay Cheng, Executive Director  
Asian Pacific American Leadership Foundation





THE SALVADORAN-AMERICAN  
LEADERSHIP AND EDUCATIONAL FUND

FONDO SALVADOREÑO-AMERICANO  
PARA EL LIDERAZGO Y LA EDUCACIÓN

August 21, 2017

Board of Directors

**Jessica Price, Esq.**  
*Chair*  
Port of Los Angeles  
425 S. Palos Verdes Street  
P.O. Box 151  
San Pedro, CA 90733

**David Giron**  
*Vice Chair*  
Office of Councilmember  
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Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Fredy Guzman.**  
*Secretary*  
MORCS

**Jorge Nuñez**  
*Treasurer*  
Office of State Senator  
Kevin De Leon

RE: Strengthening the CAAP for Clean Air NOW

Dear Port of Long Beach and Port of Los Angeles Commissioners,

**Israel Salas**  
*So Cal Gas Company*

On behalf of the Salvadoran American Leadership and Educational Fund, I urge you accelerate efforts in the Clean Air Action Plan (CAAP) to clean up Southern California's horrible air pollution. The CAAP as currently written sets zero-emissions targets for 2035, but doesn't incentivize trucks to adopt lower emissions standards until 2023. Los Angeles has the worst air pollution in the country, and we need to do everything we can right now to clean our air and provide communities with a healthier environment in which to work, play, and raise children.

**Olivia Calderon**  
*Office of Consumer Financial  
Protection Bureau (CFPB)*

**Jose Atilio  
Hernandez**  
*IDEATE California*

SALEF is a non-profit organization dedicated to helping minority communities fight for their rights, and to help fund students in need get a higher education to ensure their success. Our work is rooted in social justice, political access, and economic prosperity, and promoting progressive policy goals in the United States and throughout the world. We advocate for the democratic advancement of all people, with a special emphasis on Latinos, Central Americans, and immigrants in the United States and the people of El Salvador.

**Carlos Antonio H. Vaquerano**  
*Executive Director & Founder*

The pollution coming from Ports activity affects everyone in Southern California, particularly Latinos and other communities of color who make up the majority of residents living in the Harbor area. Moreover, working class communities and communities of color living near the 710 freeway corridor also bear a disproportionate burden from our region's dirty air, as diesel trucks leaving the Ports take the 710 into the heart of Los Angeles, spewing pollution that negatively affects the health and well-being of these communities.

*Organizations listed for  
identification purposes only*

I call on you to take action now to address this important health issue. Accelerate the CAAP by incentivizing trucks now – not six years from now – starting in 2018 and utilizing the most advanced existing technology to get diesel trucks off our roads now. The technology is here – let's put it to use cleaning up our air for all of our communities.

Sincerely,

Carlos Antonio H. Vaquerano  
Executive Director



## ASIAN-AMERICAN RESOURCE CENTER

"Serving the Inland Empire's Asian-American and other ethnicities"

---

August 23, 2017

Port of Los Angeles  
425 S. Palos Verdes Street  
P.O. Box 151  
San Pedro, CA 90733

Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

RE: STRENGTHNING CAAP

Dear Port of Long Beach and Port of Los Angeles Commissioners,

As the Executive Director of the Asian-American Resource Center I would like to express concern that the current draft of the Clean Air Action Plan (CAAP) does not provide immediate relief from air pollution fast enough. CAAP as it stands denies Southern California clean air by only starting to incentive trucks to switch to lower emissions solutions in 2023.

The Asian-American Resource Center's mission is to improve educational, mental and physical health and well-being by providing informational and developmental programs to Asian-Americans and other ethnic groups who are low-income, isolated, vulnerable and under-served.

Los Angeles has the worst air pollution in the nation, and we owe it to our communities to clean up our air immediately. The freight industry is responsible for as much as 40% of this pollution – diesel trucks are literally poisoning our communities. And air pollution doesn't stop at the city limits. Diesel trucks leave the ports and drive up the 710 freeway corridor, through the San Gabriel Valley and on into the Inland Empire, polluting these communities as well.

Yet technology currently exists to make port trucks 90% to 99% cleaner – right now. AARC encourages the Ports to accelerate the CAAP – start incentivizing trucks in 2018, not six years from now, and utilize the most advanced technology available to get diesel trucks off our roads immediately. Together we can bring clean air to our neighborhoods now, stem rising asthma rates and provide a healthy environment for Harbor communities and the rest of Southern California.

Sincerely,

Rasmei Sam  
President/CEO

**ASIAN-AMERICAN RESOURCE CENTER**  
Office: (909) 383-0164 Fax: (909) 383-7687  
Website: [www.aarc-ie.org](http://www.aarc-ie.org)

## ACT NOW for Clean Air!

---

**Time:** Wed, 23 Aug 2017 22:35:31 -0700  
**From:** Jessica Andrade <jessand289@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** ACT NOW for Clean Air!

**Attachments:** msg-30708-8.html (Ok)



Due to air pollution my children 5,3,1 suffer from asthma and bronchitis

## Clean Air Action Plan

---

**Time:** Thu, 24 Aug 2017 23:03:36 -0400  
**From:** Richard Hopkins <rhopkins03@verizon.net>  
**To:** caap@cleanairactionplan.org  
**Subject:** Clean Air Action Plan

**Attachments:** msg-11439-107.html (36k)



Dear Commisioners,

I do not want to wait until 2035 for clean air. Communities and the planet cannot wait that long. **Please** implement the fees as soon as possible to encourage the use of existing technologies that achieve NOx and GHG emissions now. **We need to have clean air as soon as possible.**

Richard Hopkins  
562-696-0967  
(c) 562-318-8016

## Clean Air Now

---

**Time:** Sat, 26 Aug 2017 19:33:16 -0700  
**From:** jasontakaki@gmail.com  
**To:** caap@cleanairactionplan.org  
**Subject:** Clean Air Now  
**Attachments:** msg-7091-168.html (0k)



To whom it may concern,

As a sufferer who went through asthma, and now whooping cough pertussis, I plead to have better air now. I've been away for two years in Denver and while there I never suffered from any cough, now that I've returned since May, I developed a cough again.

Thank you,  
Jason Takaki

## Comment on CAAP-Act TODAY ! You CAN SAVE THE LIFE OF A CHILD!

---

**Time:** Tue, 29 Aug 2017 05:46:26 -0700  
**From:** Carole Grover <csgrover34@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Comment on CAAP-Act TODAY ! You CAN SAVE THE LIFE OF A CHILD!

Sent from my iPad lawmakers-clean our air Now! before YOUR child or grandchild has life threatening breathing problems!



08/30/11

Draft CAAP

Workshop Comment Card

Ashley Hernandez, concerned community member  
from Wilmington. I ~~am~~<sup>am</sup> here to demand clean air  
now. Living here in the harbor area we have the  
highest port emissions, highest concentration of  
refining, and gargantuan amounts ~~of~~ of oil.

As an organizer w/ CBE I am devoted ~~to~~ to  
environmental justice, and pushing for health  
before efficiency in our extremely overburdened  
community!



Draft  
08/30/17 CAAP Workshop Comment Card

Brandon Molina - community member.

More has to be done, this plan is not enough. No more thinking about close to zero emissions, it's too late for that. It's time to act now, and have a plan for zero ~~emissions~~ emissions.



## Clean air action

---

**Time:** Thu, 31 Aug 2017 01:15:32 -0400  
**From:** ck55@verizon.net  
**To:** caap@cleanairactionplan.org  
**Subject:** Clean air action

**Attachments:** msg-9042-1461.html (2k)



Hello,

Wanted to let you know I'm against CNG vehicles as part of the "Clean Trucks Program. Who in their right mind thinks natural gas is clean energy?! Just because you can't see methane, don't think it's safe and not a big polluter. Fracking is destroying our country! Stop listening to the oil companies, pls.! They are only driven by profit. Join Food and Water Watch and learn the truth.

Seems kind of silly we're going to start having electric buses and CNG vehicles. This will not help clean up our air. Aren't you tired living in one of the most polluted parts of CA? Bakersfield has the pleasure of being more polluted than us and are #1.

We need decision makers that put the citizens first. You live here too!

Thanks for your time.

Cindy Koch (not related to the brothers!)  
Long Beach

"When injustice becomes law, resistance becomes duty" ~ Thomas Jefferson

## clean air for the south bay

---

**Time:** Sat, 2 Sep 2017 00:31:21 +0000 (UTC)  
**From:** Alvaro Perez <alvafro26@yahoo.com>  
**To:** "caap@cleanairactionplan.org" <caap@cleanairactionplan.org>  
**Subject:** clean air for the south bay

**Attachments:** msg-21906-641.html (2k)



Hello my name is Alvaro Perez my friends call me Alvy. I have been wanting to help the community in which I have lived in all my life. During my high school years at banning high I was in the global environmental science academy and recently joined the neighborhood beautification club. I wasn't able to attend the CAAP meeting august 30 but I did want to send you my idea for an cleaner south bay. As you know Wilmington is a polluted city surrounded by refinery's and the busy days of the port. I always ask my self what can I do to help? what can we build that can look environmentally green and fight pollution while returning clean oxygen to our city? How many already suffer from health risk and just want to breath fresh air. we can't shut down the ports or refinery's over night but we can fight back. With the green gift of moss. About the size of a compact car, Moss can be as strong as 200 trees fighting to filter polluted air. The beauty of moss is that it filters co2 and nitrogen oxides that comes form the refinery's and port while looking friendly green. All ready cities around the world are lunching moss for an cleaner air .Lets not be left behind in the black thick smog. To a cleaner future where family's and school athletes can breath again.

Thank you  
sincerely Alvaro Perez

ps. I also have ideas for custom moss setup for different location around the south bay and more ideas for the environment in Wilmington. please contact me back I would like to hear feedback from you and want to know how I can get more involved with cleaning up the community

## Comment on CAAP

---

**Time:** Tue, 5 Sep 2017 08:24:01 -0700  
**From:** John Graf <johngraf69@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Comment on CAAP

**Attachments:** msg-14606-862.html (2k)



I saw your big ad in the Daily Breeze Newspaper showing the child with a breathing mask on. I am willing to bet the pollution is not from what you think it is. I watch high altitude jets spraying miles of chemicals over head. I video tape the operations. There are NOT contrails like they want us to believe. I know the difference. Google Geoengineering and you will see these spraying programs exist. What is being found in this spray is aluminum, barium and strontium, just to name a few. Millions of activists know these operations are going on. All these clean air agencies will not talk about these programs. They tell us they are contrails and no programs like these are happening. They are happening...and not just in L.A. This is worldwide. Please listen to me on this...I swear it is true. I wish it wasn't..believe me.



Virus-free. [www.avast.com](http://www.avast.com)

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**Time:** Wed, 6 Sep 2017 18:29:46 -0700  
**From:** Jeronimo Reyes <jeronimocanseco6@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:**  
**Attachments:** msg-3065-565.html (0k)



Porfavor agamos algo por nuestros niños antes q cea demasiado tarde

"Please let's do something for our children before it's too late."

## Comment on CAAP

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**Time:** Thu, 07 Sep 2017 09:50:53 -0700  
**From:** Pedro Diaz <minjarez\_pedro74@icloud.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Comment on CAAP

I'm trailer mechanic worker I vote for clean air for us childrens

Sent from my iPhone

---

**Time:** Fri, 8 Sep 2017 17:47:04 +0000 (UTC)  
**From:** Alvaro Perez <alvafro26@yahoo.com>  
**To:** <caap@cleanairactionplan.org>  
**Subject:**

Hello my name is Alvaro Perez my friends call me Alvy. I have been wanting to help the community in which I have lived in all my life. During my high school years at banning high I was in the global environmental science academy and recently joined the neighborhood beautification club. I wasn't able to attend the CAAP meeting august 30 but I did want to send you my idea for an cleaner south bay. As you know Wilmington is a polluted city surrounded by refinery's and the busy days of the port. I always ask my self what can I do to help? what can we build that can look environmentally green and fight pollution while returning clean oxygen to our city? How many already suffer from health risk and just want to breath fresh air. we can't shut down the ports or refinery's over night but we can fight back. With the green gift of moss. About the size of a compact car, Moss can be as strong as 200 trees fighting to filter polluted air. The beauty of moss is that it filters co2 and nitrogen oxides that comes form the refinery's and port while looking friendly green. All ready cities around the world are lurching moss for an cleaner air .Lets not be left behind in the black thick smog. To a cleaner future where family's and school athletes can breath again.

Thank you  
sincerely Alvaro Perez

ps. I also have ideas for custom moss setup for different location around the south bay and more ideas for the environment in Wilmington. please contact me back I would like to hear feedback from you and want to know how I can get more involved with cleaning up the community

---

**Time:** Sat, 9 Sep 2017 23:18:36 -0700  
**From:** Eduardo Quintero <gladiador607@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:**

**Attachments:** msg-14601-374.html (0k)



Si el prolegto esta bien deben pensar en los choferes que son perte fundamental de su prolegto si biene un cambio en el sistema que beneficie a ambas partes choferes companias pueblo gracias i adelante apollemos

## Strengthening CAAP

---

**Time:** Sat, 9 Sep 2017 11:05:54 -0700  
**From:** Jay Cheng <jcheng@apalf.org>  
**To:** caap@cleanairactionplan.org  
**Subject:** Strengthening CAAP

**Attachments:** msg-11475-282.html (2k)



Dear Port of Long Beach and Port of Los Angeles Commissioners,

The current draft of the Clean Air Action Plan (CAAP) sets zero-emissions targets for 2035, but doesn't start incentivizing trucks to switch to lower emissions solutions until 2023. This delay will result in significant detrimental health outcomes, not only to the communities surrounding the Ports, but to the entire Southern California region.

The Asian Pacific American Leadership Foundation (APALF) was founded to empower communities of color to bring about true narrative change at the community and decision-maker level. APALF also coordinates outreach and education campaigns for other organizations wishing to empower communities of color to build shared advocacy for health equity.

Los Angeles has the worst air pollution in the nation, and we owe it to our communities to clean up our air immediately. The freight industry is responsible for as much as 40% of this pollution – diesel trucks are literally poisoning our communities. And air pollution doesn't stop at the city limits. Diesel trucks leave the ports and drive up the 710 freeway corridor, through the San Gabriel Valley and on into the Inland Empire, polluting these communities as well. And while this pollution affects all residents, the majority of freeway adjacent communities are communities of color – especially in the San Gabriel Valley, home to one of the largest concentrations of Asian Pacific Americans in California.

Yet technology currently exists to make port trucks 90% to 99% cleaner – right now. APALF encourages the Ports to accelerate the CAAP – start incentivizing trucks in 2018, not six years from now, and utilize the most advanced technology available to get diesel trucks off our roads immediately. Together we can bring clean air to our neighborhoods now, stem rising asthma rates and provide a healthy environment for Harbor communities and the rest of Southern California.

Sincerely,  
Jay Cheng  
Executive Director  
Asian Pacific American Leadership Foundation



## Act Now LA

---

**Time:** Tue, 12 Sep 2017 19:27:28 -0700  
**From:** Christina Hall <christinah523@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Act Now LA

Please replace all dirty diesel trucks with clean trucks powered by renewable fuel over the next 5 years, starting today.

Thank you,  
Christina Hall  
317 N Winnipeg Place  
Long Beach, CA 90814

Sent from my iPhone

## Advanced Clean Truck Now

---

**Time:** Tue, 12 Sep 2017 20:47:51 -0700  
**From:** Elio B <aratta1140@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Advanced Clean Truck Now

**Attachments:** msg-32374-42.html (Ok)



Hello,

We really need trains to haul the shipment cargo up the 710 from the ports rather than use trucks. In the long run it is the most efficient way in terms of energy and money, plus there is less wear and tear on the highway and relieves traffic.

This makes the most sense, let's not be influenced by special interest groups and do the right thing.  
Thanks,  
Leo

## Clean Trucks Now

---

**Time:** Wed, 13 Sep 2017 08:20:06 -0700  
**From:** Andrea Helzer <andrealynnhg@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Clean Trucks Now  
**Attachments:** msg-31364-170.html (0k)



Long Beach Harbor Commissioners,  
Please support The ACT Now Plan to replace all dirty diesel trucks with clean trucks, starting today.

Thanks,  
Andrea Helzer

## Aire limpio.

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**Time:** Wed, 13 Sep 2017 02:51:26 -0700  
**From:** Lorens Salgado <lorenssalgado09@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Aire limpio.

**Attachments:** msg-18884-174.html (0k)



Queremos aire limpio por nuestros niños y nuestra salud.

"We want clean air for our children and our health."

9/13/17

Chris Cannon  
Director of Environmental Management  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731  
(Email: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org))

Heather Tomley  
Director of Environmental Planning  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach CA 90815

Subject: San Pedro Bay Ports 7/19/17 Clean Air Action Plan Comments

To whom it may concern,

I appreciate the Ports' continuing efforts in the CAAP to reduce health impacts to the public from the shipping industry and submit the below comments and six numbered recommendations for which I request specific response.

#### COMMENTS

- Please recognize that all CAAP references to public funding (e.g., “government subsidies,” federal, state, and local government) are costs that would be paid by the public and not the private interests which benefit directly from port operations.
- I appreciate the Ports' advocacy for regulatory agencies in efforts to develop and implement the most effective emission reduction rules and the Ports' efforts to require that source specific strategies developed by the Ports be implemented as state and federal mandates.
- I recognize the profoundly significant CAAP conclusions establishing economic benefits of reducing public health impacts, as the calculation of the expected reductions in public health costs is greater than CAAP implementation costs.

- The Ports are responsible to the state of California for the effective business management of operations on the tidelands and for holding tenants to the requirements defined in leases and for mitigation plans filed under California Environmental law. Notably, the CAAP will only be as successful as the Ports are capable to hold tenants to requirements.

## RECOMMENDATIONS

1. I ask in the interest to ensure CAAP success that the Port of Los Angeles define the specific root causes and the respective corrective actions taken to prevent recurrence of POLA's failure to hold the tenant China Shipping responsible to satisfy mitigation requirements due to short term economic issues defined in the respective Supplemental Environmental Impact Report.
2. In recognition that commercial interests benefit most significantly from Port operations and freight transport, I request you consider that CAAP costs should be funded primarily through the commercial interests which benefit most directly, such as through container and shipping fees. The associated transportation infrastructure serves primarily commercial freight movement to and from the Ports of Los Angeles and Long Beach, experiences great degradation from the high volume of commercial heavy-duty vehicle traffic, and must be built to accommodate the freight related commercial traffic. The public cannot reasonably be expected to pay the significant portion of costs required to reduce pollution resulting from goods transport, especially in consideration of the significant costs to public health already borne by the people living and working in proximity of the Ports.
3. I request that the following meetings be conducted publicly and in accordance with the Brown Act:
  - a. CAAP Implementation Stakeholder Group;
  - b. Updates on CAAP specific projects' implementation applicable to Technology Advancement Program, Green Ports Collaborative, Freight Infrastructure Planning and Investments, Freight Efficiency, and Energy Resource Planning; and,
  - c. Convene a committee to include specifically assigned/appointed representatives from the following organizations to encourage greater public understanding of the Ports' efforts to reduce public health impacts

and to increase the Ports' credibility through oversight and participation by the representatives knowledgeable and responsible for the subjects to be discussed:

- a. Port staff with the technical knowledge to discuss impacts, technologies, leases, operations, etc.;
  - b. South Coast Air Quality Management representative;
  - c. California Air Resources Board representative;
  - d. US Environmental Protection Agency representative;
  - e. Community representatives assigned by recognized agencies such as the City of Los Angeles Neighborhood Councils impacted the most by port operations;
  - f. Industry representatives as subject matter experts that may be required for the varying subjects to be discussed (e.g., engine manufacturers, fuel distributors, business agents, etc.); and,
  - g. Labor representatives as subject matter experts that may be required for the varying subjects to be discussed (e.g., scheduling, classification limitations, etc.).
4. I request that the Ports recognize that cancer risk is the result of cumulative impacts from all port operations and thereby increase the goal for reduction in health risk for additional port projects from the currently stated increment threshold of 10 in-a-million (excess residential cancer risk) to five in-a-million for additional port projects.
5. I request that the Ports plan to implement zero emission technologies rather than interim steps to implement near-zero emission technologies due to the below three reasons:
- a. The required zero emission technologies are most likely to be reasonably feasible and implementable before project completion. Several public and private agencies are invested intensely in implementing zero emission technologies, as demonstrated by the Cities of Long Beach and Los Angeles. Further the Gateway Cities COG and Metro concluded in the year 2013 "I-710 Project Zero-Emission Truck Commercialization Study" that zero-emission capable drayage trucks can be developed, demonstrated, validated, and moved into production by a 2025 target timeline.

- b. Zero emission technologies, resulting in great economic and public health benefits, will drive monumental economies of scale that will improve Southern California transportation systems and motivate other industries towards advancing technologies.
  - c. The technologies and methods implemented will require significant economic investment certain to greatly influence short and long term budget planning and to potentially enhance our quality of life for generations. A shorter-term investment in near zero emission technology will reduce the perceived benefits and return from a longer term and more significant investment in zero emission technology. Indeed, Port of Los Angeles tenants such as China Shipping refused to invest in newly available advanced emission reduction equipment because of recent expenditures on inferior, but previously available emission reduction equipment. Simply establishing the zero-emission standard rather than a mix of near zero will provide stability in long term financial decision making and short term budgetary considerations.
6. I request the CAAP be revised to provide alternative actions as may be necessary to achieve planned emission reductions applicable to the following sources as noted:
- a. Locomotives, in the event of the following:
    - i. the US Environmental Protection Agency refuses the Air Resource Board's Petition to amend emission standards for newly built locomotives and locomotive engines and to lower emission standards for remanufactured locomotives and locomotive engines; and,
    - ii. the federal government refuses to limit federal preemption on locomotive engines to the initial useful life.
  - b. Ocean going vessels, in the event of the following:
    - i. the Green Ships Incentive Program and the Clean Ships Program are effective to the extent as was POLA's Low Sulfur Fuel Incentive Program, which failed to increase LSF use appreciably;
    - ii. the federal government denies the State's request for new engine tier levels;
    - iii. the state of California is not successful at implementation of statewide vessel speed reduction rule;



- iv. rule-making is not filed applicable to at-berth emission controls from non-regulated vessels.
- c. Heavy Duty Trucks, in event of the following:
  - i. the federal government denies the SCAQMD petition for a national near-zero emissions engine standard for trucks;
  - ii. the Ports' incentive-based strategies to promote voluntary turnover to cleaner technologies is unsuccessful.
- d. Harbor craft, in event rule-making is not filed applicable to fleet turnover requirements.
- e. Cargo Handling Equipment, in event rule-making is not filed applicable to idling restrictions and fleet turnover.

I look forward to your response to the above six recommendations and thank you.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard Havenick". The signature is written in a cursive, flowing style.

Richard Havenick  
3641 South Parker Street  
San Pedro CA 90731

Copies to: Councilman Joe Buscaino; Air Quality Management District  
Boardmember Joe Liu; County of Los Angeles Deputy Jayme Wilson

## ACT NOW PLAN

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**Time:** Wed, 13 Sep 2017 20:40:55 -0700  
**From:** Raye <rayebethm@ca.rr.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** ACT NOW PLAN

To Whom it May Concern:

A few months back I was at an urgent care clinic in SP where I met a young woman who worked at the Port of Los Angeles. She shared with me her CHRONIC bronchitis issues due to the air she breathes every week because of where she works. .

It makes absolutely no sense to me to push down the road a clean air action plan to 2035. Zero emission plans should begin implementation immediately.

I'm so tired of every environmental issue being tied to money. Why isn't health a priority, both for humans and the environment? In the end, neglect will cause a great financial burden.

Thank you.

Raye Murphy

Sent from my iPhone

## clean air now

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**Time:** Thu, 14 Sep 2017 21:49:07 -0700  
**From:** angela parent <angelaparent23@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** clean air now

**Attachments:** msg-17844-53.html (1k)



To Whom it May Concern:

I am a mom of two young boys ages 17 months and 3 years. While I was concerned about the air quality in Long Beach and surrounding areas due to the diesel trucks that move in and out of the port (as well as all of the refineries) before I had children, I am now even more worried about my children's health and safety when it comes to the air they breathe. They are so much more vulnerable to the toxins and the illness that could manifest due to this exposure. We are considering moving out of the Long Beach area and out of the home we purchased here to another area of southern California that will not pose as high of a pollution threat to our little ones. We are successful small business owners here in Long Beach and support other businesses around the area. It would be a shame to have to leave, but the health of our children is more important than anything else.

We can't wait 17 years to get toxic diesel polluting trucks off our roads. Let's accelerate the CAAP: incentivize trucks in 2018 - instead of waiting six years. The ACT Now Plan will replace all dirty diesel trucks with clean trucks powered by renewable fuel over the next 5 years, starting today. Let's use the most advanced technology NOW to lower emissions and clean our air.

Thank you for your time.

Angela Bradford  
Rose Park

**From:** Tomley, Heather  
**To:** "[caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org)"; [Cannon, Chris](#); [Cameron, Rick](#); [Wunder, Lisa](#); [DeMoss, Tim](#); [Moilanen, Renee](#); [Coluso, Amber](#)  
**Subject:** FW: CAAP comment  
**Date:** Tuesday, September 19, 2017 2:00:14 PM

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**From:** Lathrop, Monique  
**Sent:** Tuesday, September 19, 2017 1:53 PM  
**To:** Tomley, Heather <[heather.tomley@polb.com](mailto:heather.tomley@polb.com)>  
**Subject:** FW: CAAP comment

Hi Heather –

I received this email in the Board of Harbor Commissioners box.

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**From:** Anna Erneholm [<mailto:annaerneholm@yahoo.com>]  
**Sent:** Thursday, September 14, 2017 1:51 PM  
**To:** Board of Harbor Commissioners <[bhc@polb.com](mailto:bhc@polb.com)>  
**Subject:** CAAP comment

Dear Commissioners,  
I appreciate your efforts to make the Port of Long Beach cleaner and to reduce the thousands of tons of CO2 emitted from the port each year. I want to urge you to focus as much as you can on investing in 100% electric trucks to serve the port. We need 100% clean trucks. We can not afford to invest any more into fossil fuels, for our climate sake and for our children's sake. LA Metro is investing into 100% electric buses and is already starting to buy them. By 2030 their whole fleet will be electric.

Natural Gas is still fossil and still emits CO2. Our planet can not handle more fossil CO2 in the atmosphere.

When will we see 100% electric trucks in the Port of Long Beach?

<http://www.byd.com/usa/truck/>

Thank you,

Anna Erneholm  
San Pedro

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CONFIDENTIALITY NOTE: This email message and its attachments contain work product or other information which is privileged, confidential and/or protected from disclosure. This information is intended only for the use of the individual or entity named above. If you think that you have received this message in error, please email or phone the sender. If you are not the intended recipient, any dissemination, distribution or copying is strictly prohibited.

## REsponse to your brochure: NO. READ AHEAD

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**Time:** Thu, 14 Sep 2017 14:02:38 -0700  
**From:** Aleta <aleta.mondragon@gmail.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** REsponse to your brochure: NO. READ AHEAD  
**Attachments:** msg-32654-59.html (4k)



I received a brochure TODAY, September 14th, 2017. In this brochure, a "Clean Air Action Plan" is supposed to be proposed but the information is vague and incomplete.

The brochure is but a piece of advertisement for something I suspect has already been decided and this mailing campaign, a waste of our hard-earned money, is but a facade.

So here goes:

1) The answer to your brochure is NO! Stop playing games proposing patch-up, partial solutions like "replacing dirty diesel trucks" Geez. We have higher priorities and much better solutions than bothering trucking companies, which are, for the most part, individuals, sole proprietors already hassled greatly by several branches of government. At any rate, what do you mean by "clean trucks??" We all are so over buzz words.

2) If you REALLY, really, want to clean the air and do something meaningful to reduce pollution long term, then make sure we ALL of us switch from using fossil fuels and instead move to the use of solar energy in our homes and businesses AND to the use of electric cars. Work on programs to stimulate the acquisition and use of electric automobiles.

3) Sending expensive, fancy, printed advertisement to promote the image of the politicians involved, is so 10 years ago. You need to save our money and stop using it to promote your image. The brochure is a pity, as far as I am concerned, it might have been sent by a Realtor, the information is so bogus.

We have the following major problems here in San Pedro and Wilmington

- Public safety issues. Gangs, home burglaries.
- The trash collection services could be greatly improved. Wilmington and San Pedro are DIRTY as is most of the City of Los Angeles. It is a shame to look at. In the 18 years, I've lived in this area, I've never seen ONE ad from the City trying to educate people on the importance of maintaining cleanness and preserving our green areas.
- Our Public Parks in San Pedro and our green areas are losing trees and shrinking. The city comes and cuts down trees, at anyone's request, especially companies. Also, mutilating old trees and cover green areas with cement. Like we need more cement. We are losing green areas at the speed of light over here. City employees and authorities seem oblivious to these problems. Trees not only improve air quality (more oxygen) but greatly improve the sense of well-being and calmness of human beings.

Please do not waste more of our dollars in useless, partial propositions. Come up with an integrated solution that benefits tax payers, rather than burdening us even more

## CAAP

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**Time:** Thu, 14 Sep 2017 08:10:48 -0700  
**From:** Dean Krivicic <dkusa@gmx.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** CAAP

**Attachments:** msg-10667-22.html (2k)



I do not support the CAAP - why should we wait 17 years?

Please endorse the ACT plan now - 5 years gives operators plenty of time to change over  
Protect your residents now!  
Enough is enough - we are the most polluted city in the USA.

Dean Krivicic  
dkusa@gmx.com

## Clean trucks

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**Time:** Thu, 14 Sep 2017 01:34:51 +0000  
**From:** Harry Helman <hhelman@msn.com>  
**To:** "caap@cleanairactionplan.org" <caap@cleanairactionplan.org>  
**Subject:** Clean trucks

I think it's a great idea to improve the air-quality. I also think it's important to take into consideration the impact that this major expense is going to have on independent haulers. The average trucker who comes in and out of the port cannot afford to buy a brand new truck. If you don't provide subsidies or phase this process, the only contenders will be the big corporations who affectively drive all of your smaller haulers out of business one by one. If you'd like to see an example of how that works look to Los Angeles with their reconfiguring and franchising of the trash hauling service. They are driving all the small independent haulers out of business because they cannot compete with the large companies such as Athens, waste management etc.

I certainly hope better judgment is used at the port that has been used in Los Angeles thank you for taking the time to read this.

Harry Helman

Sent from my iPhone



# COASTAL SAN PEDRO NEIGHBORHOOD COUNCIL

**Doug Epperhart**  
President

**Dean Pentcheff**  
Vice President

**Shannon Ross**  
Secretary

**David Myers**  
Treasurer

September 14, 2017

Chris Cannon  
Director of Environmental Management  
Port of Los Angeles  
425 South Palos Verdes Street  
San Pedro CA 90731  
(Email: [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org))

To: Ports of Los Angeles & Long Beach Harbor Commissioners and staff  
Subject: San Pedro Bay Ports Clean Air Action Plan, July 19, 2017 – Comments

We appreciate the continuing efforts of the Port of Los Angeles and Port of Long Beach (PORTS) through the CAAP process to reduce health impacts to the public from the shipping and goods movement industry, and submit the below COMMENTS, as well as various numbered RECOMMENDATIONS, for which we request specific responses.

## COMMENTS

- Please recognize that all CAAP references to public funding (e.g., “government subsidies,” federal, state, and local government) are costs that will be paid by the public and not by the private interests that benefit directly from port operations.
- Please note that we greatly appreciate the PORTS’ advocacy with regulatory agencies in efforts to develop and implement the most effective emission reduction rules as well as the PORTS’ efforts to require that source specific strategies developed by the PORTS be implemented as state and federal mandates.
- We note the strategies proposed for On-Road Trucks, Terminal Equipment, the Vessel Speed Reduction and Vessel At-Berth Emissions Reduction Programs, Harbor Craft, Freight Infrastructure Planning and Investments, Freight Efficiency, and Energy Resource Planning, and we request that alternative strategies be developed as backstop measures in event the plans for public funding or hoped regulatory actions do not happen.
- It is profoundly significant that the PORTS have concluded that it is cost efficient to implement the CAAP program, declaring in the CAAP that the cost of implementation are less than the public health costs of not doing so.
- Please recognize that the PORTS operate tidelands under the authority assigned by the State of California and the PORTS thus are responsible to the people of California first and foremost under the Tidelands Trust so that health impacts from port operations should never be borne by the public.

1840 S Gaffey St., Box 34 • San Pedro, CA 90731 • (310) 918-8650 •  
[cspnclive@gmail.com](mailto:cspnclive@gmail.com)





## RECOMMENDATIONS

### **1. Past errors must be acknowledged and explained**

The PORTS are responsible to the State of California for the effective business management of operations on the tidelands and for holding tenants to the requirements defined in leases and for mitigation plans filed under California Environmental law. Notably, the CAAP will only be as successful if the PORTS are capable and willing to hold tenants to its requirements. Accordingly, we ask that the Port of Los Angeles define the specific root causes and the respective corrective actions it has taken to prevent recurrence of POLA's continuing failure to hold its tenant, China Shipping Company, responsible for meeting court-approved mitigation requirements.

### **2. Requirements needed for public meetings and transparency**

We request that the following future meetings be conducted in public and in accordance with the Brown Act:

- a. CAAP Implementation Stakeholder Group;
- b. Updates on CAAP specific projects' implementation applicable to Technology Advancement Program, Green Ports Collaborative, Freight Infrastructure Planning and Investments, Freight Efficiency, and Energy Resource Planning; and,
- c. Convene a committee to include specifically assigned/appointed representatives from the following organizations to encourage greater public understanding of the PORTS' efforts to reduce public health impacts and to increase the PORTS' credibility through oversight and participation by the representatives knowledgeable and responsible for the subjects to be discussed:
  - a. Port staff with the technical knowledge to discuss impacts, technologies, leases, operations, etc.;
  - b. South Coast Air Quality Management representative;
  - c. California Air Resources Board representative;
  - d. U.S. Environmental Protection Agency representative;
  - e. Community representatives assigned by recognized agencies such as the City of Los Angeles Neighborhood Councils, whose stakeholders are impacted by port operations;
  - f. Industry representatives as subject matter experts who may be required for the varying subjects to be discussed (e.g., engine manufacturers, fuel distributors, business agents, etc.); and,
  - g. Labor representatives as subject matter experts who may be required for the varying subjects to be discussed (e.g., scheduling, classification limitations, etc).

### **3. PORTS pollution baselines are outdated and distort the truth**

The PORTS must stop relying on data points that compare current reductions in air pollution factors to a baseline in 2005.

The PORTS are justifiably proud of initial improvements to air quality since 2005 and the first CAAP. But this was the low-hanging fruit. The area's air remains dirty and dangerous and this is substantially due to pollutants continually being generated by the goods movement and shipping industry.

To better reflect the data and current conditions, all reporting on pollution data MUST include a comparison to the previous year. In other words, we need data that clearly shows how the PORTS have performed year-to-year in reducing AQ pollution factors. The historic, 2005 data, may also be appropriate, but cannot be used in isolation or stand alone.

The truth is that while the PORTS have reduced air pollution dramatically since 2005, there has been very little improvement in the past five years. In fact, some AQ factors have declined or shown almost no improvement in the past five years. Data and discussion **MUST** reflect this fact.

#### **4. Deadlines and milestones needed for zero-emission future**

The CAAP must include interim deadlines that would implement zero-emission technology in the near term, and milestones that will ensure that the PORTS **will achieve full zero-emissions for cargo handling equipment by 2030 and trucks by 2035**, in line with the directives issued by the Mayors of Los Angeles and Long Beach.

#### **5. SB1 is not a shield against cleaner trucks programs by PORTS, says CARB**

The PORTS must abandon the trucking industry view that SB1 somehow limits how the Ports can address the dirty trucks issue. CARB has said SB1 places no **restrictions on PORTS efforts to control truck pollution.**

#### **6. Cancer acceptable-risk level is inadequate and needs improvement**

We request that the PORTS recognize that cancer risk is the result of cumulative impacts from all port operations. Accordingly, the PORTS must revise and improve the CAAP goal for reduction in health risk for additional port projects from the currently stated increment threshold of 10 in a million (excess residential cancer risk) to five in a million.

#### **7. Alternative planning for funding and regulatory contingencies**

We request the CAAP be revised to provide alternative actions as may be necessary to achieve planned emission reductions applicable to the following sources:

- a. Locomotives, in the event of the following:
  - i. The US Environmental Protection Agency refuses the Air Resource Board's Petition to amend emission standards for newly built locomotives and locomotive engines and to lower emission standards for remanufactured locomotives and locomotive engines; and,
  - ii. The federal government refuses to limit federal preemption on locomotive engines to the initial useful life.
- b. Ocean-going vessels, in the event of the following:
  - i. The Green Ships Incentive Program and the Clean Ships Program are effective to the extent as was POLA's Low Sulfur Fuel Incentive Program, which failed to increase LSF use appreciably;
  - ii. The federal government denies the State's request for new engine tier levels;
  - iii. The State of California is not successful at implementation of statewide vessel speed reduction rule;
  - iv. Rule-making is not filed applicable to at-berth emission controls from non-regulated vessels.
- c. Heavy Duty Trucks, in event of the following:
  - i. The federal government denies the SCAQMD petition for a national near-zero emissions engine standard for trucks;
  - ii. The PORTS' incentive-based strategies to promote voluntary turnover to cleaner technologies are unsuccessful.
- d. Harbor craft, in event rule-making is not filed applicable to fleet turnover requirements.
- e. Cargo Handling Equipment, in event rule-making is not filed applicable to idling restrictions and fleet turnover.

### **8. Funding required for CAAP program**

CAAP lacks and must have a specific funding plan, including the funding sources that will achieve zero emissions goals.

### **9. Assess Health Risk and the Externalized Costs of Goods Movement**

To improve public health and reduce the industry practice of placing extraordinary externalized costs on the community, the CAAP must include a health risk assessment tied to the CAAP measures. This assessment would present and analyze the costs of legacy and continued pollution on the community, as well as the health benefits of required emissions reducing technologies. This will ensure that the costs of doing business are shifted to industry rather than borne by the community in the form of health costs.

### **10. Update and maintain as current key data and web pages**

Update and provide the detail associated with the projects currently active under the Technology Advancement Program as well as all CAAP web pages. For example, the current TAP pages appear outdated, including no information on the current four projects listed (one from 2014 and with a reference to "preparation for grant opportunities anticipated over the 2016–2017 fiscal year."

We look forward to your response. Please feel free to contact us should you have any questions.



Anna Erneholt  
Chair of the Environment and Sustainability Committee  
Coastal San Pedro Neighborhood Council  
cspnclive@gmail.com

## support for the ACT Now Plan

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**Time:** Fri, 15 Sep 2017 01:49:22 +0000  
**From:** Alicia Cox <alicia.cox@uci.edu>  
**To:** "caap@cleanairactionplan.org" <caap@cleanairactionplan.org>  
**Subject:** support for the ACT Now Plan

**Attachments:** msg-17021-44.html (3k)



Dear Los Angeles and Long Beach Harbor Commissioners,

My name is Alicia Cox, and I am a resident of the City of Long Beach. I am writing to voice my support for the Advanced Clean Trucks (ACT) Now Plan which will replace all dirty diesel trucks with clean trucks powered by renewable fuel over the next five years, starting today. I believe that the proposed Clean Air Action Plan (CAAP) which sets a zero-emission target for 2035 is not good enough. The people of Long Beach and Los Angeles should not have to wait 17 years to breathe clean air.

When I lived in Riverside, California while attending graduate school at UCR from 2007-2014, I developed asthma due to the polluted air in the Inland Empire. When I lived in Oakland, California from 2014-2016, my asthma improved dramatically. However, since moving to Long Beach over one year ago, I have experienced tremendous difficulty breathing, and I am very concerned about the further deterioration of my respiratory health over time. I love Long Beach, and I would hate to have to move away due to the poor air quality.

Please implement the ACT Now Plan.

Sincerely,

Alicia Cox

2839 E Vista St.

Long Beach, CA 90803

**Alicia Cox**  
**Assistant Professor**

Department of Comparative Literature  
University of California, Irvine  
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COMMENTS ON DRAFT UPDATE OF THE SAN PEDRO BAY PORTS CLEAN AIR ACTION PLAN 2017

BARRY R. SEDLIK  
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PHONE: (213) 610-1010  
AUGUST 30, 2017  
SEPTEMBER 15, 2017 (REVISED) <sup>1</sup>

HONORABLE COMMISSIONERS AND STAFFS,

My name is Barry Sedlik. I have my own consulting practice for which I assist clients dealing with energy, environmental, site selection, and capital raising issues. I previously worked at Southern California Edison where I established and led the company's economic development program. Subsequently, I was the Chief Operating Officer of the Los Angeles Economic Development Corporation and the CEO of the World Trade Center Association of Los Angeles-Long Beach. I also had the great honor and opportunity to serve as the Undersecretary of the Business, Transportation and Housing Agency during the Schwarzenegger Administration.

During my tenure as Undersecretary, I co-managed the Governor's Goods Movement Action Plan with my counterpart at the California Environmental Protection Agency. After the publication of the Plan, I was heavily involved in the goods movement component of the successful Proposition 1B bond issue that California voters approved in 2006. This effort provided \$2 billion for goods movement related infrastructure and \$1 billion for environmental mitigation. Those funds provided a significant contribution for the construction of the new Gerald Desmond Bridge, the Carl Moyer truck replacement program, and other support for port-related infrastructure and environmental efforts at the ports of Los Angeles and Long Beach and ports throughout the state.

From my background with utilities, economic development, and government policy making, I have a deep appreciation for the necessary and challenging work of crafting the Clean Air Action Plan (CAAP). I commend mayors Garcetti and Garcia for maintaining this important effort initiated by their respective predecessors.

Because of the limited time available this afternoon, I will focus my comments on just one area of the plan that I believe is extremely important for you to consider as an example to guide the efficacy of the Clean Air Action Plan Update.

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<sup>1</sup> These comments are revised and extended from an original hard copy that I presented to Carter Atkins, Environmental Specialist, Port of Los Angeles at the Banning's Landing public meeting held August 30, 2017. This document, submitted electronically to [caap@cleanairactionplan.org](mailto:caap@cleanairactionplan.org), should be considered a replacement for the hard copy document submitted to Mr. Atkins.

The component of the plan that I want to address this afternoon is Section 1.5, Vessel At-Berth Emission Reductions. I choose this section to speak to you for several reasons. However, my primary motivation is to convey to you the importance of having a proper perspective in formulating and executing good public policy to balance competing interests among regulatory, technology, and economic issues.

I've learned from my four decades of experience since first working on the New Source Performance Standards for coal-fired power plants as a novice consultant in Washington, D.C. in 1976, that difficult and unpopular tradeoffs are always at play among the diverse stakeholders involved in major public policy issues. Consequently, it is extremely important to have the "right" road map in hand and correct metrics that focus on outcomes and not activities to secure equitable, effective, and fair policies.

Vessels At-Berth emission reductions presents a classic example of these tradeoffs prevalent throughout the plan. While the intentions of the effort are clear, the imprecise language in this section has the effect of pre-supposing and narrowing the range of options available to develop more flexible and cost-effective solutions.

Let me elaborate.

In the plan, a declarative statement is made that,

"The [California Air Resources Board] CARB regulation, which has been in place since 2014, ramps up the required shore power usage until 2020, when fleets must demonstrate an 80% reduction in at-berth emissions."

This statement is false. CARB does not mandate that emission reduction from at-berth vessels be achieved exclusively from "shore power" technology. In this instance, the regulations state that the use of shore power "shall be considered to meet the emission reduction requirements of the [Alternative Control of Emissions] (ACE) Plan."<sup>2</sup> Namely, the regulation is formulated on the basis of defined emission levels, not by specification of a particular technology.

The CAAP goes on to describe that CARB has already approved two alternative emission control technologies for at-berth container vessels that achieve emission reductions by capturing and treating post combustion emissions from operating auxiliary engines. Nonetheless, the implication is that shore power is somehow a "preferred" option.

The CAAP also states that, "The Ports see a need for land-based capture-and-control systems." The fact that the current CARB approved systems happen to be mounted on barges, implies that somehow if these same systems were set down on the dock that these systems would not work or CARB would not certify the technologies as compliant. There is no such constraint in the CARB certifications.

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<sup>2</sup> See 13 CCR, section 2299.1(J)1.

Furthermore, an unsubstantiated statement is made that, “some vessel types – tankers for example – are not good candidates for barge-based technologies due to at-berth operational constraints and safety considerations.” There are no citations of any studies or analyses to support this contention or that “limited wharf space may be unable to provide berths for a substantial fleet of barges,” or that barges “may impede waterway access and impose constraints on the safe passage of other vessel types.”

All this language is speculative and cripples the terminal operators and vessel owners who should rightly be the arbiters of what systems they can use to operate safely and economically.

Finally, the CAAP presents an unreferenced table indicating a projection of the use of shore power and “Alternative Emissions Control Devices,” failing to note that “shore power” is itself defined as an “Alternative Control of Emissions” strategy in the CARB regulations.

The table indicates that shore power use will grow from 43% in 2017 to 49% by 2025 of all projected vessel calls with no source attribution. At the same time, the table shows the use of post combustion capture and treatment technology-based systems will be flat at 5% over the same period. The table implies that the balance of vessel calls will not have any at-berth emission controls. The fraction of vessels with uncontrolled at-berth emissions will only decrease a paltry 8% over the next 8 years from 53% in 2017 to 45% in 2025 according to these projections.

There is no pathway defined as to how the San Pedro Bay ports will achieve the anticipated CARB 100% compliance requirement by 2030. Specifically, if at the end of 8 years from 2017 to 2025, the number of vessel calls using no at-berth emission controls drops from 53% to 45% how is it possible to drop from 45% with no controls to 0% in the following 5 years?

In a rational compliance achievement process, one expects to capture the “low hanging fruit” first and the more difficult later. Consequently, a strategy that only achieves 15% of the goal (8%/53%) in 62% (8 years/13 years) of the time and 85% of the goal (45%/53%) in the remaining 38% (5 years/13 years) of the time is inverse to the typical compliance pattern.

This might not seem like a big deal but from a public policy perspective, such a disconnect is highly unsatisfactory and disappointing. If the revised CAAP is approved with such an inverse compliance design metric, then the compliance path devolves into an ill-fated dynamic that would likely result in failure to meet desired outcomes in a timely manner and undermine the opportunity to achieve higher compliance rates earlier in the process, a major lost opportunity to reduce premature deaths afflicting the neighboring port communities contributed from uncontrolled OGV emissions at-berth.

Why?

First, while most industry stakeholders strive to do the “right thing” to ameliorate the public health consequences of their operations, they work in a fiercely competitive environment and must pay close attention to the disruption and the expense incurred from prospective



compliance demands. Consequently, the message from the indicated compliance schedule leads many faced with the prospect of costly compliance to conclude that there is no benefit to being an early adopter. Why reduce at-berth emissions now when such a small fraction is expected to comply over the first 8 years?

To the contrary, they would likely reason that: 1) since not much compliance is expected in the first 8 years, they can wait out the time until they really need to take action; and 2) with 8 years of “breathing room,” further procrastination later would have a good chance of pushing back real compliance to a later date or perhaps never, depending on the political will at that future date.

Second, from the community side and those seeking the benefits from expanded regulatory intervention, a counter dynamic may unfold. Community members and environmental justice groups are already frustrated that progress towards emission reduction from port activities is proceeding way too slowly. Consequently, the “leisurely” adoption of the at-berth compliance schedule as depicted in the current draft CAAP is likely to be perceived as more capitulation to industry at the expense of the community’s health.

If the indicated compliance schedule is incorporated in an adopted CAAP, it further inflames the community’s unhappiness with the overall CAAP. However, in the larger context of all the advances that will be made from implementation of the CAAP, industry can make the case that the community’s demands for accelerated compliance are unreasonable and further tightening left to some future iteration of the CAAP. Hence, delaying compliance achievement will likely be a worthwhile tactic for those faced with implementation.

Such a scenario can be avoided with thoughtful articulation of the “right” metrics. Most importantly, compliance adoption can be accelerated and the community more satisfied that real public health benefits are being realized at a faster pace.

While the percentage of at-berth calls using emission controls is an important metric for indicating compliance levels and projecting income from fines, it is totally unhelpful in portraying the efficacy of the various emission reduction strategies.

Why? Because there is a very wide distribution in the size of ships, the emission rates from their respective auxiliary engines, and the lengths of stay at-berth. For example, a Port of Long Beach study on the cost effectiveness of cold ironing<sup>3</sup> indicates that the 5,344 TEU Container/Reefer *OOCL California* has an average power demand of 5,200 kW at-berth during an average berth time of 121 hours per call. Similarly, the Break Bulk ship *Thorseggen* is calculated to have a 600 kW average power demand at-berth with a 48 hour average berth time.

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<sup>3</sup> “Cold Ironing Cost Effectiveness” Environ International Corporation, March 30, 2004.

The study's authors estimate that the *OOCL California* produces 9.2 tons of NOx per call while the *Thorseggen* produces 0.41 tons of NOx per call. Namely, the *OOCL California* produces over 22 times the NOx emissions than the *Thorseggen* per their respective calls. Other pollutants, including VOCs, CO, PM10, and SOx are estimated with similar proportionalities between the two vessels.

Since the study was conducted in 2004, the disparity between large and small vessels has increased dramatically. The emergence of very large ships like the recently commissioned 18,000 TEU *Benjamin Franklin*, a ship that was serviced by the CARB-approved AMECS emission control system on its maiden voyage to Long Beach last February<sup>4</sup>, is a prime example of the trend. Ships as large as 24,000 TEUs are being contemplated.<sup>5</sup>

Consequently, it is much better to frame the metrics in terms of overall emission reductions achieved rather than percentage of vessel calls using at-berth emission reduction strategies. On this basis, the efficacy of at-berth emission reduction strategies can be more directly assessed. Furthermore, it provides a clear line of sight nexus to the *raison d'être* of the CAAP, a plan to achieve sustainable emission reductions from port-related activities.

With such a metric, industry stakeholders can have higher assurance that enforcement efforts will be vigorously taken and the community will have a better gauge of progress towards emission reduction goals. In this manner, there is no gap. Emission reductions are likely to be largest at the outset from first compliance of the large and frequent port vessel visitors. Incremental improvements can be made over time as the more cost-effective emission capture and treatment systems expand coverage to small or infrequent vessel callers over time.

While industry can choose the approach that best meets their needs, there will still be ample opportunity for continuous innovation. With high assurance from the outset that the goal can be achieved with the available technologies there is less motivation to forestall compliance implementation.

However, it is important that port policy makers not proscribe technology-specific mandates. The first step in this process is to eliminate the inherent biases implied in the CAAP narrative. CARB correctly defines desired outcomes in terms of emission limits and not mandated technology choices. While the CAAP describes the post combustion capture and control technologies as an alternative, the minimal penetration afforded in the table of projected implementation coupled with the unsubstantiated objections and obstacles to adoption described in the narrative subvert thoughtful analysis and subsequent implementation, conveying a preconceived notion that shore power is the preferred alternative.

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<sup>4</sup> <http://grist.org/business-technology/this-green-entrepreneur-was-once-an-undocumented-farmworker/>

<sup>5</sup> See <http://www.marineinsight.com/shipping-news/containerships-24000-teu-possible-ship-size-approaching-limits/>

To the contrary, when the Benjamin Franklin, the biggest container ship ever to call on the Port of Long Beach uses post combustion capture and treatment rather than a shore power hook up, it's not clear that the projections in the CAAP forecast are reasonable. In fact, the penetration rates depicted in the draft plan between shore power and post combustion capture and treatment may be upside down. It may very well turn out that post combustion capture and treatment far exceeds the number of port visits covered to the more limited shore power flexibility. Overall emission reduction from otherwise uncontrolled at-berth auxiliary engine use could likely proceed much faster than the schedule in the draft plan.

For small ships that make limited calls per year, post combustion emission capture and control systems whether mounted on barge, dock, tethered, or in some other configuration, could be highly cost effective, safe, and operationally benign to overall port traffic.

Leaving the decision to each terminal operator and vessel owner to determine the most cost-effective solution for their respective needs will likely achieve the greatest overall emission reductions over the life of the CAAP, especially if it is clear that aggressive compliance enforcement will be maintained.

History is replete with examples where the pace of innovation moves in unpredictable spurts and advances. Specifying emission limits but providing flexibility to the wide range of port users to select the technologies that work best for their respective needs is likely to produce the fastest and most sustainable outcomes.

Speed of implementation is an especially urgent dimension of consideration so that the communities surrounding the ports get the relief needed to improve public health and wellbeing.

While I have focused my comments on this one component of the CAAP, I believe it is important for the respective commissions to make sure that metrics throughout the plan have a strong and direct nexus to emission reduction outcomes and not to activities. My personal experience confirms that what gets measured gets done. For this reason, it is important to make sure that commissioners are confident that the right things are being measured.

Thank you for the opportunity to share my comments with you.

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## Comment on CAAP

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**Time:** Fri, 15 Sep 2017 20:06:22 -0700  
**From:** ptgjr <ptgjr@aol.com>  
**To:** caap@cleanairactionplan.org  
**Subject:** Comment on CAAP

**Attachments:** msg-2457-2767.html (1k)



I've been a mechanic in the IAM for 47 years and worked at the Port for 22 years and have seen extraordinary technological changes in those many years all along the waterfront always hoping that someday that we could use some of that tech to clean up this mess we are unfortunately gifting to our kids and future generations. Kicking those smog hogs off the road is just a little step forward, but a huge leap for mankind. Let's get it together and clean up this place we call home before we unable to do so. Thanx. PS, I drive a Vette, but only on Sundays after church if the weather is clear.

Sent from my T-Mobile 4G LTE Device

## Comments to 2017 Clean Air Action Plan- the need for electrified freight rail

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**Time:** Sun, 17 Sep 2017 20:37:01 -0700  
**From:** Brian Yanity <brian.yanity@railpropulsion.com>  
**To:** CAAP@cleanairactionplan.org  
**Subject:** Comments to 2017 Clean Air Action Plan- the need for electrified freight rail

**Attachments:** msg-16815-316.html (4k)  
BYanity SoCal freight rail electrification 17Sept2017.pdf (3M)



To whom it may concern:

I am pleased to see that the 2017 San Pedro Bay Ports Clean Air Action Plan (CAAP) is poised to continue innovation in electric trucks, cranes, lifting equipment, and electrical plug-ins for ships. The Port of Long Beach and the Port of Los Angeles have long been leaders in reducing emissions from port operations, and should continue this legacy by leading the way in electrified freight rail. Freight rail electrification would build upon, and add value to, the large investments that the ports are making on rail infrastructure and clean technology. Used successfully all over the world for over a century, electric freight railroads have many advantages. While the up-front capital costs may be substantial, all-electric freight rail would pay for itself with significant reductions in emissions and transport energy costs.

The July 2017 CAAP Draft Final Update calls for expanding the use of on-dock rail by investing in improvements to the port-wide rail network, with the long-term goal of moving 50% of all cargo leaving the ports by rail (Section 2.1), and for the continued exploration of short-haul rail (Section 3.3). The July 2017 CAAP also sets commendable goals planning of the electrification of the transportation sector and freight movement equipment in general, particularly drayage trucks. However, the plan did not mention rail electrification specifically. On page 57, the report states that in the future, "the Ports will continue to seek opportunities to work with rail operators and technology developers to demonstrate and deploy locomotive technologies that can achieve zero emission track miles". To this end, the Ports' Technology Advancement Program should support demonstrations of electric locomotives.

The Alameda Corridor and the Pacific Harbor Line system around the ports could serve as a pioneering example of freight rail electrification. The Alameda Corridor is owned by the public, and it is in the public's interest to reduce air pollution electrifying the trains running through populated areas. This freight rail corridor was built with enough vertical clearance for an overhead catenary wire over a double-container stacked train, along with other features designed in anticipation of future electric rail infrastructure. Electrification of the proposed short-haul rail service between the ports and the Inland Empire, currently under study, is an opportunity for using electric locomotives through the Alameda Corridor. All-electric locomotives dedicated to the short-haul service could go back and forth along less than 100 miles electrified track between San Pedro Bay and the Inland Empire, while conventional non-electric line-haul freight trains could continue use the same tracks.

For more information, please read my attached white paper titled "The Need for Freight Rail Electrification in Southern California".

Thank you for this opportunity to provide comment on this important work that the ports are doing.

Best Regards,

Brian Yanity  
Californians for Electric Rail  
Electrical Engineer  
Fullerton, CA

# The Need for Freight Rail Electrification in Southern California

Brian Yanity

Californians for Electric Rail

[brian.yanity@railpropulsionsystems.com](mailto:brian.yanity@railpropulsionsystems.com)

September 17, 2017

## Executive Summary

Full electrification of freight trains is the only proven zero-emissions freight railroad technology. Electric rail propulsion can take several different forms, including locomotives powered by overhead catenary wire, on-board batteries, or more advanced concepts such as battery tender cars and linear synchronous motors. This white paper is largely a literature review of previous studies on electric freight rail in the Southern California region, with information compiled about existing electric freight rail locomotives and systems from around the world.

The two main benefits of freight rail electrification in the region would be reduced air pollution, and reduced consumption of diesel fuel for transportation. Electrification of freight rail in Southern California would reduce the public health impacts to local communities affected by diesel-powered freight transportation, and reduce greenhouse gas emissions of freight movement.

The main challenge for electric freight rail is the high capital costs of electric rail infrastructure, especially the overhead catenary wire over tracks. A variety of options for public and/or private financing of freight rail electrification need to be explored.

Electrification of the proposed short-haul rail service between the ports and the Inland Empire, currently under study, is an opportunity for using electric locomotives through the Alameda Corridor. Co-utilization of electric rail infrastructure planned for the California High Speed Rail project should also be studied.

To successfully fund and implement an electric rail network in Southern California, a cooperative partnership must be forged between with the freight carriers (UP, BNSF, Pacific Harbor Line, trucking companies), transportation industry trade associations, locomotive and electrical manufacturers, electric utilities, community organizations, environmental and public health public advocacy groups, along with local businesses and labor unions. Electric utilities would benefit from the new business opportunity of supplying power to electrified rail corridors, as well as benefit from new electric transmission line routes and energy storage systems developed for railroads.

The last time that a regional, comprehensive rail electrification task force existed was in the early 1990s for the 1992 *Southern California Accelerated Rail Electrification Program* study. Such a regional task force should be created again, with committees for planning, engineering, analysis, operations & maintenance, environmental analysis, legislative funding, and regulatory requirements.

## Acknowledgements

Special thanks to Dave Cook (Rail Propulsion Systems) and Raphael Isaac (Ph. D. candidate at the UC Davis Institute of Transportation Studies) for their review and comments on the drafts of this white paper.

## 1. Introduction

There is a great need to electrify freight railroads in the United States. Railroad electrification is a proven form of zero-emissions freight transportation, and can take a variety of forms. The most established way to run trains on electricity is by overhead catenary wires over railroad tracks supplying power to the moving train's pantograph. While the up-front capital costs may be substantial, all-electric freight rail with overhead catenary is a tried-and-true technology that would pay for itself with significant reductions in emissions and transport energy costs. Used successfully all over the world for over a century, electric freight locomotives have many advantages. In particular, electric locomotives are:

- Zero-emissions at point of use.
- More energy efficient than diesel-electric locomotives, and consume almost no power when idling.
- Capable of using regenerative braking when going downhill to recover energy that can be stored on-board, used by other trains nearby, or returned as power to the grid.
- Capable of higher speed and pulling power than diesel-electric locomotives.
- Quieter and lower maintenance than diesel locomotives.
- Capable of being powered by renewably-generated electricity, further enhancing emissions benefits and reducing dependence on fossil fuels. Electrified rail corridors can also serve as electric transmission line routes, potentially accessing many renewable energy generation sites.

Due to the unfamiliarity in the U.S. with electric freight rail, this technology is too often overlooked as a solution to many of the country's transportation needs, despite its proven track record of success in the rest of the world. Southern California should be a national leader in freight rail electrification due to its need to reduce air pollution, and strong longtime local political support for clean transportation technologies. The region once had an extensive electric rail network of passenger street car and interurban transit during the first half of the 20<sup>th</sup> century, and today has a rapidly growing network of all-electric subway and light rail lines. In the past three decades, a number of studies have been commissioned by state and local government agencies on low- and zero-emissions freight rail in Southern California. These publicly-funded efforts were primarily due to interest in reducing air pollution in the South Coast Air Basin region, particularly for those living and working near the tracks. In addition to freight rail electrification with overhead catenary, other low and zero-emissions locomotive technologies evaluated in previous Southern California rail electrification studies included:

- Tier 4 diesel-electric locomotives with and without emissions after-treatment
- Dual-mode diesel-electric hybrid that can use diesel or overhead catenary
- Third-rail electric
- Compressed natural gas (CNG)
- Liquefied natural gas (LNG)
- Onboard all-battery electric or hybrid diesel-electric
- Diesel-electric locomotives with battery-tender cars
- Paired diesel locomotives with all-electric locomotives (dual power trains)
- PEM fuel cell (PEMFC)/battery hybrid
- Solid Oxide fuel cell-gas turbine (SOFC-GT) hybrid

However, all of the Southern California regional clean rail technology studies concluded that all-electric rail with overhead catenary is the only proven zero-emissions technology for heavy-rail freight movement over any distance.

The San Pedro Bay Ports (Los Angeles and Long Beach) adopted their first Clean Air Action Plan in 2006<sup>1</sup>, and the Zero-Emissions Freight Collaborative was formed by Los Angeles County in 2012. In July 2015, Governor Jerry Brown issued Executive Order B-32-15, which “provides a vision for California’s transition to a more efficient, more economically competitive, and less polluting freight transport system”. The resulting California Sustainable Freight Action Plan has set a goal of transitioning to zero emissions technology in all freight- air, land and sea- by 2050. Released in July 2016, the plan called on the California Public Utilities Commission (CPUC), the California Energy Commission (CEC), the California Air Resources Board (CARB), and utilities to better plan for the electrification of the transportation sector.<sup>2</sup> In the spring of 2016, CARB released two reports evaluating clean freight rail technology for California<sup>3</sup>. While an admirable effort on behalf of the state, these two studies had significant shortcomings in evaluating electric freight rail, as discussed in the sections below.

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<sup>1</sup> <http://www.cleanairactionplan.org/about-the-plan/>

<sup>2</sup> <http://www.casustainablefreight.org>

[http://www.casustainablefreight.org/files/managed/Document/289/CSFAP\\_FINAL\\_07272016.pdf](http://www.casustainablefreight.org/files/managed/Document/289/CSFAP_FINAL_07272016.pdf)

California Air Resources Board, Rail Emission Reduction Program:

<https://www.arb.ca.gov/railyard/railyard.htm>

<sup>3</sup> *Draft Technology Assessment: Freight Locomotives*. California Environmental Protection Agency, Air Resources Board, Transportation and Toxics Division, April 2016.

[https://www.arb.ca.gov/msprog/tech/techreport/freight\\_locomotives\\_tech\\_report.pdf](https://www.arb.ca.gov/msprog/tech/techreport/freight_locomotives_tech_report.pdf)

*Transitioning to a Zero or Near-Zero Emission Line-Haul Freight Rail System in California Operational and Economic Considerations, Final Report*. Prepared for State of California Air Resources Board by University of Illinois at Urbana-Champaign Rail Transportation and Engineering Center (RailTEC), Spring 2016. [https://www.arb.ca.gov/railyard/docs/uoirpt\\_06222016.pdf](https://www.arb.ca.gov/railyard/docs/uoirpt_06222016.pdf)



*Next Steps for Freight Rail Electrification in Southern California*

1. A comprehensive feasibility study on electrifying the Alameda Corridor, along with short-haul rail service from the Ports of Los Angeles and Long Beach to an 'Inland Port' or other types of intermodal facilities in the Inland Empire. This comprehensive study would include:
  - Preliminary design and cost estimation
  - Cost/benefit analysis: what lines are the best candidates for electrification?
  - Viable strategies for funding the high upfront costs of electrification.
  - Environmental and social impact assessment of possible electrification alternatives.
  - Cost assessment of modifying/replacing existing infrastructure such as bridges and tunnels for overhead catenaries, impacts on rail operations and safety, impacts to regional power grids.
  - Operational impacts to existing freight and passenger rail service.
  - Carefully assess present and future patterns of truck and rail traffic from the Ports to the Inland Empire.
  - Evaluation of Inland Port sites, in the Inland Empire, or further inland sites in the Victorville and Barstow areas.
  - Legal/legislative/regulatory actions needed to support rail electrification.
  - Further questions that must be addressed by such a study:
    - Match the electrified-Inland Port model with regional objectives
    - Best ways for more freight to be shifted from truck to rail, and to reduce truck VMT and highway congestion
    - Environmental impact of short-haul freight rail and related intermodal freight facilities
    - Economic development opportunities of short-haul freight rail
    - Identify effective project "champions"
2. Increased research and development on all types of low-emissions or zero-emissions freight rail and truck technology, for railroad yards, intermodal shipping facilities, and ports. To compliment and build upon existing efforts in the region, a research program or center in Southern California should be established, dedicated to electric rail technology. Such a research program would partner with organizations such as the American Association of Railroad's Transportation Technology Center in Colorado, the University of Illinois at Urbana-Champaign Rail Transportation and Engineering Center (RailTEC), and other research centers located in other countries experienced with electric heavy freight rail.
3. Construction in Southern California of a short, test track of overhead catenary at a freight rail yard or short-line freight railroad. This demonstration site could serve as a test bed to evaluate an all-electric locomotive such as modified Siemens ACS-64, a converted freight rail locomotive, a dual-mode locomotive such as a modified Bombardier ALP-45DP, a smaller all-electric switcher (yard) locomotive, or catenary hybrid/ battery tender/ZEBL technology (discussed below in section 6). If at first such a test site could not be built in California, new electric freight rail locomotives could be tested on the existing electric rail test tracks of the Transportation Technology Center near Pueblo, Colorado.
4. Selection of an initial freight rail corridor in Southern California to electrify.
5. Demonstration site, at a freight yard or passenger train station/yard, with charging infrastructure for battery electric and hybrid locomotives, including emerging technologies such as wireless power transfer (WPT).
6. Explore co-deployment of electrification along corridors shared with passenger service trains of Metrolink, Amtrak, and California High Speed Rail.

7. Phasing-in of all-electric operations with existing fleet of diesel-electric locomotives, and opportunities for dual-power, or 'mixed-unit' trains pulled by both all-electric and diesel electric power.
8. Negotiated agreements between railroads and electric utility companies, and thorough analysis of the economic value and benefits to electric utilities from railroad-hosted transmission line routes and energy storage capacity.

The electrification of the Alameda Corridor, and other rail lines in the region, is a major undertaking with a long development timeline, and could be started with a comprehensive feasibility study done by transportation professionals. This document attempts to outline what questions must be answered by such a study.

To successfully fund and implement an electric rail network in Southern California, a cooperative partnership must be forged between with the freight carriers (UP, BNSF, Pacific Harbor Line, trucking companies), transportation industry trade associations, locomotive and electrical manufacturers, electric utilities and the government organizations listed below:

- Port of Los Angeles
- Port of Long Beach
- Alameda Corridor Transportation Authority
- Southern California Regional Rail Authority
- Cities along rail lines
- Counties of Los Angeles, Orange, San Bernardino and Riverside
- Southern California Association of Governments
- South Coast Air Quality Management District
- University transportation research centers (UTC San Bernardino, UTC Long Beach – METRANS, others)
- California Department of Transportation
- California State Transportation Agency
- California Air Resources Board
- California High Speed Rail Authority
- California Energy Commission
- California Public Utilities Commission
- Federal Railroad Administration

In addition, there is a need to build a broad base of support in the region for rail electrification from community organizations, environmental and public health public advocacy groups, along with local businesses, labor unions, trade associations and community activists. Local engineering, construction, and transit agency experience with electric rail transit could be applied to electrifying freight rail. Global and national experts in electric rail should also be invited to Southern California. A regional rail electrification task force was created in the early 1990s for the 1992 *Southern California Accelerated Rail Electrification Program* study, with committees for planning, engineering, analysis, operations & maintenance, environmental analysis, legal/legislative funding, alternative fuels, and regulatory applications<sup>4</sup>. Such a regional task force should be created again for the 21<sup>st</sup> century.

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<sup>4</sup> *Southern California Accelerated Rail Electrification Program, Draft Executive Summary*. Prepared for Southern California Regional Rail Authority, February 10, 1992, pgs. ES-1, ES-2:

<http://libraryarchives.metro.net/DPGTL/Metrolink/1992-ExecSummary-SoCal-Accelerated-Rail-Electrification.pdf>

## 2. Benefits of Freight Rail Electrification

### *Emissions benefits-*

Even with conventional diesel locomotives, emissions per ton are several times less by rail when compared to truck. With electrification, the emissions directly emitted by locomotives drops to zero. Given the choice, rail is always a cleaner way to move freight than by truck. For example, Southern California's busiest truck corridor (Interstate 710) produces ten times more emissions than the region's busiest rail corridor.

Historically, efforts to advance electrification and other clean transportation technologies in the region have been driven primarily by a desire to reduce local air pollution. Many populated areas in Southern California regularly do not meet federal air quality standards, especially those near freight movement sites such as ports, rail yards and warehouses. The huge amount of freight movement activity in the South Coast Air Basin (SCAB) results in a massive amount of emissions from diesel-powered trucks and trains. Diesel exhaust around the San Pedro Bay ports and the region's railroad yards and freight facilities has been linked to cancer, asthma and many other ailments, as well as contributing to premature death, in nearby communities. Emissions from port-related goods movement, including levels of NO<sub>x</sub>, SO<sub>x</sub> and diesel particulate matter (PM), have declined significantly in the past decade due to stricter regulation and introduction of cleaner diesel engines. However, the public health impacts in the region caused by port-related goods movement industry still contribute to thousands of premature deaths and billions of dollars in health care costs each year<sup>5</sup>. The area around the San Pedro Bay ports has even been dubbed the "diesel death zone". In the Inland Empire, a hub of goods movement, logistics and warehousing, residents of San Bernardino and Riverside counties continue to suffer from some of the highest particulate and ozone pollution levels in the U.S.

Switching from a freight rail system that relies on diesel power to one that relies on electric power will have a substantial impact on emissions in Southern California. According the 2016 RailTEC report, if all line-haul freight rail locomotives in the SCAB were all-electric (and all electricity used from zero-emissions sources), compared to using a fleet of 100% Tier 2 diesel locomotives, the annual emissions reductions possible would be as follows<sup>6</sup>:

- 372,000 tons CO<sub>2</sub>
- 3,750 tons NO<sub>x</sub>
- 1,000 tons CO
- 200 tons hydrocarbons (HC)
- 140 tons particulate matter (PM)

The above figures do not include the region's freight yard/switcher or passenger locomotives. However, over 80% of locomotive emissions in the South Coast Air Basin are from line-haul freight trains. In addition to reducing emissions of pollution with local public health impacts, electrifying freight rail will also help meet the state's goals for reducing greenhouse gas (GHG) emissions. If more freight and passenger traffic is shifted from road to rail in the future, the emissions benefits of electric rail would be more significant.

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<sup>5</sup> Port of Long Beach & Port of Los Angeles, *San Pedro Bay Ports Clean Air Action Plan 2017, Draft Final Clean Air Action Plan Update*, July 2017, pgs. 16-20:

<http://www.cleanairactionplan.org/documents/clean-air-action-plan-2017-draft-document-final.pdf>

<sup>6</sup> *Transitioning to a Zero or Near-Zero Emission Line-Haul Freight Rail System in California Operational and Economic Considerations, Final Report*. Prepared for State of California Air Resources Board by University of Illinois at Urbana-Champaign Rail Transportation and Engineering Center (RailTEC), Spring 2016, pg. 52. [https://www.arb.ca.gov/railyard/docs/uo\\_i\\_rpt\\_06222016.pdf](https://www.arb.ca.gov/railyard/docs/uo_i_rpt_06222016.pdf).

It is worth noting how the emissions reductions of fully electric locomotives are superior to other low emissions technologies. The 2016 RailTEC report also concluded that Tier 4 diesel freight locomotives with after-treatment (the report's preferred alternative), would not reduce CO<sub>2</sub> or CO emissions in the region. Also, diesel-LNG locomotives would decrease CO<sub>2</sub> emissions, but increase CO emissions. Locomotives powered by LNG using solid oxide fuel cell (SOFCs)-gas turbine hybrid systems were estimated to reduce CO<sub>2</sub> emissions by 57%<sup>7</sup>.

#### *Energy savings benefits-*

On a per-ton basis, a double-stack container rail car pulled by a conventional diesel-electric locomotive moves freight three to five times more fuel efficiently than a truck<sup>8</sup>. The overall energy efficiency of diesel-electric locomotive, or the proportion of energy diesel fuel converted to useful motive power, is approximately less than 40%. However, U.S. freight railroads have substantially improved their overall energy efficiency in the past several decades. According to the Association of American Railroads, U.S. freight railroads moved one ton of freight an average of 468 miles per gallon of diesel fuel, up from 235 miles in 1980<sup>9</sup>.

The overall per-ton energy efficiency advantage of rail more than doubles with an all-electric locomotive, which converts over 80% of the electric energy captured from the overhead catenary wire into useful motive power<sup>10</sup>. The annual 'at wheel' energy consumption of all line haul freight rail locomotives operating in the SCAB, pulling an average of 130 line-haul freight trains per day, is presently about 435,000 MWh<sup>11</sup>.

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<sup>7</sup>Transitioning to a Zero or Near-Zero Emission Line-Haul Freight Rail System in California Operational and Economic Considerations, Final Report. Prepared for State of California Air Resources Board by University of Illinois at Urbana-Champaign Rail Transportation and Engineering Center (RailTEC), Spring 2016, pg. xiii. [https://www.arb.ca.gov/railyard/docs/uoi\\_rpt\\_06222016.pdf](https://www.arb.ca.gov/railyard/docs/uoi_rpt_06222016.pdf).

<sup>8</sup> Federal Railroad Administration, *Comparative Evaluation of Rail and Truck Fuel Efficiency on Competitive Corridors*, November 2009, pg. 9: <https://www.fra.dot.gov/eLib/details/L04317>.

<sup>9</sup> Association of American Railroads, *The Environmental Benefits of Moving Freight by Rail*, June 2017: <https://www.aar.org/BackgroundPapers/Environmental%20Benefits%20of%20Moving%20Freight%20by%20Rail.pdf>

<sup>10</sup> RailTEC, Spring 2016, pg. 49. [https://www.arb.ca.gov/railyard/docs/uoi\\_rpt\\_06222016.pdf](https://www.arb.ca.gov/railyard/docs/uoi_rpt_06222016.pdf).

<sup>11</sup>Ibid., pg. 48 and pg. xiii. [https://www.arb.ca.gov/railyard/docs/uoi\\_rpt\\_06222016.pdf](https://www.arb.ca.gov/railyard/docs/uoi_rpt_06222016.pdf).

### 3. Freight Rail in Southern California

With its deep-water ports and extensive network of railways and highways, Southern California has long been one of the country's most important hubs for freight movement. In 2014, the San Pedro Bay Ports handled about \$400 billion of international trade. Moving freight efficiently is vital to the region's economy. The freight movement sector directly involves the transportation, warehousing, trade, manufacturing, construction, agriculture, mining and utilities industries. In 2014, industries related to freight movement represented \$740 billion, or 32% of gross state product, and about 5 million jobs<sup>12</sup>.

In Southern California, the industries of freight transportation and warehousing directly contribute over 300,000 jobs and about \$25 billion of gross regional product. Industries dependent on goods movement directly or indirectly represent nearly \$300 billion in gross regional product, and support about 3 million jobs<sup>13</sup>. Warehousing, distribution and logistics centers in Southern California boast about 1.2 billion square feet of storage space, representing 15% of the entire U.S. market, and 40% of the West coast market. Despite the status of Los Angeles as a global entertainment and media center, the regional economic importance of these industries is exceeded by those related to freight movement.

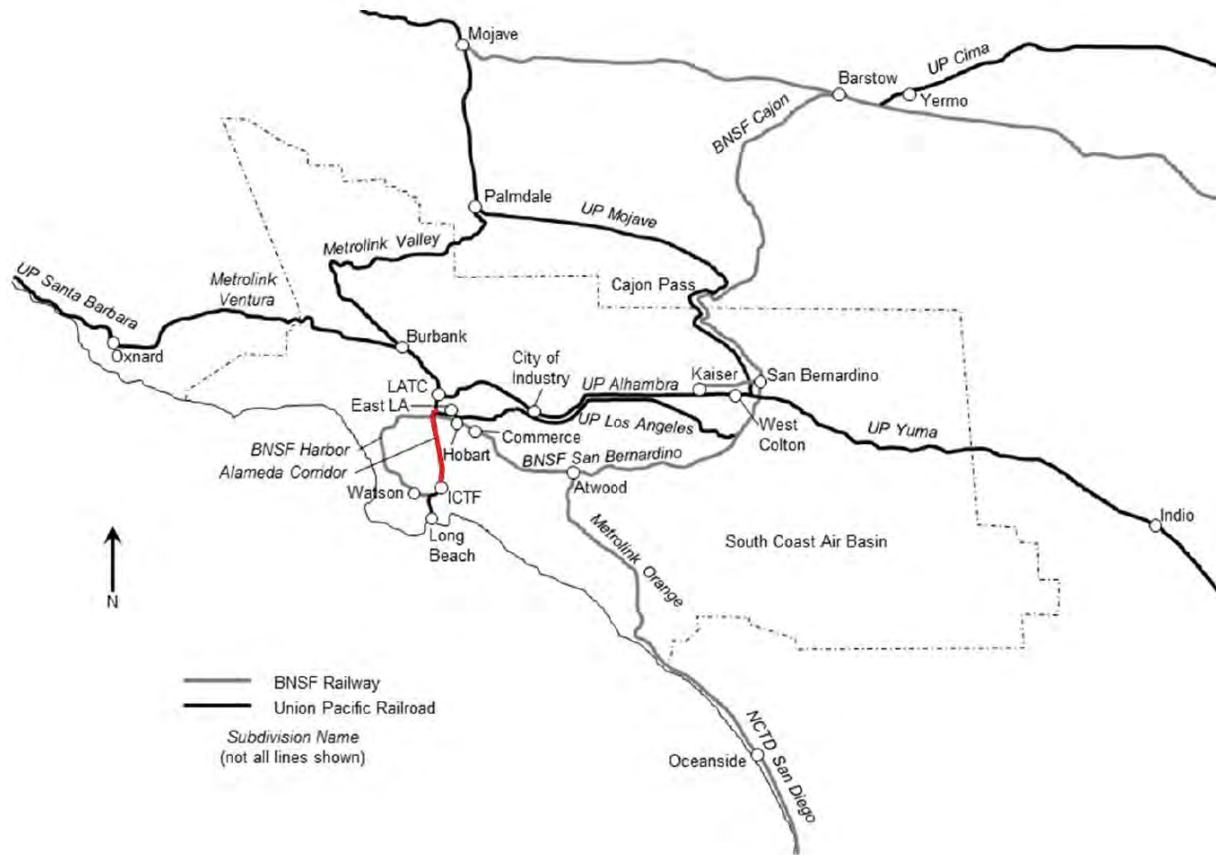
Manufacturing employs about 1.3 million in the state. While down from 2 million in 1980, this number is expected to stay at or above 1 million workers for the foreseeable future. The manufacturing industry is especially dependent on truck and rail transportation, and supports over 700,000 jobs in the Los Angeles-Inland Empire region alone. Southern California's manufacturing industry is heavily intertwined with international partners, especially in neighboring Mexico. Southern California's transport, warehousing and distribution infrastructure serves as a vital link between the large manufacturing industry of Baja California and the rest of North America.

The vast majority of California's rail freight traffic is carried by the two Class I railroads serving the state: Burlington Northern Santa Fe (BNSF) and Union Pacific (UP), which together operate about 130 line-haul freight trains each day in the SCAB. Trains originating or terminating in the South Coast Air Basin transport nearly 100 million tons of freight annually. A map of the region's major freight rail corridors, prepared for State of California Air Resources Board's 2016 zero-emissions rail report, is shown in Fig. 1 below.

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<sup>12</sup> State of California Employment Development Department, Labor Market Information by California Geographic Areas, <http://www.labormarketinfo.edd.ca.gov/geography/lmi-by-geography.html>, accessed March 21, 2016.

<sup>13</sup> Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, Goods Movement Appendix*, April 2016, pg. 5: [http://www.freightworks.org/DocumentLibrary/2016RTPSCS\\_GoodsMovement.pdf](http://www.freightworks.org/DocumentLibrary/2016RTPSCS_GoodsMovement.pdf)



**Fig. 1. Map of line-haul freight rail network in the South Coast Air Basin (SCAB) of Southern California, highlighted to show the Alameda Corridor.**

Source: Figure 3-2 from *Transitioning to a Zero or Near-Zero Emission Line-Haul Freight Rail System in California: Operational and Economic Considerations, Final Report*. Prepared for State of California Air Resources Board by University of Illinois at Urbana-Champaign Rail Transportation and Engineering Center (RailTEC), Spring 2016.

Southern California has some of the busiest railroad corridors in the U.S. For example the BNSF San Bernardino Subdivision between Los Angeles and Fullerton sees about 50 passenger trains and 40 long-haul freight trains per day, and 60 daily freight and 40 passenger trains between West Riverside and Colton. The BNSF Cajon Subdivision, over Cajon Pass, sees nearly 100 freight trains daily<sup>14</sup>. Both passenger and freight rail traffic is expected to increase in the years ahead. This increasing amount of rail traffic will make the zero-emissions benefits of electric trains even more important for trackside communities.

<sup>14</sup> Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, Goods Movement Appendix*, April 2016, pg. 29: [http://www.freightworks.org/DocumentLibrary/2016RTPSCS\\_GoodsMovement.pdf](http://www.freightworks.org/DocumentLibrary/2016RTPSCS_GoodsMovement.pdf)

*Ports of Los Angeles and Long Beach-*

The adjacent ports of Los Angeles and Long Beach, which share San Pedro Bay, combined are the busiest container port in North America. In overall tonnage, they rank as the third largest behind the ports of Houston and South Louisiana. Arguably the most important single international trade gateway on the continent, the Ports of Los Angeles and Long Beach together handle about 40% of all containerized U.S. imports. The majority of this freight is shipped by trucks and trains through the Los Angeles Basin to destinations outside of Southern California.

Rail cargo at the San Pedro Bay ports is about half intermodal containers, and half carload traffic. In California, intermodal container traffic is growing faster than carload rail traffic. In 2015, 16 million twenty-foot-equivalent units (TEUs) of intermodal container traffic moved through the San Pedro Bay Ports. For shipping containers, intermodal transitions are an essential part of the North American freight system. Intermodal container traffic is growing faster than carload traffic. However, carload rail traffic remains vital for California's agriculture, automobile, manufacturing, chemical and petroleum industries. In 2016, 28% of containerized import cargo moving through the San Pedro Bay ports left the docks by rail, and 72% by truck. In 2012, the San Pedro Bay Ports were responsible for approximately 55,000 direct daily regional truck trips, many of which are for moving containers. The trends of intermodal freight growth, such as ever-larger container ships, are leading to not only congestion of port facilities but also highways and railways. The San Pedro Bay Ports anticipate annual intermodal cargo volumes to increase about 3% per year, and to over 30 million TEUs annually by 2035.

The communities alongside San Pedro Bay live with some of the most polluted air in the nation, due to vehicle exhaust port operations, and heavy industries such as oil refineries. While much work remains to be done, the Ports of Los Angeles and Long Beach have been national leaders in reducing air pollution from ships, trains, and trucks. The ports pioneered "alternative marine power" (electrical plug-in for ships), and have introduced electric trucks, cranes, and lifting equipment, as well as restrictions on ship speed and port emissions. The 2017 San Pedro Bay Ports Clean Air Action Plan (CAAP) is poised to continue this innovation in electric trucks, cranes, lifting equipment, and electrical plug-ins and other at-berth pollution control technologies for ships.

The 2017 CAAP calls for expanding the use of on-dock rail by investing in improvements to the port-wide rail network, with the long-term goal of moving 50% of all cargo leaving the ports by rail, and a near-term goal of 35%<sup>15</sup>. The CAAP also calls for the continued exploration of short-haul rail. The 2017 CAAP draft update, released in July 2017, did call for the planning of the electrification of transportation sector and freight movement equipment. The plan has the worthy goal of increasing the percentage of Port-related goods movement trips that use zero-emissions technology to at least 15% by 2025 and 25% by 2035<sup>16</sup>. The plan did not mention rail electrification specifically, but did say that in the future "the Ports will continue to seek opportunities with rail operators and technology developers to demonstrate and deploy locomotive technologies than can achieve zero-emissions track miles"<sup>17</sup>.

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<sup>15</sup> Port of Long Beach & Port of Los Angeles, *San Pedro Bay Ports Clean Air Action Plan 2017, Draft Final Clean Air Action Plan Update*, July 2017, pg. 56:

<http://www.cleanairactionplan.org/documents/clean-air-action-plan-2017-draft-document-final.pdf>

<sup>16</sup>Ibid., pg. 21.

<sup>17</sup> Ibid., pg. 57.

The Port of Long Beach and the Port of Los Angeles should continue their clean technology vision by leading the way in electrified freight rail. Freight rail electrification would build upon, and add value to, the large infrastructure investments that the ports are making to shift more freight from truck to rail.

The majority of intermodal containers are transported by truck to and from the port. On-dock railyards offer the greatest opportunity to reduce the greatest reduction of truck miles per container, yet represents roughly 10% of the San Pedro Bay ports' intermodal freight traffic. The amount of containers transferred to on-dock rail is increasing, and transferring more containers from ship to rail is a goal of both ports. Both ports now have on-dock rail infrastructure at nearly all container terminals. The past decade has seen more than \$2 billion worth of port-area on-dock rail capacity improvements, and there is \$1 billion of proposed investment in near-dock rail infrastructure<sup>18</sup>.

Off-dock railyards, including near-dock facilities that are 5 miles or less away from the port, handle about 30% of the San Pedro Bay ports' intermodal freight traffic. The largest near-dock intermodal rail yard is UP's Intermodal Container Transfer Facility (ICTF) in Long Beach, astride the Alameda Corridor. UP's proposed expansion of ICTF, and BNSF's proposed near-dock Southern California International Gateway (SCIG) project along the Alameda Corridor in the Wilmington neighborhood of Los Angeles, have met significant community opposition largely due to air pollution concerns. Further inland, the off-dock intermodal facilities include BNSF's San Bernardino and Hobart (the busiest in the country) yards, and UP's LA Transportation Center (LATC) and City of Industry yards. Also important for freight movement in the region are transloading or transshipment facilities, where goods are typically taken out of 40' international containers arriving from the port, sorted, repackaged or placed in storage, then moved to a 53' container for domestic shipping to the rest of the U.S.

Electrification is possible for all land movements of a shipping container, from unloading off a ship with an electric crane, drayed by an electric truck to a nearby transshipment facility or intermodal yard, moved around at that facility with an electric forklift, and carried away on an electric train. By reducing GHG emissions and other air pollution per ton of intermodal freight, electrification would make the ports more environmentally competitive.

#### *Alameda Corridor-*

The Alameda Corridor is operated by the Alameda Corridor Transportation Authority (ACTA), a public joint powers authority formed by the cities of Long Beach and Los Angeles<sup>19</sup>. Union Pacific and BNSF both utilize the heavily-used route that connects the Ports of Long Beach and Los Angeles (both served by the Pacific Harbor Line), to the major railroad yards east of Downtown Los Angeles, shown on the Pacific Harbor Lines map in Fig. 2 below. Completed in 2002 as a significant upgrade to an existing rail line, the Alameda Corridor was financed and built by the ACTA with over \$2 billion of public money. One of the project's main goals was shifting more freight to rail instead of truck. The line also includes a series of new grade-separated underpasses, overpasses to entirely separate the Alameda Corridor's tracks from automobile and pedestrian crossings.

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<sup>18</sup> Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, Goods Movement Appendix*, April 2016, pp. 32-34:  
[http://www.freightworks.org/DocumentLibrary/2016RTPSCS\\_GoodsMovement.pdf](http://www.freightworks.org/DocumentLibrary/2016RTPSCS_GoodsMovement.pdf)

<sup>19</sup> Alameda Corridor Transportation Authority: <http://www.acta.org>



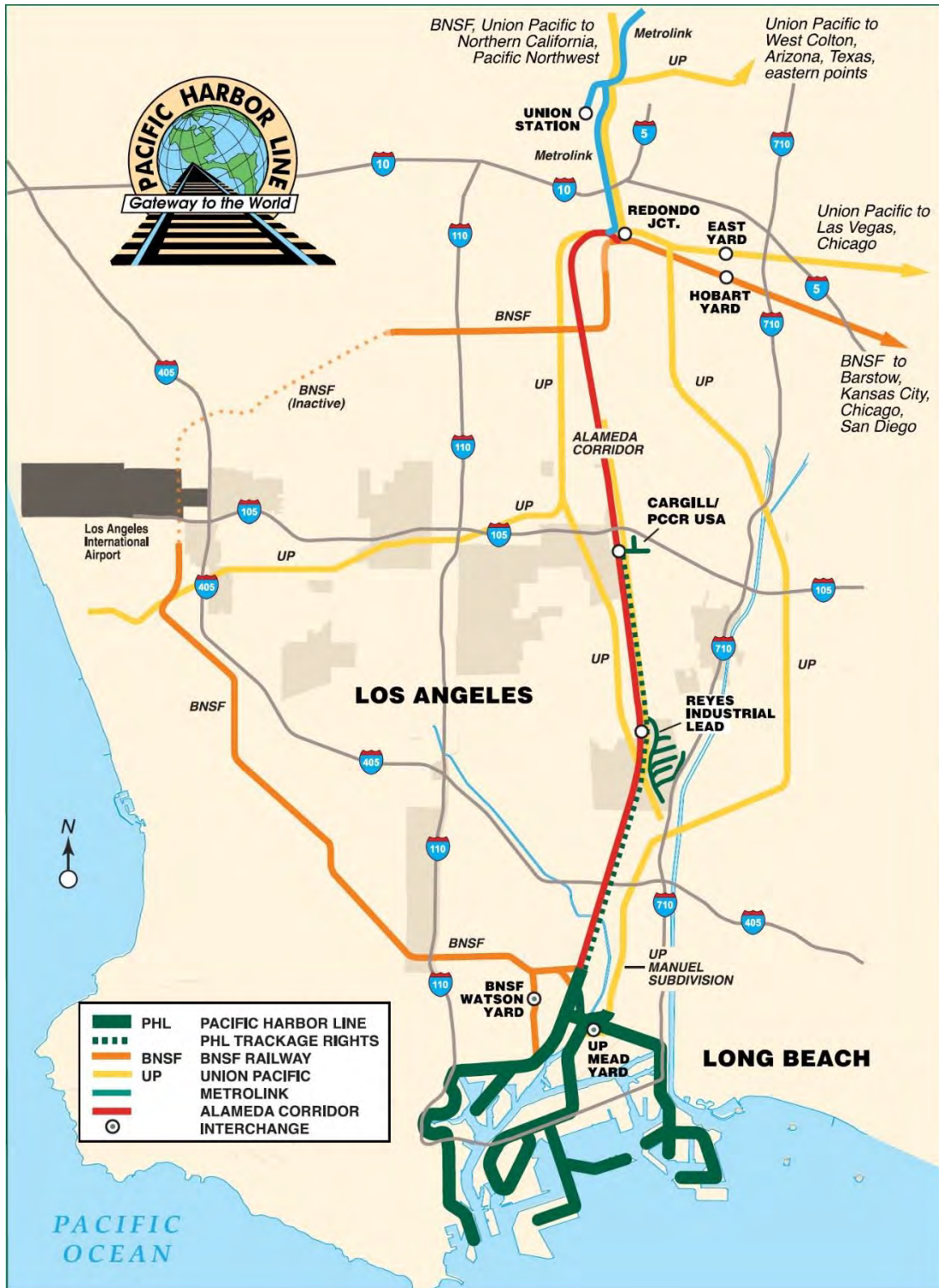


Fig. 2. Map of the Alameda Corridor, Pacific Harbor Line, and connecting freight rail lines.

Source: Anacostia Rail Holdings, <http://www.anacostia.com/sites/www.anacostia.com/files/assets/PHL-LA-LBTml-Map081414.pdf>

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The 20-mile, triple-tracked line was built with enough vertical clearance (25' minimum) for an overhead catenary wire over a double-container stacked train, along with other features such as spaces for substations, which could be used for future electrification. The Alameda Corridor's Mid-Corridor Trench, shown in the photo in Fig. 3 below, is a 33' deep, 10 mile-long, below-ground segment that is that allows the rail line to avoid more than 200 street-level railroad crossings. Currently used by about 40 trains per day, the Alameda Corridor has the capacity for about 150, making the corridor an underutilized resource. However, the corridor is still credited with reducing truck traffic congestion on the I-710 and other freeways. The Alameda Corridor Operating Agreement presently states that the ACTA cannot require the private railroads to use electric locomotives.



**Fig. 3. A section of the Alameda Corridor's mid-corridor trench in the city of Compton.**  
Photo by Brian Yanity

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*Freight rail improvements-*

Freight transportation planning policy in Southern California in recent years has advocated the shifting of more freight from truck to rail, to reduce vehicle miles traveled (VMT) on the region's highways. The economic costs of highway congestion and delays affect timeliness and reliability of shipments, and waste fuel. Heavy trucks are also the greatest source of wear and tear on roads. Economic costs of delays are often passed on to consumers. The environmental costs of highway congestion include increased fuel use and pollution. Ongoing and proposed railroad capacity improvement projects in Southern California, to benefit both passenger and freight rail include:

- Grade separations
- Additional main line tracks to increase main line capacity
- Additional sidings, local unloading/loading tracks, and rail yard expansions
- Improved signal systems and Positive Train Control (PTC)
- On-dock rail capacity expansion at the San Pedro Bay Ports
- Locomotive upgrades, including introduction of cleaner Tier 4 diesel locomotives

The Southern California Association of Governments' *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, Goods Movement Appendix* in April 2016 proposed an \$11 billion package of regional rail improvement projects of the type listed above<sup>20</sup>.

Electrification would build upon the above-mentioned improvements to further enhance the reliability, capacity, and sustainability of the region's rail system. The Alameda Corridor and the Pacific Harbor Line system around the ports could serve as a pioneering example of freight rail electrification. The Alameda Corridor is owned by the public, and it is in the public's interest to reduce air pollution by electrifying the trains running through populated areas. The Alameda Corridor was built with enough vertical clearance for an overhead catenary wire over a double-container stacked train, along with other features designed in anticipation of future electrification. Electrification of the proposed short-haul rail service between the ports and the Inland Empire, currently under study, is an opportunity for using electric locomotives through the Alameda Corridor in the near- to medium-term. All-electric locomotives dedicated to the short-haul service could operate along less than 100 miles of electrified track between San Pedro Bay and the Inland Empire, while conventional non-electric line-haul freight trains could continue use the same tracks.

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<sup>20</sup> Southern California Association of Governments, *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy, Goods Movement Appendix*, April 2016, pp. 30-34:

[http://www.freightworks.org/DocumentLibrary/2016RTPSCS\\_GoodsMovement.pdf](http://www.freightworks.org/DocumentLibrary/2016RTPSCS_GoodsMovement.pdf)

#### 4. Electric Rail Around the World

Most urban rail systems in the U.S. run on electricity, but electrification is sparse in the nation's intercity rail network. Amtrak runs electrified passenger service along the 457-mile Northeast corridor from Boston to Washington, and the Keystone Corridor from Philadelphia to Harrisburg, Pennsylvania. While electricity is now a major source of motive power for freight railroads in most advanced economies, the percentage of U.S. rail freight hauled using electricity is close to zero. Three lines totaling about 130 miles carry coal from mines to power plants in Arizona, Utah and New Mexico, while the Iowa Traction Railway runs 18 miles of electric line from Mason City to Clear Lake.

Outside of North America, electric freight trains are very common, as shown below in Table 1. Almost every industrialized country, including nearly all of Europe and Japan, has an extensive network of electrified freight rail. Russia's Trans-Siberian Railway electrification was completed in 2002 - over 6,000 miles. Switzerland is all electric, except for one tourist line that has steam engines. Over one quarter of India's railways are electrified, and its first two freight-only electric rail lines are under construction in northern India, to carry double-stacked container under the wires. Nations from Chile to South Africa are investing in expanding or building new electrified rail lines, while China is in the middle of electrifying 20,000 km of existing track. As described by the *Solutionary Rail* book:<sup>21</sup>

AROUND A QUARTER OF THE WORLD'S RAIL LINES ARE ELECTRIFIED, 186,000 miles out of a total of 808,000. Western Europe leads with 53% of lines propelled by electricity, while North America trails with 1%. The global electrification market "continues to grow dynamically," particularly in Western Europe, Africa and the Middle East, SGI/Verkehr reports. Electricity's share in fueling rail is growing, up from 17% in 1990 to 36% in 2012, while oil has held steady at 58% and coal decreased from 25% to 6%....

However, these figures understate the significance of electrification. Typically it is the more heavily used lines that are electrified. For example, though France is only 52% electrified, 85% of freight and 90% of passengers run on electrified lines.

In Russia the Trans-Siberian, at nearly 6,000 miles the longest continuous rail line in the world, was fully electrified by the end of 2002. This is notable because it runs in one of the world's harshest environments and because reliable operation is critical to Russia's strategic control of its eastern regions. The rail line carries 30% of Russian exports. Overall, electric lines carry 70% of Russian freight, the equivalent in ton-miles of 80% of US rail freight... China's rail electrification has expanded rapidly. Concerted efforts have grown the percentage from only 5% in 1975 to over 40% today.

Smaller economic powerhouse nations have largely electrified rail systems. Sweden grew electrification from 61% in 1970 to 77% of its system in 2005. The Netherlands has increased its electrified network from 52% in 1970 to 73% in 2005. Switzerland is a global standout with a 100% electrification rate. That nation is in the midst of a major rail line improvement program, a central goal of which to move freight from trucks to electric rail. In 17 European nations the rail network is at least 40% electrified.

Great Britain, which has lagged other European nations with only 33% of its rail network electrified, in 2007 announced a £1.1 billion effort to expand electrification. The Great Western Line linking London with Wales is slated for full electrification by 2017. Liverpool-Manchester, one of the world's oldest rail lines, was electrified in 2015.

Nations around the world that have recently expanded electrified rail or are engaged in significant efforts to do so include Chile, Taiwan, Malaysia, Iran, Israel, Saudi Arabia, Kazakhstan, Uzbekistan, Ethiopia, South Africa, Denmark, Norway, and New Zealand. Electrified rail is working around the world. It can work in the US again.

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<sup>21</sup> Bill Moyer, Patrick Mazza and the Solutionary Rail team ( <http://www.solutionaryrail.org/> ). *Solutionary Rail: A people-powered campaign to electrify America's railroads and open corridors for a clean energy future*, October 2016, pp.15-17.

**Table 1: Railroad electrification around the world (as of 2016)<sup>22</sup>**

Country	Miles Electrified (approx.)	Percentage Electrified
Ethiopia/Djibouti	470	100%
Switzerland	3,200	99%
Belgium	1,900	85%
Sweden	7,600	76%
Japan	12,500	75%
Netherlands	1,400	72%
South Korea	1,600	70%
China	50,000	65%
Italy	8,200	65%
Spain	6,300	64%
Poland	7,400	62%
Austria	2,200	61%
Morocco	800	61%
Germany	12,400	60%
Finland	2,000	55%
France	9,400	52%
Russia	27,000	50%
South Africa	5,900	45%
India	14,700	35%
United Kingdom	3,300	33%

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<https://www.cia.gov/library/publications/the-world-factbook/fields/2121.html>
[http://uic.org/IMG/pdf/synopsis\\_2015\\_print\\_5\\_.pdf](http://uic.org/IMG/pdf/synopsis_2015_print_5_.pdf)
[http://statbel.fgov.be/fr/statistiques/chiffres/circulation\\_et\\_transport/transport/ferroviaire/](http://statbel.fgov.be/fr/statistiques/chiffres/circulation_et_transport/transport/ferroviaire/)

## 5. Existing and Historical Electric Freight Railroads in North America

There are only four all-electric freight railroads currently in operation in the United States. Three of the existing U.S. all-electric freight railroads are dedicated and isolated lines to haul coal between a mine and a coal-fired power plant. These are the Black Mesa & Lake Powell Railroad (78 mile length, completed 1973) in Arizona, the Deseret Power Railroad (39 mile length, completed 1984) between Utah and Colorado, and the Navajo Mine Railroad (14 mile length, electrified 1984) in New Mexico. All three lines use GE E60C all-electric freight locomotives built in the 1970s and 80s, which utilize 25 kV or 50 kV overhead catenary. The GE E60Cs are rated at 6,000 horsepower, but with 333 kN of starting tractive effort, have about one-third the pulling power of typical U.S. diesel-electric freight line-haul locomotives. The fourth existing U.S. electric freight railroad is the Iowa Traction Railway, which runs 18 miles of electric line from Mason City to Clear Lake, and can interchange freight cars with a Class I railroad network. The Iowa Traction Railway's four small Baldwin-Westinghouse electric locomotives are nearly 100 years old and still operating.

Several notable, pioneering electric freight rail lines existed in the U.S. during the first half of the 20<sup>th</sup> Century, particularly for steep mountain grades. In the Washington Cascades, the Great Northern Railway electrified its Cascade Tunnel in 1909. The longest lasting of the large U.S. freight rail systems were those of Pennsylvania's Keystone Corridor and the Milwaukee, St. Paul and Pacific Railroad (commonly referred to as the Milwaukee Road). The Milwaukee Road electrified 645 route miles of its Pacific Extension in two long sections of the Rocky and Cascade mountain ranges between 1914 and 1920, the longest electric railroad in the world at the time<sup>23</sup>. The Pennsylvania Railroad had electrified nearly 2,700 miles of its track by the end of the 1930s<sup>24</sup>. The Sacramento Northern Railway, which ran between Oakland, Sacramento and Chico, ran electric freight locomotives until 1965<sup>25</sup>. The Milwaukee Road electrification ended in 1974, and in Pennsylvania the last electric freight trains (then run by Conrail) ran in 1981. Elsewhere in North America, Mexico ran electric freight rail for about 140 miles between Mexico City and Queretaro between 1994 and 1997, using GE E60 locomotives. In Canada, BC Rail used all-electric locomotives on an 85-mile line to a coal mine between 1984 and 2000. As further described by the Spring 2016 CARB RailTEC report<sup>26</sup>:

The most significant electrified mainline line-haul freight operation in the United States, and last to remain in service, was the route between New York, Philadelphia and Harrisburg, Pennsylvania, last operated by Conrail and now part of Norfolk Southern. Previous electrified networks operated by the Milwaukee Road and Norfolk & Western were removed from service in 1974 and 1962, respectively. Part of the reason for the longevity to the Harrisburg electrification is that it operated between two major gateway terminals at one extreme end of the Conrail network. Harrisburg was the location of Enola Yard, one of the largest hump classification yards in North America. The majority of trains traversing the electrified territory operated between an origin on the Philadelphia-New York electrified territory and Enola Yard for reclassification. With both origin and destination on the electrified territory, the trains did not need to make a mid-route locomotive change (Bezilla, 1980). The two other major electric operations that were discontinued years earlier were all located in the middle

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<sup>23</sup> Middleton, William D. (2001) [1974]. *When the Steam Railroads Electrified (2nd ed.)*. Bloomington, IN: Indiana University Press, pgs. 226, 230.

<sup>24</sup> "Electrification History to 1948". *Pennsylvania Railroad Electrification*. [www.railsandtrails.com](http://www.railsandtrails.com) : <http://www.railsandtrails.com/PRR/BOD1948/electric.htm#text>

<sup>25</sup> <http://www.wrm.org/about/railroad-history/sacramento-northern-railway>

<sup>26</sup> *Transitioning to a Zero or Near-Zero Emission Line-Haul Freight Rail System in California Operational and Economic Considerations, Final Report*. Prepared for State of California Air Resources Board by University of Illinois at Urbana-Champaign Rail Transportation and Engineering Center (RailTEC), Spring 2016, pg. 30. [https://www.arb.ca.gov/railyard/docs/uo\\_i\\_rpt\\_06222016.pdf](https://www.arb.ca.gov/railyard/docs/uo_i_rpt_06222016.pdf)



of train routes and away from major terminals, leading to locomotive changes, delay and logistical issues (Marchinchin, 2013).

In British Columbia, Canada, 84.5 miles of new mainline constructed by BC Rail to reach two new coal mines were electrified in 1984. This route segment operated with electric locomotives until 2000. Coal trains serving the mines executed a locomotive change at an exchange point located at the southern end of the electrification. The electric locomotives transported the empty trainsets to the mine for loading and return to the exchange point. During this process, the diesel-electric locomotives were staged in a siding track. The locomotive exchange facility was not placed at a crew change point; as crews completed the locomotive exchange, they continued their run with the new motive power. Since the volume of traffic never exceeded three loaded trains per day, logistical issues at the exchange point were minimized. The commodity being transported, coal for overseas export to Japan, was also not particularly sensitive to delays associated with the locomotive exchange operation. Electrified operations were terminated in 2000 as coal production at the mines was scaled back and BC Rail, previously operating as a government-owned corporation, was privatized through a lease to Canadian National.

In Mexico, a 154-mile segment of freight mainline between Mexico City and Queretaro was electrified with operations commencing in 1994. The electrification had originally been planned to extend to the major terminal in San Luis Potosi with fast, frequent shuttle train service between the two end points. Due to financial difficulties, the electrification was terminated in Queretaro, a location that was neither an existing locomotive servicing point nor a crew change point for through trains. The need for a mid-route locomotive change created delays and logistical issues with balancing motive power. When the route was privatized in 1997, electric operations were immediately terminated in favor of run-through diesel-electric locomotives.

In each case, maintenance of the overhead catenary system, and the capital cost of replacement or refurbishment at the end of its service life, is often cited as the primary reason for discontinuing electric operations. However, improved locomotive utilization and elimination of delay from locomotive changes were also significant factors.

## 6. Electric Freight Locomotives

For widespread freight rail electrification to work again on a large scale in the U.S., there is a need for a new generation of all-electric locomotives designed specifically for the U.S. freight market. The 2016 CARB Railtec report estimated the cost of a new all-electric U.S. line-haul freight locomotive to be roughly \$5 million/unit, compared to average price of \$3 million/unit for a comparable Tier 4 diesel-electric locomotive<sup>27</sup>. There could be advantages in using an adapted, in production electric locomotive for a small order for the short-haul freight service in the Alameda Corridor, or between the ports and the Inland Empire. Perhaps the Bombardier IORE freight or the Siemens ACS-64 passenger locomotives (see Table 2 below) could be modified for Southern California short-haul freight rail service, pulling lighter and faster trains than an interstate line-haul freight train. It is also possible for an existing line-haul freight locomotive, with its higher weight, tractive effort and six-axle chassis, to be converted to all-electric by replacing the diesel engine with a catenary pantograph and transformer system.

The weight of a long-distance, U.S. line-haul freight train ranges between 10,000 and 20,000 short tons. The most powerful diesel-electric locomotives used in U.S. freight service are the 6,000 hp GE AC6000CW (840 kN/189,000 pounds starting tractive effort, 740 kN/166,000 pounds continuous) and EMD SD90MAC (890 kN/200,000 pounds starting tractive effort, 734 kN/165,000 pounds continuous). However, U.S. freight railroads have moved away from such high-horsepower locomotives as they have found it more efficient to use multiple locomotives, of less than 5,000 hp each, as distributed tractive power in the front, middle, or rear of a train. An example of a more typical large Tier 4 U.S. line-haul diesel-electric locomotive currently being manufactured is the EMD SD70ACe-T4 (4,600 hp, 890 kN/200,000 pounds of starting and 780kN/175,000 pounds continuous tractive effort). In general, locomotives in North America have three size classifications:

- Small, Freight Yard ‘Switcher’: 750 kW to 1.72 MW (1,000 to 2,300 horsepower)
- Medium-Power Locomotive: 1.72 to 2.8 MW (2,300 to 3,800 horsepower)
- Large ‘Line-Haul’ Locomotive: 2.8+ MW (3,800+ horsepower)

An electric locomotive can be designed to match or exceed the performance specifications required by U.S. line-haul freight trains. In fact, the world’s most powerful locomotives are all-electric, as shown below in Table 2. In China, a single HXD1 two-section, all-electric locomotive set pulls entire 20,000-ton coal trains using a 25 kV catenary system. For the 535-mile Sishen–Saldanha Ore line, South African Railways uses a 50 kV catenary system for hauling iron ore trains typically in excess of 40,000 metric tons (44,000 short tons), shown below in Fig. 4. More than double the weight of a typical U.S. line-haul freight train, these trains are pulled by up to nine all-electric Mitsui Class 15E locomotives in distributed configuration, not unlike their American counterparts.

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<sup>27</sup> *Transitioning to a Zero or Near-Zero Emission Line-Haul Freight Rail System in California Operational and Economic Considerations, Final Report*. Prepared for State of California Air Resources Board by University of Illinois at Urbana-Champaign Rail Transportation and Engineering Center (RailTEC), Spring 2016, pg. 58. [https://www.arb.ca.gov/railyard/docs/uo\\_i\\_rpt\\_06222016.pdf](https://www.arb.ca.gov/railyard/docs/uo_i_rpt_06222016.pdf)



**Fig. 4. South African Railways iron ore train on Sishen–Saldanha Orex line, pulled by electric locomotives under 50 kV catenary.**  
(Photo: Peter Ball collection, <http://www.theheritageportal.co.za/article/south-africas-world-record-breaking-train> )