

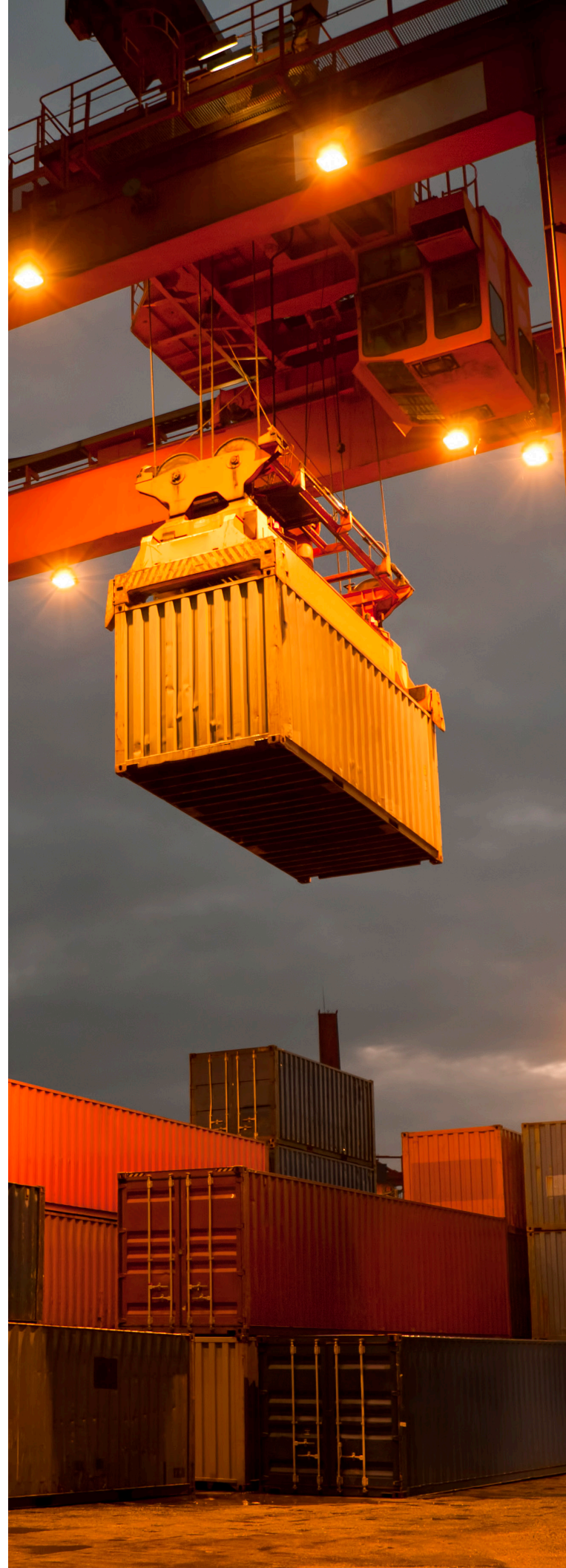
Streamlining Sustainability

Regulatory and Permitting Improvements to Achieve California's Freight Goals

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About this Report

This report is the result of a convening with regulators, advocates, industry members, and other stakeholders in California's freight system, jointly sponsored and organized by the California Governor's Office of Business and Economic Development, the California Governor's Office of Planning and Research, and UC Berkeley School of Law's Center for Law, Energy & the Environment.

This report and its recommendations are solely a product of the UC Berkeley School of Law and do not necessarily reflect the views of all individual convening participants, reviewers, or the Governor's Office of Business and Economic Development or the Governor's Office of Planning and Research.

About CLEE

The Center for Law, Energy & the Environment (CLEE) channels the expertise of the Berkeley Law community into pragmatic policy solutions to environmental and energy challenges in California and across the nation. CLEE works with government, business, and communities on initiatives that focus on reducing greenhouse gas emissions, advancing the transition to renewable energy, and ensuring clean water for California's future.

Authorship

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Executive Summary

Sustainable Freight Action Plan: Action 9

Develop a process involving federal, regional and local agencies, industry, environmental, and community stakeholders, to identify regulatory or permitting process improvements to expedite the delivery of projects identified as meeting the objectives of this plan, while upholding public participation and assessment of environmental, community, and health impacts as part of the process.¹

California's environment and economy would greatly benefit from deployment of new freight infrastructure and technology. These projects, such as freight corridors that allow heavy-duty trucks to travel independent of passenger traffic with smart sensors and platooning capability, electric vehicle fast-charging networks, or fully modernized ports, all promise significant benefits to the state's residents.

Yet deployment of these and other smart projects often face myriad obstacles, from complex permitting processes to financial challenges. At stake is a freight system that is responsible for approximately one third of all jobs within California as well as approximately one-half of its most harmful air pollutants. Freight supports California's farming and industrial communities, delivers goods to residents and businesses throughout the state, and contributes to jobs in port-adjacent communities and throughout California. It also causes billions of dollars in health care costs each year and contributes to the causation of climate change.

To address the challenge, California's Sustainable Freight Action Plan calls for a range of regulatory actions to promote the vitality and growth of this essential industry while reducing its negative health and climate impacts. The plan seeks to promote and integrate more efficient, low-emitting vehicle and goods movement technologies and infrastructure projects to reduce freight emissions and increase economic growth. Achieving these dual goals requires sustained collaboration among all stakeholders—state and local governments, industry leaders, labor groups, and community and environmental advocates.

The Sustainable Freight Action Plan specifically focuses on regulatory and permitting process improvements to facilitate project deployment through its "Action 9." In particular, Action 9 seeks to speed the development of complex projects needed to increase the efficiency of California's freight system by removing regulatory barriers and conflicts.

As part of the broader effort to implement Action 9, in June 2018 the Governor's Office of Business and Economic Development (GO-Biz), the Governor's Office of Planning and Research (OPR), and the UC Berkeley School of Law Center for Law, Energy & the Environment (CLEE) convened a group of experts from throughout California's freight system for a symposium to identify top barriers and solutions for deploying smart freight projects. The group included representatives from key state energy and transportation agencies, the ports, the trucking and logistics industries, and the labor and environmental communities.

Participants identified a number of existing barriers to the achievement of this vision, and a group of priority solutions to overcome those barriers (listed on the following page).

- **Barrier 1:** A lack of communication and engagement between communities and industry leads to inefficiency in local land use decision making, California Environmental Quality Act (CEQA) conflicts, and risk for developers and investors.

- *Solution:* Increase developer and lead agency engagement with local communities.
- *Solution:* Create a messaging campaign to advertise the importance and benefits of freight projects.
- *Solution:* Consider devising a process for independent, alternative review of CEQA claims and explore options to refine standing requirements for CEQA litigants.
- *Solution:* Increase the use of community benefit agreements to build community support.

- **Barrier 2:** A lack of coordination across utility processes, infrastructure permitting, and the needs of zero-emission freight technology exacerbates inefficiencies.

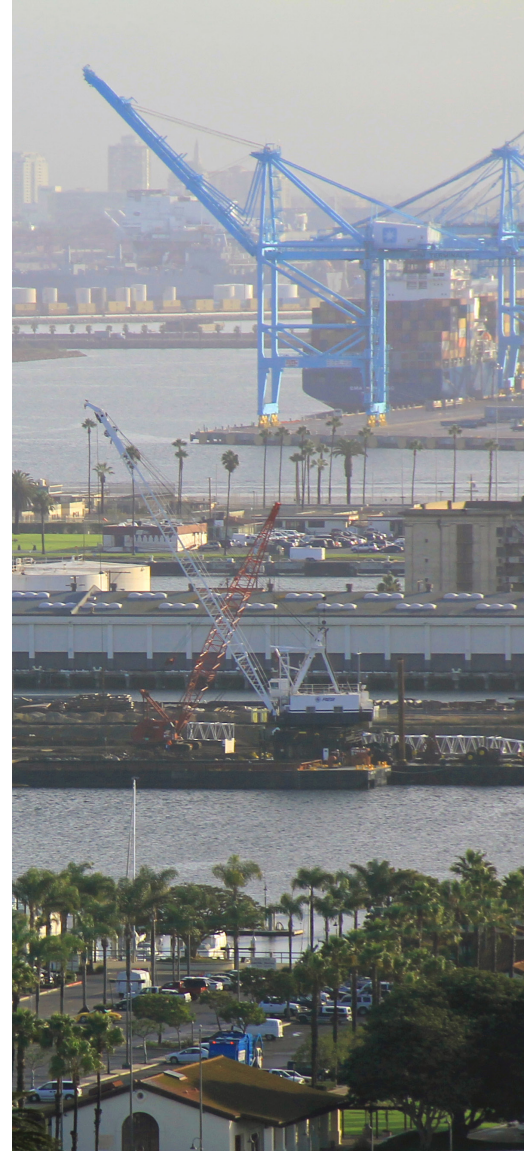
- *Solution:* Convene sustainable freight “red teams” to assist in the delivery of major projects.
- *Solution:* Increase the use of tiered CEQA review and other streamlining measures for qualifying freight projects.

- **Barrier 3:** A lack of supply chain data standardization and access slows adoption of efficient and sustainable technologies.

- *Solution:* Devise and implement data optimization pilot projects to identify practical regimes acceptable to industry and regulators.
- *Solution:* Convene stakeholders to discuss data challenges and opportunities.

- **Barrier 4:** The potential for unjust labor transitions slows adoption of zero-emission technology.

- *Solution:* Explain and emphasize the distinction between zero-emission and automated freight technologies.
- *Solution:* Increase support for labor transition programs, but limit state involvement in hiring and employment decisions.



This report details these barriers and proposed solutions and provides an overview of the freight system and its economic and environmental impacts.

Introduction

The Sustainable Freight Action Plan, jointly issued in 2016 by the California Department of Transportation, the California Air Resources Board, the California Energy Commission, and the Governor's Office of Business and Economic Development, lays out a long-term vision for a California's freight system in 2050. The document seeks to "move freight in California on a modern, safe, integrated, and resilient system that continues to support California's economy, jobs, and healthy, livable communities" while "[t]ransporting freight reliably and efficiently by zero emission equipment everywhere feasible, and near-zero emission equipment powered by clean, low-carbon renewable fuels everywhere else."² The plan set three 2030 targets to achieve this vision:

- Improving system efficiency (value of goods relative to emissions) by 25 percent;
- Deploying over 100,000 zero-emission vehicles and equipment; and
- Increasing economic growth and competitiveness.

The system that the Sustainable Freight Action Plan seeks to evolve is the largest in the country and essential to international trade. It encompasses 12 deep-water seaports, 12 major cargo airports, three international commercial border crossings, 6,000 miles of railroad track, and 6,000 miles of major highways supporting four modes of transit (sea vessels, trains, trucks, and airplanes) and seven types of facilities (seaports, airports, rail yards, distribution centers, warehouses, high traffic highways, and border crossings).³ This system is a significant driver of both California's economic development and its air emissions.

Regulators and industry leaders in California's extensive freight system have begun to make progress advancing the goals of the Sustainable Freight Action Plan. Manufacturers such as Cummins, Tesla, and Thor have begun to develop and debut battery electric medium- and heavy-duty trucks with carrying capacities and ranges that may soon compete with traditional diesel vehicles.⁴ The Ports of Los Angeles and Long Beach updated their Clean Air Action Plan in 2017, calling for ambitious reductions in greenhouse gas and harmful air emissions via increases in electrification and port efficiency.⁵ And in mid-2018, the California Public Utilities Commission approved over \$300 million for medium- and heavy-duty electric vehicle charging infrastructure by the state's investor-owned utilities.⁶ Industry and public sector leaders will need further progress, including the regulatory and permitting process advancements envisioned by Action 9, to consolidate and expand these initial developments.



Freight and Employment

Freight is responsible for approximately one third of the state's economy, while one third of all jobs in California are in freight-related industries (i.e., industries such as trade, manufacturing, and farming that rely on or are directly linked to the physical movement of goods).⁷ Approximately 240,000 Californians work as truck drivers, and over 340,000 Californians are employed as freight and material movers.⁸ Ports are particularly significant freight employers, responsible for high proportions of jobs in local communities. According to internal estimates, the Ports of Los Angeles and Oakland facilitate approximately 147,000 and 73,000 local jobs, respectively, while the Ports of Los Angeles and Long Beach (together known as the San Pedro Bay Ports) support nearly one million jobs combined in California.⁹ In total, freight is related to over five million California jobs. As the Sustainable Freight Action Plan recognizes, the development of a sustainable freight system will be necessary for continued growth of the freight economy and these jobs.

Freight and Emissions

Yet freight is also responsible for disproportionately high shares of California's harmful air emissions. Approximately 50 percent of diesel PM_{2.5} emissions, 45 percent of nitrogen oxides emissions, and six percent of greenhouse gas emissions in California come from the trucks, trains, ocean vessels, and port equipment that move goods to and within the state.¹⁰ These emissions cause thousands of premature deaths and billions of dollars in medical costs each year, as well as climate change-related damages such as sea level rise, more powerful storms, and more frequent and bigger wildfires.¹¹ Negative health impacts are most severe in communities located near ports, rail yards, and other major freight facilities, where heightened exposure to harmful diesel emissions increases the risk of asthma, cancer, and heart disease.¹² These impacts are disproportionately felt within low-income communities and communities of color.¹³ Advancing sustainable freight targets will therefore reduce these health risks and help California achieve its long-term greenhouse gas emission reduction goals.

Vision, Barriers, and Solutions

Participants at the June 15, 2018 convening described an ideal freight regulatory and permitting ecosystem that will accelerate the development of a sustainable freight system based on the following characteristics:

- Greater cohesion and communication among stakeholders via common goals, cultures, and metrics
- Faster, streamlined, and holistic permitting processes for infrastructure and long-term investments
- Increased involvement of and assistance to local communities and decreased conflict over and misuse of the California Environmental Quality Act (CEQA)
- Better generation and sharing of data and information across industry and government

Participants identified a number of existing barriers to the achievement of this vision and set forth a group of priority solutions to overcome those barriers, detailed in the following pages.

“A system that is economically competitive, environmentally sound, and inclusionary is completely agreed. The question is: how do we get anything done? Where are the redundant steps, and where are we making more work for everyone?”

Fran Inman
Majestic Realty

Barriers & Solutions



Barrier 1: A lack of communication and engagement between communities and industry leads to inefficiency in local land use decision making, CEQA conflicts, and risk for developers and investors.

Participants described freight project development and approval processes that are delayed and halted due to insufficient support in local communities. Many sustainable freight infrastructure projects bring economic benefits to local communities in the form of construction jobs and long-term employment opportunities and generate environmental benefits for the state in the form of increased efficiency and emission reductions. But local environmental impacts—such as from increased truck traffic to a new distribution facility—and changes to community character can generate significant opposition. This resistance, in turn, can add delay and increased costs to expensive project development processes, slowing the integration of more efficient and zero-emission freight infrastructure throughout California. In addition, CEQA litigation can sometimes serve as a forum for disputing non-environmental issues, adding project delays for ancillary concerns not related to environmental benefits or harms.

Both local land use approvals and CEQA can play into this dynamic. CEQA requires analysis and mitigation of the environmental impacts of development projects proposed, approved, or funded by government entities. Environmental and community advocates can sue, potentially delaying or blocking projects, if that analysis is incomplete or if lead agencies select insufficient mitigation options. Meanwhile, even if a new sustainable freight infrastructure project has state support or will help achieve Sustainable Freight Action Plan goals, project proponents

“One of the reasons that CEQA can be a problem is that freight project benefits are distributed across the state and the country, but costs in terms of air quality and congestion are all locally concentrated. We need to improve CEQA to help balance this cost-benefit analysis.”

Mike Jacob
Pacific Merchant Shipping
Association

will still likely require local land use approval or have a local lead agency for CEQA purposes. These local governments, which must be responsive to local demands, are a venue for environmental and community involvement in project development.

While each process can often provide vital community involvement in decisions over the disposition of local lands as well as environmental protection, many participants felt that a lack of consistent and effective communication and engagement between lead agencies, project developers, stakeholder groups, and local communities has slowed development of key sustainable freight infrastructure. In particular, they cited potential “abuse” of CEQA by third parties that may not represent local communities, causing harm to both efficient projects and environmental justice considerations. They also emphasized that project-by-project review of development goals, land use preferences, and environmental concerns can be highly inefficient, when more comprehensive reviews could provide the proper scale to balance all three interests.

Solution: Increase developer and lead agency engagement with local communities.

Project developers and lead agency leaders who fail to engage local community leaders sufficiently to identify and propose solutions to top concerns will often face CEQA challenges as a result. Outreach to community and environmental leaders at the earliest stage of project proposals, including educational programs and listening sessions (arranged in evening times that are convenient for community members), as well as giving leaders a meaningful seat at the table, could generate more project buy-in before litigation becomes a concern. Similarly, engaging third parties—ideally from neutral entities such as the University of California and the California State University system—can help increase trust early in the life of a project. More broadly, local governments and developers could support public education campaigns to increase general understanding of CEQA’s purposes and processes, which may help increase trust and reduce overall conflict. By committing more time and more funds to these early efforts, project developers and lead agency representatives can build trust with local groups rather than polarization that may increase vulnerability to CEQA lawsuits down the line.

Solution: Create a messaging campaign to advertise the importance and benefits of freight projects.

Participants felt that despite the importance of the freight system to everyday life throughout California and to the state’s economic and environmental goals, the general public lacks recognition of just how valuable freight is. In the context of the large-scale, complex infrastructure needed to advance sustainable freight goals—such as overhauls of major arterial highways, rehabilitation or introduction of new rail lines, and full-scale electrification of port complexes—this deficit can lead stakeholders (ranging from residents to local representatives to state agency staff) to underestimate the need for projects relative to their potential impacts and costs. Participants envisioned a statewide public relations and messaging campaign advertising the importance and reach of the freight system in order to increase knowledge and awareness. Such a campaign could appeal to:

“I’ve never seen an industry that is so fractured, with so many stakeholders who all agree the system is not operating optimally. Until we start forcing common language and culture and mission—working on each other’s projects even if there isn’t anything in it directly for us—we won’t be able to improve.”

Jonathan Rosenthal
Saybrook
Corporate
Opportunity Funds

“Whatever we do to improve regulatory efficiency has to have value for industry and for marginalized communities.”

David Libatique
Port of Los Angeles

“Freight-impacted communities have a simple ask of industry—to deliver benefits to remedy the harms caused by freight, and to not make things worse—which will earn their support of new projects.”

Joel Espino
Greenlining Institute

“The industry and the state do a relatively poor job of communicating to citizens that this system brings benefits—jobs, a tax base, cheaper goods, faster delivery. The public sector needs the backing of a populace that sees the benefits of the system.”

Chris Schmidt
Caltrans

- **Consumers**, by illustrating the links between major freight infrastructure—such as ports and highways—that deliver goods to their homes, stores, and workplaces;
- **Labor**, by highlighting the number and range of California jobs directly linked to freight;
- **Industry**, by underlining the importance of an efficient freight system to California’s economic competitiveness;
- **Energy and environmental regulators**, by outlining the ways that freight electrification can pave the way for an electrified passenger automobile fleet and modernized electrical grid; and
- **Local governments**, by drawing the connection between freight facilities, jobs, and tax revenue.

This campaign, drawing from examples like the “Visit California” state tourism campaign, could be joint-funded by the state and relevant freight industry players in trucking, logistics, and construction. It could provide a narrative backbone to the consensus-building efforts of the “red team” concept described later in this report, as well as an additional basis for building community buy-in to projects. This outreach, in turn, would help build more urgency to streamline and expedite permitting processes for major new freight projects.

An alternative or companion to a public messaging campaign would be a voluntary standards, compliance, and labeling program similar to the well-known Energy Star program for efficient appliances. The SmartWay program, a voluntary public-private freight collaboration run by the U.S. Environmental Protection Agency, is an example that California could replicate or expand. SmartWay participants (shippers, carriers, and logistics companies) work with EPA to generate and track fuel use and air emissions data, connect with supply chain partners to coordinate efficiency goals, and share efficiency data with customers and partners.¹⁴ Participating companies can display the SmartWay logo on their vehicles to advertise their participation and focus on efficiency. According to EPA, the program has helped nearly 4,000 participants reduce over 100 million tons of air emissions and save nearly \$30 billion in fuel costs since 2004.¹⁵ Participants expressed interest in a California-specific program to incentivize participation in efficiency programs, confer tangible benefits to the most forward-looking companies, and acknowledge the increased costs that can sometimes result from shipping through California.

U.S. EPA SmartWay Program Logos



Source: U.S. Environmental Protection Agency.

Solution: Increase the use of community benefit agreements to build community support.

Sustainable freight projects can provide statewide benefits in the form of reduced emissions, reduced road congestion, and economic growth. However, the communities where projects are sited may not experience all these benefits directly and may receive insufficient direct benefits relative to the local impact of a new roadway or distribution facility. To address this gap, many counties and localities require developers to enter into community benefit agreements. These agreements require certain benefits—such as local employment requirements and or funds for community facility development—as a part of the approval process. For example, certain counties have created community benefit programs for large-scale solar energy developments, such as a Riverside County requirement that developers pay \$150 per acre per year, with 25 percent of all fees going to benefit local communities.¹⁶ Instituting similar requirements for freight developments—for example assessing a small fee for each ton of freight moved through or over a given facility, with funds raised going directly to local projects or environmental enhancement—could increase the extent to which local communities receive adequate benefits from these projects of statewide importance.

Project labor agreements, which are agreements between public agencies or developers and labor unions that set local employment and wage requirements for specified projects, are an effective and well-tested form of benefits agreement; participants cited the ongoing project labor agreements at the Port of Oakland and Port of Los Angeles as useful examples for future freight projects and priority freight areas.¹⁷ Designing these benefit agreements in cooperation with community groups, and signaling at the outset that they will be linked to a project, could build trust and reduce CEQA litigation and general opposition.

Solution: Consider devising a process for independent, alternative review of CEQA claims and explore options to refine standing requirements for CEQA litigants.

Participants emphasized that while CEQA is an essential tool for local communities to protect their environmental health and community character, outside parties without local interests at heart can also abuse it, including project competitors seeking a commercial edge. Trust-building can therefore have its limits in protecting against CEQA litigation that does not necessarily reflect the needs of local communities. For these scenarios, participants recommended two potential CEQA updates.

First, participants suggested that the state, lead agencies, and/or project developers could provide funding for optional independent, alternative review and resolution of CEQA disputes. Such review would essentially be a form of alternative dispute resolution increasingly common in other contexts where parties seek less adversarial alternatives to traditional litigation, such as mediation. These options can reduce legal costs and time to disposition while increasing potential litigants' satisfaction with the process.¹⁸ Independent third-party reviewers could assess the legitimacy

“From the private sector side, it can sometimes be hard to figure out who is the community that we are supposed to be working with and distinguish between legitimate community concerns and those who are employing CEQA for improper reasons.”

**LaDonna
DiCamillo**
BNSF Railway



and fundamental fairness of litigants' interests and claims, ensuring both that outside groups are not assuming the guise of local concerns for commercial gain or litigation fees and that developers are not unfairly targeting vulnerable areas or ignoring local concerns. State-level coordination and random assignment of reviewers could build trust on both sides.

Participants also expressed interest in refinement of the legal standing requirements to file lawsuits under CEQA as a means to prevent abusive litigation. Private CEQA enforcement is available to any person or entity with a direct, substantial, and beneficial interest in the subject matter of a CEQA review, or who can demonstrate that he or she is representing the public interest by enforcing public rights or duties.¹⁹ Participants felt that this standard—necessarily broad to ensure court access for parties seeking to advance the environmental protection purposes of the statute—can sometimes support litigants who may be seeking to vindicate non-environmental interests or non-local interests, in particular competing commercial interests. Standing-related revisions to the statute have not been successful in the past and are opposed by a range of community and environmental stakeholders for whom CEQA is an essential tool. Any alteration of CEQA would need to be delicately crafted to ensure that its core environmental protection purposes are preserved. Refinement of standing requirements could be a potentially beneficial area for stakeholders and legal experts to explore further.



Barrier 2: A lack of coordination across utility processes, infrastructure permitting, and the needs of zero-emission freight technology exacerbates inefficiencies.

Outside of the context of local project approval and CEQA litigation, participants noted a general misalignment between state goals for emission reduction, utility approvals that facilitate freight electrification, and the economics of the freight industry. For example, participants cited projects in which the introduction of electrified freight trucks, a core technology of the Sustainable Freight Action Plan, has been delayed by the inability of local utilities to gain approval from the California Public Utilities Commission to construct an electrical distribution line to provide the necessary power. Local utilities also have not yet gained approval for new, flexible electricity rates that drop demand charges (which are currently imposed on especially high electricity consumption at times of peak demand but can penalize intermittent and intense uses such as truck charging). Legacy regulations—such as self-supply definitions that regulate as a public utility an entity that wishes to sell leftover renewable energy that it generates on-site for use by a truck charging facility—can render beneficial projects economically unviable.²⁰

At the same time, participants emphasized that ambitious state projects and funding opportunities may require more electrification or zero-emission infrastructure than is feasible. They may also have the potential to punish early adopters of advanced technology. As a result, permitting of sustainable freight projects is neither as efficient nor as cost-effective as state or industry targets. For example, participants cited the I-710 freeway corridor project, which seeks to widen the freeway to improve air quality and reduce congestion, and recently was expanded to require advanced electric vehicle charging infrastructure.²¹ Participants argued that while the requirement aligns with state electrification goals, it could also prove too ambitious and threaten the viability of the entire project, including its other much-needed, more straightforward infrastructure improvements. Similarly, participants noted that the Proposition 1B Goods Movement Emission Reduction Program, which offered financial incentives to trade in older trucks for newer, cleaner models, had the unintended effect of harming early adopters and large fleets by capping the total number of rebates available.²²

“There is an overwhelming amount of bureaucracy in getting flexible electricity rate structures approved by the CPUC for freight. We want to use energy storage technologies to effectively create on-site generation capacity, but that may take 10 to 20 years.”

Dakota Semler
Thor Trucks

“California has the biggest, most diverse, and most sustainable freight system in America, but the perception of people outside the system is the opposite. We need to discuss the benefits of the system and what it can do much better than everyone else.”

Richard Steinke
Moffatt & Nichol

Solution: Convene sustainable freight “red teams” to assist in the delivery of major projects.

At the core of the regulatory and economic misalignment participants described were a lack of mandates and resources to evaluate new infrastructure projects holistically. Such a process could determine all potential points of regulatory delay or conflict and engage relevant state and local agencies at the outset in order to maximize project economics. Participants proposed the creation of “red teams,” similar to those convened in the cybersecurity context to assess organizational effectiveness from an outside or adversarial perspective. In this context, they would consist of project developers, agency staff, and community representatives who would carry out a comprehensive evaluation of project needs and vulnerabilities.

A “red team” would be convened for a sustainable freight project of regional significance—such as a freight corridor on interstate highways, a new rail terminal, or a port expansion. It would undertake a complete analysis of the infrastructure needs both within and related to the project, identify the regulatory implications and potential constraints for those needs, and build a coalition with project-specific expertise for both the planning stage and the construction stage. Crucially, the “red team,” by including staff from all agencies involved in permitting a project, such as the California Public Utilities Commission, Caltrans, and the local land use board, would have decision-making authority to expedite a project by addressing the regulatory constraints that the team identified. The goals would be to:

- Streamline the approval process for the most complex, essential projects;
- Develop project approval sequencing “best practices” specific to each jurisdiction;
- Craft regulatory solutions within each implicated agency and opportunities to increase consistency among agencies;
- Identify regulatory reform needs to propose to the legislature; and
- Generate, to the extent possible, an accurate assessment of the regional and statewide costs of infrastructure (and associated legal and permitting processes) needed to build a sustainable freight system.

Such an initiative could grow out of new enabling legislation or a realignment effort within state agencies spearheaded by the new gubernatorial administration. “Red teams” could also provide a template for an ongoing multi-agency planning effort to implement the long-term goals of the Sustainable Freight Action Plan. State leaders could assist in the creation of these teams with pilot project funding or allocation of Greenhouse Gas Reduction Fund dollars (generated from auction proceeds from the cap-and-trade program). Assembly Bill 2127 (Ting, 2018) would require the California Energy Commission, California Air Resources Board, and the California Public Utilities Commission to prepare a biennial assessment of the electric vehicle charging infrastructure needs to meet the state’s 2030 goals for EV deployment and greenhouse gas emission reduction.²³ Equivalent legislation for sustainable freight needs, including but not limited to electrification, could support or supplement the “red teams” concept.



Solution: Increase the use of tiered CEQA review and other streamlining measures for qualifying freight projects.

The CEQA “tiering” process presents another solution to inefficient resolution of conflicts between local community and environmental concerns and project development goals. Tiering, which is expressly permitted under CEQA, allows for the creation of a program-level Environmental Impact Report (the core environmental assessment document required under CEQA) for a set of geographically or substantively related projects within the studied area. This programmatic EIR is prepared before any of the projects are undertaken, in an effort to comprehensively evaluate their anticipated impacts and the broadest possible means to mitigate them. Individual projects then only need to demonstrate consistency with the master programmatic EIR to gain approval, provided the programmatic document evaluated impacts in sufficient detail and no substantial differences in those impacts emerge.²⁴ Increased use of the tiering process for sustainable freight projects would require an up-front evaluation of the freight infrastructure needs of a given jurisdiction. But the additional resources expended in this effort could be repaid in long-term planning and reduced CEQA litigation risks.

Participants cited a number of current tiering or other streamlining measures that could either be applied to major freight infrastructure projects or serve as useful analogies to speed project permitting processes. For example:

- Metropolitan Planning Organizations and Regional Transportation Planning Agencies, which prepare large-scale transportation plans designed to maximize economic growth and environmental protection, often employ programmatic EIRs and tiering to evaluate the environmental impacts of a swath of linked infrastructure projects. Caltrans has stated that such tiering “could help eliminate repetitive discussions of the same environmental issues; facilitate project-level impact analysis by focusing on issues specific to the later project; reduce the burdens from duplicative reconsiderations of a program, plan or policy with a certified EIR; and, reduce CEQA delay and paperwork at project level.”²⁵
- Certain railroad grade separation (i.e., intersections that raise or lower the grade of a road to avoid a crossing with a railroad) projects are categorically exempt from CEQA review.²⁶ While new CEQA exemptions are highly sensitive, certain limited types of priority freight project that serve to increase safety, such as freight-only lanes or on-ramps, could be strong candidates for similar treatment.

State agencies adopting climate change rules or regulations required under Assembly Bill 32 (Nunez, Chapter 488, Statutes of 2006) are authorized to prepare “focused” EIRs, which operate similar to programmatic and tiered EIRs.²⁷ Similar treatment could benefit freight projects that serve greenhouse gas emission reduction goals.

Barrier 3: A lack of supply chain data standardization and access slows adoption of efficient and sustainable technologies.



Sustainable freight technologies rely heavily on the generation and transmission of data by and between originating facilities, products, vessels, warehouses, vehicles, retailers, and end consumers. Maximally efficient container ship loading requires precise information on the contents and destination of each container; last-mile delivery depends on instant knowledge of retailer and customer demand; electrified and platooned trucks need to communicate with each other, the road, and charging stations. The operational data are generated in real time from different segments of the freight system and must be communicable in a compatible way in order to be useful. As new smart freight technologies come online and get introduced to participants in the supply chain, freight operations personnel should consider whether or not additional efficiencies or reduced costs can be achieved through the sharing of data generated from these technologies. For example, a manufacturer's location and temperature sensors on shipping pallets may communicate with a vessel's data network but not with the destination port's offloading program, or platooned electrified trucks may share data internally to manage a fleet trip but not externally with state regulators seeking to manage congestion and air emissions.

This lack of communication results from both the proprietary nature of the data—many freight industry members protect the information due to its inherent competitive value—as well as the technological challenge of aligning different data protocols that are not designed to interact. Participants described an environment in which interoperability and some data sharing on a universal platform are necessary to achieve maximum efficiency in many components of the supply chain, but individual players do not have incentives to lead on adoption or disclosure. Properly designed regulatory improvements and government-led projects could generate sufficient buy-in and momentum to achieve the necessary data transformation toward the optimal levels of sharing and interoperability. But absent this data transformation, regulators and industry alike will not be able to deliver adequately efficient new projects in service of the Sustainable Freight Action Plan's environmental and economic goals.

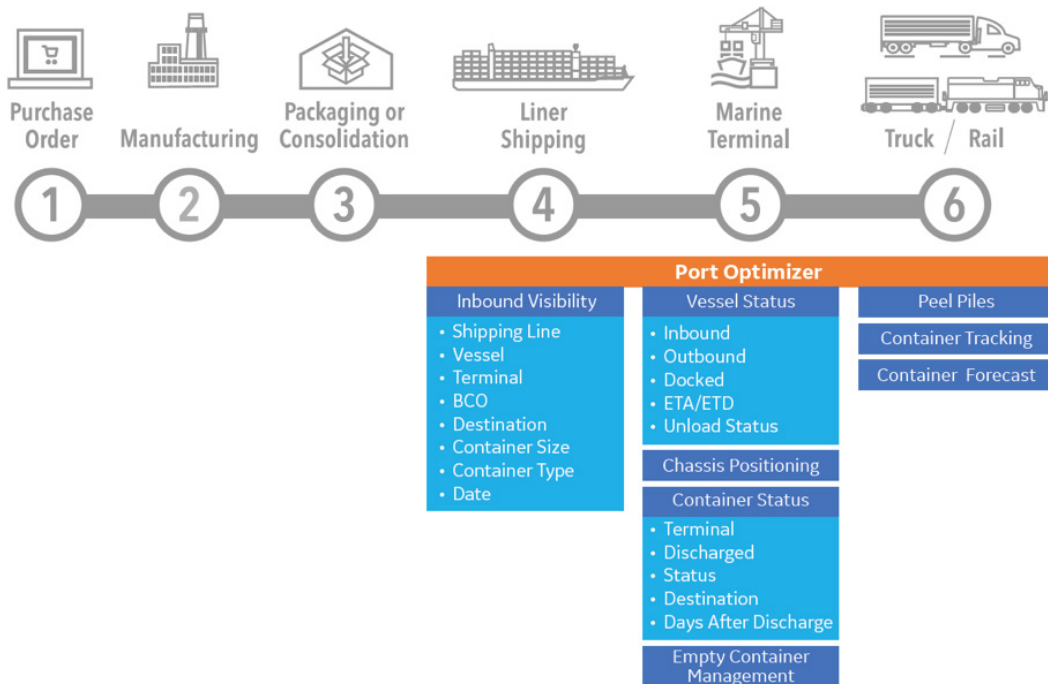
Solution: Devise and implement data optimization pilot projects to identify practical regimes acceptable to industry and regulators.

Participants emphasized the importance of pilot programs in the data generation and sharing context. Unlike major infrastructure pilots, data sharing and streamlining pilots can require minimal investment of funds; rather, creating limited-scope and secure venues for sharing of data provide industry with the assurance it needs to share proprietary data or allow competitors or regulators to interact with proprietary systems. Ports, which involve immensely complex interactions between goods, parties, vehicles, and technologies within the limited geographic scope and relative data security of an enclosed physical environment, can offer a particularly valuable venue for these data pilots. Freight data generation protocols and sharing platforms that succeed in these pilots can earn the trust of industry while regulators gain valuable collection and observation experience, both prerequisites to the eventual selection and promotion of an industry-standard protocol.

One example of such a pilot project is the introduction of GE Transportation’s Port Optimizer technology at the Ports of Los Angeles and Long Beach. The technology facilitates comprehensive sharing of essential data—advance notice of cargo arrival, equipment availability, and staffing resources—between shipping vessels, terminal operators, and trucks and trains taking cargo from the port.²⁸ In May 2017, the Port of Los Angeles and GE Transportation piloted the concept at terminals operated by APM and later that year began expanding the solution to the rest of the major terminals at that port. In August 2018 the Port of Long Beach and GE initiated a two-month pilot of the technology at three of six port terminals, providing stakeholders with a substantial but low-risk opportunity to experience operability with their own systems and measure increases in efficiency.²⁹ TradeLens, an IBM- and Maersk-led initiative based on blockchain tracking of supply chains, is another collaborative, data-centered effort to increase shipping efficiency that has seen significant uptake by international ports, shipping lines, and customs authorities.³⁰ Participants also discussed the potential benefits of technologies like E*DRAY, a digital platform for connecting cargo owners with drayage (at-port truck) drivers in real time, eliminating the need to contract in advance and reducing the time that drayage drivers need to wait for their contracted container to be located and unloaded from the vessel or container stack.³¹ While E*DRAY has already been introduced at many West Coast ports, participants emphasized the importance of pilots to extend its reach as well as that of similar or competitor technologies, just as they praised the GE Port Optimizer pilot for the increased exposure and interest it has generated.

GE Port Optimizer

Optimizing the Global Supply Chain



Source: GE Transportation.

“We need to look at the highest and best use of new technologies. A yard truck is a great candidate for electrification, but a long-haul truck is not. For businesses to invest in the technologies, they need to see them lined up with the best uses.”

Nick Monroy
Neste



As industry and government contemplate increased data sharing across all market players, they will also need to consider mechanisms and forums for negotiating and maintaining security and standardization for data that are shared. Information Sharing and Analysis Centers, created by presidential directive to foster public-private partnerships based on information sharing and coordination across critical infrastructure industries, may provide a useful model.³² A freight industry ISAC could offer members a platform to share data anonymously with other members, and with regulators by member approval, to facilitate research and internal investigations.³³ Cybersecurity concerns, driven by recent cyberattacks on major shippers, may cause some hesitancy among industry members to join this type of consortium. But such a platform, together with increased data-related pilot projects, could generate the buy-in and certainty needed for the development of a national freight data system, as well as regulatory engagement with and enforcement of that system. By increasing transparency and sharing of best practices, a data-sharing platform could also improve cybersecurity in the long term.

Solution: Convene stakeholders to discuss data challenges and opportunities.

Participants also emphasized the need for ongoing, iterative convening of freight system stakeholders to identify and address emerging issues around the generation and distribution of freight-related data and implementation of new technologies. One example is the Annual Global Supply Chain Excellence Summit at USC Marshall School of Business, which participants hailed for providing a neutral platform for industry and government to share knowledge and identify where leadership from each side is needed to advance sustainable freight goals.³⁴ The creation of more similar programs, as well as more academic institutions such as USC's Center for Global Supply Chain Management, could provide a significant boost to the nascent field of big freight data and inform future industry and regulatory processes.

Barrier 4: The potential for unjust labor transitions slows adoption of zero-emission technology.

The development and implementation of sustainable freight technologies implicates not only the freight industry, local communities, and statewide economic development, but also the hundreds of thousands of Californians directly employed in trucking and goods movement and millions more employed in freight-dependent industries. The individuals who drive and operate zero-emission freight vehicles and equipment, and the organizations that represent them, will have a lot of sway in how quickly and effectively these new technologies are brought online. Without sufficient attention paid to their needs and views, the state will not achieve the transition envisioned by the Sustainable Freight Action Plan. However, participants expressed concern that fear of worker displacement by the introduction of new technologies is hampering regulatory progress and slowing the adoption of needed technologies. Through litigation, contract negotiations, and public opposition, labor interests that are not adequately addressed have the potential to delay both new freight projects and the updated regulations needed to facilitate them.

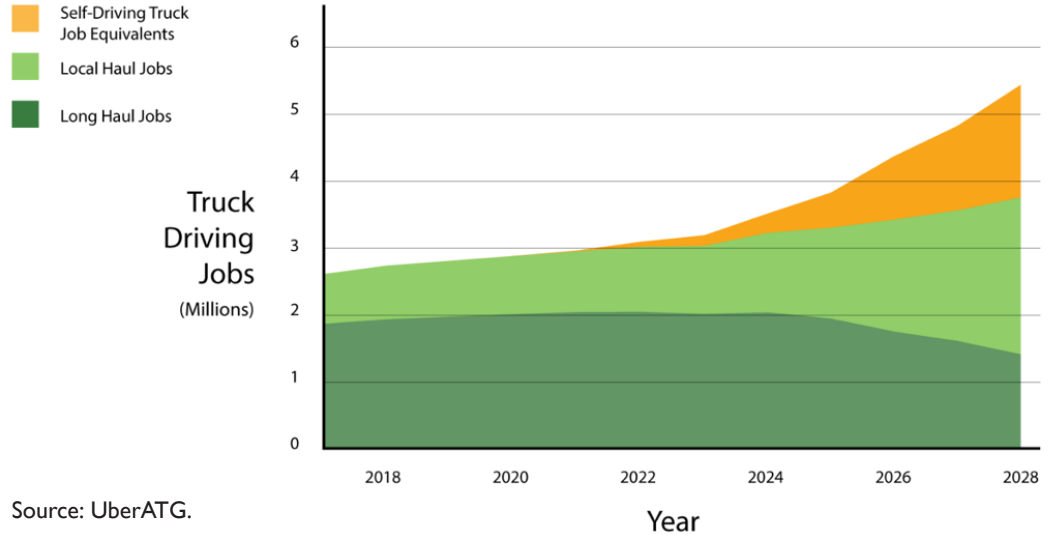
Solution: Explain and emphasize the distinction between zero-emission and automated freight technologies.

Participants described a possible misperception in the freight labor community that zero-emission vehicles and equipment are all automated. There is substantial overlap between the two definitions; for example, port technologies such as computerized cargo offloading and trucking technologies such as truck platooning, both of which will be essential to reducing freight emissions, rely in part on the automation of roles currently performed by human operators. If these technologies are adopted at full scale, significant numbers of jobs could be displaced, including up to 80 percent in the trucking industry.³⁵

But participants emphasized that these potential job losses are far in the future, the end result of a long-term transition occurring throughout goods movement-related industries that will directly affect few current employees. Increased education and outreach efforts, and earlier involvement of labor groups in freight system planning processes, could help labor leaders and employees better understand when and to what extent future jobs may be at risk, potentially easing immediate concerns and resistance to new regulatory requirements. Industry leaders could also better explain the potential alternative scenarios for zero-emission and automated technologies, some of which even anticipate an overall increase in truck driving jobs as the introduction of automation spurs overall economic growth.³⁶ Existing structures, such as the Port of Oakland project labor agreement, could provide a platform for such outreach and long-term planning. State- and industry-sponsored informational campaigns could also help insulate zero-emission freight goals from labor-related pauses.



Uber ATG Analysis of Truck Automation Job Impacts



Solution: Increase support for labor transition programs, but limit state involvement in hiring and employment decisions.

While participants felt that large-scale freight job transitions are not an immediate risk for those employed in trucking, ports, warehousing, and distribution, they nonetheless recognized that the state and the companies seeking to implement efficient freight technologies have an obligation to provide training programs, education, and safety net programs, such as support income for when jobs are directly eliminated. State funds to support technological training programs in high schools and community colleges can prepare current drivers and operators to use new technologies such as driver assistance when employers adopt them, while also ensuring a sufficient pipeline of future employees. The three workforce-related actions of the Sustainable Freight Action Plan, implemented by the Governor's Office of Business and Economic Development and the California Workforce Development Board, provide a useful model for state freight- and employment-related agencies.³⁷ The Workforce Development Board's High Road Training Partnerships program, which seeks to link job quality and equity goals with climate resiliency, also awarded a grant to the Port of Los Angeles to facilitate workforce transitions.³⁸ Multiplication and extension of these programs, in particular focusing on disadvantaged communities and those at risk of particularly high job losses at major facilities, could ensure a just transition for California's freight workers and increase buy-in for new technologies.

However, participants also emphasized that it is important for the state to limit its direction of employment decisions. State efforts to limit the job-displacement impacts of efficiency policies, such as limitations placed on the recipients of incentive dollars under the landmark transportation funding legislation Senate Bill 1 (Beall, Chapter 5, Statutes of 2017) and the Greenhouse Gas Reduction Fund, may limit future economic and



job growth. Senate Bill I funds are available for “projects to enhance the capacity and efficiency of ports” but cannot be allocated “to a project that includes the purchase of fully automated cargo handling equipment.”³⁹ Similarly, the 2017 Budget Act allocated \$140 million from the Greenhouse Gas Reduction Fund for advanced freight demonstration projects. But it similarly applied the same limitation on fully automated equipment (both laws included clear exceptions for human-operated zero- and near-zero equipment).⁴⁰ “Fully automated” is defined as “equipment that is remotely operated or remotely monitored, with or without the exercise of human intervention or control,” potentially encompassing the majority of currently available zero- and near-zero-emission port technologies. By imposing these limitations, some participants argued, the state legislature had failed to fully promote adoption of those technologies, which are being incorporated into state-of-the-art terminals worldwide. Protection of current port jobs could thus, in the long run, harm overall freight-related employment if California’s ports are hindered in their ability to invest in sustainable and efficient freight technology, contravening the goals of the Sustainable Freight Action Plan, Senate Bill I, and the state’s greenhouse gas emission reduction policies.

While it is vital to protect the interests of port and other freight employees, those interests may be best served by ensuring long-term, sustainable growth of freight in California. Rather than limit industry’s ability to address sustainable freight needs by adopting emerging technologies, participants felt that the state should focus its efforts on assisting employees with adapting to and taking advantage of those needs. In addition, greater involvement of labor interests in freight project planning processes could help reduce the need for protection through such limitations.

“What is really going to spur rapid deployment of zero emission technology is when it becomes the rational business decision to make. We need to make it cheaper for a company to operate zero emissions than it is for a competitor to cheat.”

Chris Shimoda
California Trucking Association

Conclusion

Action 9 of the Sustainable Freight Action Plan calls for “regulatory or permitting process improvements to expedite the delivery of projects” that advance sustainable freight goals. These process improvements will be essential to the achievement of the greenhouse gas emission reductions, community air quality and health improvements, and economic and technological development goals of the Sustainable Freight Action Plan. As described in this report, a range of solutions could drive these process improvements, including:

- Devising an equitable process for alternative resolution of potential CEQA claims;
- Creating a messaging campaign to advertise the importance and benefits of freight projects; and
- Implementing data optimization pilot projects to identify practical regimes acceptable to industry and regulators.

By developing some of these solutions, state and industry leaders could together promote the goals of the Sustainable Freight Action Plan while protecting environmental, community, health, and labor interests. These leaders could focus on steps that can advance regulatory and permitting process improvements in the near term, such as:

- Creating an initial “red team” to conduct regulatory and permitting analysis for, and speed the delivery of, top-priority sustainable freight projects;
- Convening industry and government stakeholders to identify needs and limitations with respect to data sharing; and
- Making immediate efforts to improve public knowledge on the distinctions between zero-emission and automated freight technology, to reduce resistance to both.

By focusing energy and funds on both near-term efforts and long-term reforms, industry and public sector leaders can ensure that California achieves the sustainable freight future required to meet both our economic and environmental goals.

Ken Alex – Governor's Office of Planning and Research

Ken Alex is the Director of the Governor's Office of Planning and Research, and serves as Senior Policy Advisor to Governor Jerry Brown and the Chair of the Strategic Growth Council. As the longest tenured OPR Director, Ken has led a broad effort to modernize land use planning through greater transparency; easier access and local application through mapping tools, templates, and streamlined permits; reduced barriers to in-fill development; promotion of transit oriented development; protection of agricultural land and open space; recognition of water constraints; and updated general plan and CEQA guidelines. Before joining the Governor's Office, Ken was the Assistant Attorney General heading the environment section of the California Attorney General's Office, and the co-head of the Office's global warming unit. From 2000 to 2006, Ken led the California Attorney General's energy task force, investigating price and supply issues related to California's energy crisis. Ken is a graduate of Harvard Law School and holds a B.A. in political theory from the University of California at Santa Cruz.

Rob Ball – Kern Council of Governments

Rob is Director of Planning for Kern Council of Governments (COG), the federally designated Metropolitan Planning Organization and Transportation Planning Agency for Kern County. He has been involved in keeping the wheels of commerce rolling in Kern and the Valley for over 25 years. He heads Kern COG's planning team tasked with fulfilling the state and federal requirements that keep transportation funds flowing to Kern, while providing technical information to local decision makers on which project to build next; and has helped deliver over 20 major transportation projects in the region. Rob has a Masters from CSU Bakersfield, with a thesis on Micro-Spatial Population Forecasting; and an undergraduate degree in Geography with a Certificate in Urban Planning from CSU Fullerton.

Mark Christoffels – San Gabriel Valley Council of Governments

Mark serves at the San Gabriel Valley Council of Government's Chief Engineer where he has been responsible for the formation and adoption of the SGVCOG's Mobility Matrix, the establishment of the sub regional funding allocations under the Measure M program, represents the San Gabriel Valley on Metro's Measure M and Long Range Transportation Plan Policy Advisory Policy Council, and is working on the five year plans and project implementation for those subregional programs. He has been a practicing civil engineer in local government for more than 35 years. Mr. Christoffels has a Bachelor of Science degree in Civil Engineering from UC Irvine and a Masters in Business Administration from Pepperdine University.

Matt Davis – Port of Oakland

Matt Davis has served as the Port of Oakland's Director of Governmental Affairs since 2015, and has been with the Port's Governmental Affairs team in several leadership capacities since 2004. He is responsible for advocating for seaport, airport and commercial real estate development projects, securing funds for major initiatives, and acting as a liaison to elected and appointed officials at the local, state and federal levels. Prior

Participant Biographies

to joining the Port, Mr. Davis served as a legislative aide to the former Minority Leader of the House of Representatives. Before that, he worked on economic and workforce development initiatives for two non-profit agencies in Baltimore, MD, which included one year of service as an AmeriCorps*VISTA. Mr. Davis received his Master in Public Policy degree from the Goldman School of Public Policy at the University of California, Berkeley and a Bachelor of Arts degree in Political Science, also from U.C. Berkeley.

LaDonna DiCamillo – BNSF Railway

LaDonna DiCamillo is the Regional Assistant Vice President for BNSF Railway Company in Los Angeles. Ms. DiCamillo works with California communities to address rail-related issues at both local and legislative levels. She began her railroad career in 1989 in the Research and Development Department of the Atchison, Topeka & Santa Fe Railway (a predecessor to BNSF) where she conducted laboratory testing related to environmental and failure analysis projects. In 1991, she was promoted and moved to California where she worked for BNSF's Environmental Department for ten years. Ms. DiCamillo obtained her undergraduate degree in Chemistry from Washburn University in Topeka, Kansas in 1989. In 1999, Ms. DiCamillo completed her Juris Doctorate at the University of La Verne, College of Law.

Paula Dowell – Cambridge Systematics

Paula is Principal at Cambridge Systematics with more than 16 years of experience in economic development, transportation economics and freight and logistics planning. She is leading Cambridge Systematics' National Transportation Economics Practice. Prior to joining Cambridge Systematics, she served as Vice President and the National Practice Leader for Economics and Freight at Wilbur Smith Associates. Previously, she served as a Post Doctorate Research Associate for the Center of Business and Economic Research at the University of Tennessee, Knoxville. Paula has worked with more than 30 of the US states as well as numerous international locations including Mexico, Canada, India, Norway, and Africa. Her professional experience includes transportation economics and finance, urban and statewide freight planning, freight market analysis, logistics-based development strategies, multijurisdictional corridor and border planning.

Joel Espino – Greenlining Institute

Joel Espino is Environmental Equity Legal Counsel at The Greenlining Institute, a racial justice non-profit based in Oakland. He works to reduce poverty and pollution in communities of color through advocacy for accessible, affordable and clean transportation choices and a diverse clean energy economy. He leads Greenlining's transportation equity work advocating to increase racial equity in transportation planning and investments; implementing the Charge Ahead California Initiative—a law that works to make electric vehicles (EV) accessible to low- and moderate-income Californians; and advocating for equitable EV charging infrastructure investments at the California Public Utilities Commission, the California Energy Commission, and within the Volkswagen Diesel Settlement. Espino has authored multiple reports, blogs, and op-eds on equity in electric mobility. Espino graduated from Arizona State University with a B.A. in Philosophy, a minor in Justice Studies, and a certificate in Ethics. He earned his J.D. from UC Hastings, College of the Law.

Fran Inman – Majestic Realty

Fran Inman directs government relations and community affairs activities for Majestic Realty Co., one of the nation's largest privately held real estate development companies. With a real estate portfolio totaling approximately 80 million square feet of commercial properties, Majestic Realty Co. has offices in Los Angeles, Atlanta, Bethlehem, Dallas, Fort Worth, Denver and Las Vegas. Fran is a past chair of the board of the Los Angeles Area Chamber of Commerce and San Gabriel Valley Economic Partnership. Fran also serves as the vice chair for the California Business Properties Association and the California Business Roundtable. Fran is also a founding board member of FuturePorts and a member of Inland Action and is on the Advisory Board of Mobility 21. She is also a long-time member of the Coalition of America's Gateway Trade Corridors and Southern California Council of Governments.

Michael Jacob – Pacific Merchant Shipping Association

Mike Jacob is Vice President & General Counsel to the Pacific Merchant Shipping Association, an independent, not-for-profit maritime trade association with offices in Oakland, Long Beach and Seattle and represents owners and operators of US and foreign-flagged ocean-going vessels, marine terminal operators, ocean carriers, shipping lines, and steamship agents operating on the West Coast. Mike joined PMSA in 2005. As Vice President and General Counsel, he manages legal, public, and regulatory affairs for the Association, regularly appears before state, local and federal governmental bodies in various administrative and legislative capacities, and represents PMSA in state and federal courts on behalf of its membership. Prior to joining PMSA, he was Managing Member of a government affairs and consulting firm with clients including the Bay Area Rapid Transit District and

the Port of Oakland. From 1996-2001, Mike worked for the California State Legislature in several capacities, including as Chief Consultant to the Assembly Information Technology Committee, as a Legislative Director, and aide to multiple members in the state Assembly and Senate. Prior to that, he was a contributor to the Silicon Valley Business Journal. Mike was a member of the Alameda County Planning Commission from 2003-2015, serving three terms as Chair. He is currently President of Satellite Affordable Housing Associates, a non-profit developer and operator of award-winning affordable housing throughout Northern California, where he has been on the Board since 2007. Mike holds a JD from the University of California, Hastings College of the Law and a BA in Economics from the University of California, Berkeley. He is a member of the California State Bar, United States Supreme Court Bar, and the Maritime Law Association of the United States.

Elizabeth John – California Energy Commission

Elizabeth John is an Office Manager in the Fuels and Transportation Division of the California Energy Commission, where she oversees grant activities funded under the Alternative and Renewable Fuel and Vehicle Technology Program. Her responsibilities include: building capacity of California companies to produce economically competitive biofuels from waste-based and renewable feedstocks; facilitating the replacement of the state's oldest and dirtiest school buses with new, alternative-fueled school buses; and implementing activities that support the Sustainable Freight Action Plan's goals of commercially deploying advanced freight and fleet technologies, including advanced zero-emission vehicles and infrastructure. Elizabeth holds a Bachelor of Arts degree in Political Science from the University of California, Davis, and a Master's of Public Policy and Administration degree from California State University, Sacramento.

Weston LaBar – Harbor Trucking Association

Weston LaBar serves as CEO of the Harbor Trucking Association representing the majority of West Coast drayage operators and their drivers. Under his leadership, the HTA has grown from a small advocacy group to a national voice on drayage. The association has become a major force in changing the way drayage is viewed in the industry and has been pioneers in developing metrics and KPI's to measure industry throughput and performance. The HTA has been at the center of major initiatives to develop and standardize cutting edge technological solutions to help create a 21st century digital supply-chain. In addition to his role with the HTA, Weston is the Founding Partner of the Long Beach based boutique consulting firm PEAR Strategies. PEAR specializes in a variety of professional services and is a leading firm in public affairs, strategic planning, and executive management. Through PEAR, Weston serves as a contract executive for several goods-movement based trade associations. Weston sits on key regional, state, and federal task forces on supply-chain optimization and goods-movement. Weston is a graduate of the University of Vermont's College of Arts and Sciences.

David Libatique – Port of Los Angeles

David Libatique is the deputy executive director of stakeholder engagement for the Port of Los Angeles, a position that oversees and manages all communications on behalf of America's Port® via the Community Relations, Media Relations, Government Affairs, Trade Development, and Labor Relations and Workforce Development Divisions. In this role, Libatique works with diverse stakeholders, including local communities, a dedicated and organized workforce, beneficial cargo owners, terminal operators, international customers, shipping and cruise lines, railroads, the trucking industry, media, and regulatory, environmental agencies to advance the Port's goals and initiatives. He also interacts on a broader scale with an array of local, regional, statewide, and national elected officials and stakeholders. Libatique first joined the Port in January 2011 as senior director of government affairs, a role that augments the Port's intergovernmental advocacy at a critical time of increasing engagement with local, regional, state, federal, and even transnational and international levels of government. Prior to joining the Port, Libatique served as Mayor Antonio Villaraigosa's director of energy policy, where he was responsible for advancing the Mayor's environmental policies at the Los Angeles Department of Water and Power. Before assuming that role, he served as the Mayor's senior policy analyst, and acted as a liaison with the Port of Los Angeles, where he advanced the Mayor's "Green Growth" policies, including the Clean Air Action Plan and Clean Truck Program. Before joining the Villaraigosa Administration, Libatique served as senior deputy for Councilmember Martin Ludlow, where he led policy development and legislative strategies to reform City of Los Angeles anti-gang efforts. Libatique has conducted extensive experience in economic research, including working as a research analyst at the World Health Organization in Geneva, Switzerland. There, he was a part of Working Group VI of the Commission on Macroeconomics and Health that analyzed the economic impact of investment in improved health outcomes for poor and middle-income countries. Libatique holds a bachelor of arts in economics from the University of California, Berkeley and a master of public policy from Harvard University's Kennedy School of Government.

Cynthia Marvin – California Air Resources Board

Cynthia Marvin is the Chief of the Transportation and Toxics Division at the California Air Resources Board. The Division is currently leading development of the California Sustainable Freight Initiative; implementing existing diesel rules and Proposition 1B incentives for cleaner ports and rail yards; updating the State's air toxics programs to characterize and reduce the health risk from stationary and mobile sources; and guiding multiple State agencies responsible for investing over \$2 billion annually in Cap-and-Trade auction proceeds in transportation, energy, and natural resources projects that reduce greenhouse gases and maximize co-benefits for disadvantaged communities. Ms. Marvin's prior division assignment also included climate change policy and planning, low carbon fuels, and energy issues. Her background involves 25 years of experience with the Board managing California's State Implementation Plans; developing ARB's clean air strategy for mobile sources, fuels, and consumer products; and drafting air toxics regulations to protect public health. Prior to joining ARB, she worked as an Assistant Vice President in the banking industry and received a B.S. in Environmental Toxicology from the University of California at Davis.

Nick Monroy – Neste

Nick Monroy is a renewable fuels frontrunner with an approach that combines business development and advocacy. Throughout his career, Nick has developed extensive knowledge of renewable fuel capabilities, emerging trends, and realities. He is passionate about his commitment to real-world sustainable solutions for real people. With a vision and track record of success, he seeks to bring transformative fuel technology into markets throughout the United States.

Frank Ramirez – Governor's Office of Business and Economic Development

Frank is the Manager of the Goods Movement and Sustainable Freight Unit for Governor Jerry Brown's Office of Business and Economic Development (GO-Biz). He has a Master of Urban Planning from the University of Wisconsin – Milwaukee, a Bachelor of Arts in Political Science/Urban Affairs from University of the Pacific and was a NCAA Soccer Athlete.

Jonathan Rosenthal – Saybrook Corporate Opportunity Funds

Jonathan Rosenthal is CEO of the Harbor Performance Center and Managing Partner of Saybrook Funds, with 29 years of experience in complex financings and restructurings as an advisor, operator and investor on behalf of financial institutions, bondholders, private equity investors and on for own account in public and private enterprises, particularly in the logistics industry. While head of Saybrook's Advisory Group from 1991 to 2006, Mr. Rosenthal was involved in dozens of workout situations and has had leadership roles in some of the largest and most complex restructurings in history, including Pacific Gas and Electric, United Airlines, Kmart, Adelphia, and Foster Wheeler. Prior to joining Saybrook in 1990, he founded and served as chairman and CEO of NetAir International Corporation, which became the nation's largest non-scheduled certificated carrier. Mr. Rosenthal received a BA from California State University, Northridge and a JD from Southwestern University. Mr. Rosenthal serves on the boards of Global Infrastructure Solutions, Taylored Services, and Total Transportation Services. He is also Chairman of the Trump Administration's Advisory Committee on Supply Chain Infrastructure Finance, and is Chairman of the University of Southern California's Center for Global Supply Chain Management.

Chris Schmidt – Caltrans

Chris Schmidt is the Division Chief of Transportation Planning for the California Department of Transportation, Caltrans, where he oversees six hundred positions and a budget of \$200 million. His office is responsible for the initiation of hundreds of capital projects annually amounting to a multi-billion dollar portfolio. In addition, focus areas include State, Regional, Multi-modal System, Freight, Smart Mobility and Climate Change planning efforts. He develops and implements policies and procedures in concert with federal, State, and regional transportation planning partners and regulatory agencies on statewide issues. Advances technical policies on planning issues affecting delivery of Caltrans' projects and establishes the strategic direction for the transportation planning programs. He previously worked in Caltrans District 11, San Diego where he focused on multi-modal programs. In 2016 he served as project manager for the visionary California Sustainable Freight Action Plan. He is a member of the American Planning Association and the American Institute of Certified Planners (AICP) and holds a Master of Planning degree from the University of Virginia and Master of Health Science degree from Ball State University. He has also been a research team panel member for the National Academy of Sciences, Transportation Research Board's National Highway Cooperative Research Program for studies related to highway pricing, modeling bicycle/pedestrian activity and environmental justice.

Dakota Semler – Thor Trucks

Dakota Semler is the Co-Founder and Chief Executive Officer of Thor Trucks, Inc. His passion for the clean fuels and experience in Fleet Operations established the founding vision for Thor Trucks. Dakota's business and leadership aptitude has been realized through successful ventures in Hospitality, Real-Estate, and Tour Operations. Dakota's founding vision for Thor Trucks was to create battery-electric commercial vehicles that achieve performance benchmarks of an existing diesel, accomplish higher levels of reliability, and are, first and foremost, commercially viable without public subsidization. Production on the first Thor vehicles is scheduled for 2019.

Chris Shimoda – California Trucking Association

Chris Shimoda is the Vice President of Government Affairs for the California Trucking Association. He has been with CTA since 2007 and previously served as the Association's Policy Director. Throughout his career Chris has worked with California agencies including the California Air Resources Board and California Highway Patrol on the development and implementation of major programs and regulations impacting the trucking industry. Chris is a member of several advisory boards and committees, including the California Freight Advisory Committee, the ABI 18 Advisory Group and the South Coast AQMD Air Quality Management Plan Advisory Group. He is a graduate of UC Davis.

Richard Steinke – Moffatt & Nichol

Dick has been with Moffatt & Nichol for six years and is currently serving as Vice President, supporting the firm's Port Practice Leadership team, which is responsible for driving global strategies and growth initiatives for companywide port services. Dick joined Moffatt & Nichol shortly after his retirement from the Port of Long Beach, where he spent 22 years—including 14 years as executive director. His many accomplishments while at the Port include approval for the \$1 billion Middle Harbor Redevelopment Project, and the \$950 million Gerald Desmond Bridge Replacement Project. During his tenure as the port's chief executive, he successfully directed the redevelopment of the 500-acre, former Long Beach Naval Shipyard on Terminal Island into commercial marine terminals, including a 375-acre complex originally leased to Hanjin Shipping Co., now one of the largest container terminals in the world. He was also responsible for implementing the Green Port Policy in 2005, which included the extremely successful Clean Trucks Program, propelling modernization of truck fleets to reduce pollution from short-haul trucks. The result was an 80 percent reduction in truck emissions—two years ahead of schedule. The Clean Trucks Program earned the 2010 Model Community Achievements Award from the South Coast Air Quality Management District. The Green Port Policy has become a way of life at the Port of Long Beach and a consideration in all day-to-day decisions. Dick's leadership extends throughout the U.S. port industry. He has been the chief spokesman for the U.S. West Coast Collaboration, a partnership of West Coast ports and the major western railroads. He is a past chairman of the American Association of Port Authorities, an alliance of more than 150 port authorities in the United States, Canada, the Caribbean and Latin America, and the California Association of Port Authorities. He has served as a member of the Board of Directors of the Alameda Corridor Transportation Authority, the Intermodal Container Transfer Facility Joint Powers Authority, the Harbor Association of Industry and Commerce, the Intermodal Transportation Institute, St. Mary Medical Center in Long Beach, and he is a member of the Red Cross CEO Advisory Committee. He currently serves on the National Academy's TRB Marine Board, an internationally recognized source of expertise on marine transportation and marine engineering and technology. Dick is a graduate of Nebraska's Chadron State College, and he has performed post-graduate work at the University of Colorado.

Jeff Stiles – SSA Marine

Jeff Stiles is Terminal Manager for SSA Pacific at the Port of West Sacramento. His tenure started in late 2006 as an Operations Superintendent. His assignments included everything from daily terminal operations to vessel loading and discharge operations. His experience in Stevedoring operations goes back to 1986 when he received my first and only duty assignment in the US Navy. He was enlisted and spent 24 years in a Navy Cargo Handling Battalion, moving all types of cargo all over the world. He retired from the Navy Reserve after taking his current position in West Sacramento.

Pamela Williams – California Retailers Association

Pamela Boyd Williams is Executive Vice President of the California Retailers Association. Prior to joining the Retailers in 1996, she was Vice President of Governmental Relations of the California Grocers Association, acting as chief lobbyist, overseeing the Association's work on all legislation and regulations, and managing nine internal Board and membership committees. Williams has over 20 years of advocacy experience on both the local and state levels. Williams was the Director of Governmental

Relations of the Central City Association of Los Angeles, an organization of Los Angeles-based “Fortune 500” companies. She has also previously worked for the American Institute of Architects, the California Postsecondary Education Commission, the State Senate, and she has operated her own legislative advocacy firm. Active in the community, Williams has served as a Member of the State Public Affairs Committee; International Downtown Association Legislative Committee; Dean’s Council, Graduate School of Architecture and Urban Planning; and on the Board of Directors of the Response Center, Cedars-Sinai Medical Center. She also teaches legislative advocacy, bill analysis, and legislative communications to private and nonprofit groups. Williams graduated cum laude from the University of Santa Clara with a Bachelor of Arts in English and a minor in Political Science. She has done graduate work at the University of the Pacific, McGeorge School of Law and California State University, Sacramento.

John Yandell III – Yandell Truckaway

John Yandell III serves as the Operations Manager for Yandell Truckaway, Inc. and Santa Clara Warehouses, Inc. Representing the third generation of the family owned business, he is responsible for the day to day operations of the Yandell fleet which consists of over 100 power units. Yandell has led the company’s push towards sustainable technology by working with Tesla in the early development stages of the Tesla Class A semi-truck early last year. In addition, Yandell Truckaway was one of the first companies to make a financial investment towards transitioning their fleet to all electric power units. In addition to his role with Yandell Truckaway, Inc. and Santa Clara Warehouses, Inc. Yandell is a member of the California Trucking Association’s Young Person Taskforce and a Trustee with the Benicia Industrial Park Association. In these roles he interacts with local, regional, statewide, and nationwide elected officials and stakeholders to discuss the issues and opportunities within the supply chain network. He is also an Honorary Commander of the 349th Air Mobility Command at Travis Air Force Base in Fairfield, California. This program aims to increase public awareness and understanding of Travis AFB and its mission which centers around cargo and personnel movement. Prior to joining the family business, he worked as a Marketing Manager with E & J Gallo and received a Business Management Degree from Sonoma State University with an emphasis in Wine Business.

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