Assembly
Select Committee on
Ports and Goods Movement

Chair's Interim Report

July 31, 2024

Mike A. Gipson (D-Carson), Chair

Introduction

Dear Colleagues,

As Chair of the Select Committee on Ports and Goods Movement, I have had the honor of working hand-in-hand with California's public ports, industry stakeholders, and community organizations focused on helping our state's supply chain thrive. Through this work, I have collected invaluable data and insight on public policy actions we can take to improve the global supply chain.

My extensive experience touring California's 11 public ports and hosting numerous Select Committee hearings on the state of our supply chain has informed this report's recommendations and observations. While the issues facing the ports and goods movement are daunting and complex, this report provides a snapshot of the most pressing policy challenges within the maritime industry.

I would like to express my gratitude to Speaker Emeritus Anthony Rendon for appointing me to be the Chair of the Select Committee and Ports Movement. Additionally, I would like to thank Speaker of the Assembly Robert Rivas for allowing me to retain my position as well as hold hearings and tours to examine each port in this great state.

This report would not be possible without the hard work of our ports, industry stakeholders, and community based organizations that came together to educate the Select Committee on the most pressing issues facing our supply chain. I would also like to thank my core Select Committee staff, Mitchell Mattos and Ryan Drover. Lastly, I would like to thank the members of the Select Committee, and their staff, who joined us on these tours. In doing so, they helped bring the perspective of their districts into this report.

Sincerely,

Assemblymember Mike A. Gipson
Chair of the Select Committee on Ports and Goods Movement

California Seaports: America's Trade Gateways at a Crossroads

Over the past year, the Select Committee on Ports and Goods Movement toured California's 11 public ports and hosted numerous hearings on the state of our ports. This report highlights California ports' crucial role in the state and national economy, includes a thorough policy analysis of the most pressing issues facing the goods movement sector, and outlines a roadmap to keep California ports competitive in a challenging and complex environment.

We must protect and celebrate California's Port assets through sound regulation, fiscal and infrastructure investments, and leadership at local, state, and federal levels. Failure to maintain competitiveness will result in an inability to afford climate and modernization investments or sustain regional and national economic benefits.

The most significant findings and policy recommendations are summarized below.

Understanding California's Ports

- **Economic Engine:** California ports drive trade and tourism, supporting millions of good paying jobs and playing a critical role in the national economy as a global gateway. The ports provide essential access to foreign markets by driving agricultural exports and importing critical components for manufacturing and retail goods. California ports consistently facilitate billions of dollars of commerce and generate hundreds of millions of dollars in state and local tax revenues.

- **Strong Environmental Stewards:** California's seaports are the cleanest in the nation and, by many measures, in the world. The public ports and their partners in the maritime industry have made major investments and operational changes to support cleaner operations that address air pollution and climate change. The innovations they have piloted and policies they have executed have resulted in billions of dollars in investments and substantial improvements in water quality, carbon emissions, and air quality. Ports are also on the forefront of combating sea-level rise, one of the most pressing environmental challenges facing California.

- **Emergency Preparedness & Response:** California ports play a key role in local, regional and national emergency readiness. From designations as strategic ports, FEMA-designated disaster preparedness sites, supporting naval logistics, to helping local communities respond to the COVID-19 pandemic, ports are critical for emergency readiness and response.

Key Issues

- **Maintaining California's Market Share:** The market share of California ports has steadily eroded since 2006, the peak of our facilitation of discretionary containerized cargo destined for the rest of the country. Since then competitors on the Atlantic and Gulf coasts, as well as ports in Canada and Mexico, have steadily absorbed California's market share, attracting the jobs, income, and tax revenues associated with cargo growth.

- **California's Fair Share of Funding:** Despite the outsized role of California's ports in the domestic economy and international trade, the federal funding received by Californian ports is disproportionately low. Instead, this federal funding goes towards Gulf and East Coast ports which act as competitors to California and take market share as they grow.

- **State & Local Investment:** State and local fiscal investments can be improved by:
    - Dedicating state resources to meet need and sustain competitiveness, including in freight transportation assets.
    - Protecting funds to support zero-emission goals, specifically $315M in state funding previously allocated to the California Air Resources Board (CARB) and California Energy Commission (CEC) in prior budget cycles but delayed due to current fiscal constraints.
    - Providing incentives for early adoption of clean technologies, for the creation of alternative fuels usage, storage, production, and transfer, and for system efficiency improvements.
    - A continued priority will be to secure continued matching funds for projects established through the Infrastructure Investment and Jobs Act (IIJA).

- **Reducing Environmental Impacts while Operating in a Complex Regulatory Environment:** The environmental challenges of decarbonization, reducing localized air pollution impacts, and maintaining clean water are being met head on by California ports. Public-private coordination, facilitated by California's ports, is critical to maintaining the momentum of California's environmental leadership. Collaboration, coupled with a sound regulatory approach is preferable to complicated and costly regulatory schemes that lead to cargo diversion elsewhere, resulting in higher costs, increased carbon emissions, and shifting of localized public health impacts to other communities. Regulators must be challenged to balance costs, feasibility, technological availability, scale of impacts, differing business models and institutional forms (one size does not fit all), a systems view, and the need to provide funding to support innovation and infrastructure investments.

- **Elevating Supply Chain Coordination:** The nation's supply chains depend on California's ports and freight industry. California needs a state leader focused on identifying and addressing the needs of users of the goods movement and ports system. This position should be tasked with coordinating a multi-agency response to address the most urgent

needs of the goods movement and freight industry.

- **Reducing Barriers in the Supply Chain:** We must reduce barriers that prevent ports and the goods movement industry from operating at their full potential. This includes streamlining permitting, making investments in technology and data for improved supply chain coordination, and avoiding costly California-only regulations that put ports, cargo owners, agriculture exporters, and other port users and beneficiaries at an unfair disadvantage. Additionally, as we experienced in the global supply chain crisis that took place during the COVID-19 pandemic, California must encourage better visibility, equipment availability, and asset utilization.

- **Ensuring Adequate Investment in Off-Port Truck & Rail Infrastructure:** In addition to investing in infrastructure at California's ports, it is imperative to support port access investments. Cargo cannot move off or around a marine terminal without adequate supplies of trucks or trains to meet these demands. It is essential that the state begin protecting and reinforcing truck and rail infrastructure investments.

- **Offshore Wind:** California's success in meeting its ambitious offshore wind generation goals of up to 5 gigawatts in 2030 and up to 25 gigawatts by 2045 is contingent upon employing a multi-port strategy of development of port infrastructure to support this new industry. Wind generation support operations will benefit from California ports' extensive experience and expertise in building, operating, and maintaining large waterfront infrastructure projects.

- **Promoting Workforce Development:** Our state must support workforce development programs to ensure a robust, reliable workforce is available for optimal performance. Investment in such workforce will make California's supply chain more resilient, effective, and responsive to economic needs.

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Exploring California's Ports: Our Economic Engine

From the Port of Humboldt Bay in the north to the Port of San Diego in the south, California's public ports are known for their diversity, ranging from serving as vital hubs for trade to vibrant centers for tourism. California's ports are the heart of the state and nation's economy – driving critical trade, boosting the economy, providing millions of jobs, and advancing environmentally sustainable practices.

There are 12 major seaports in California – eleven of these are publicly owned, and one, the Port of Benicia, is privately owned. These ports process about 38% of all containerized imports and 28% of all exports in the United States.

California's ports handle a variety of cargo and each port is unique in its geographic location, capacity, and cargo type.

Overview

At the most basic level, ports are facilities where goods and commodities are loaded and unloaded from ships, and then processed and prepared for further distribution to retailers and consumers. However, as this report demonstrates, ports have an outsized impact on the economy, labor market, and environment.

In addition to the 11 publicly owned deep-water seaports, California has several privately owned and operated port and terminal facilities. These private freight facilities, including the Port of Benicia, handle a variety of cargo that include dry bulk materials, metals, bulk liquids, construction materials, vehicles, electronics, crude oil, petroleum products, and many others.

International Trade

California has become a leading global trade center because of its world-class infrastructure and a massive local market, which results in more favorable costs for delivering cargo through these ports to the rest of the nation. Additionally, the region has evolved into a distribution center for U.S. trade with Pacific Rim nations partly because of its geographic location, but also because such a large portion of the trade is consumed locally. California is the most populous state and will demand ever more imported goods and the region's manufacturing sector – one of the largest in the nation – will continue to require components, parts and other inputs.

Accordingly, California's ports are vital for international trade and are considered essential to the global economy. Cargo owners – from manufacturers to farmers – rely on California's ports to facilitate trade for a diverse array of commodities.

Port	Operating Entity	Highest-Value Exports	Highest-Value Imports
Port of Long Beach	City of Long Beach Harbor Department	Petroleum Coke, Waste Paper, Chemicals, Scrap Metal	Crude Oil, Electronics, Plastics, Furniture,
Port of Los Angeles	City of Los Angeles Harbor Department	Wastepaper, Animal Feeds, Scrap Metal, Fabric, Soybeans	Furniture, Clothing, Automobile Parts, Electronic Products
Port of Richmond	City of Richmond	Vegetable Oils, Scrap Metal, Coke, Coal	Autos, Petroleum, Minerals, Vegetable Oils
Port of Oakland	Oakland Board of Port Commissioners	Fruits and Nuts, Meats, Machinery, Wine and Spirits	Machinery, Electronics, Furniture, Plastics
Port of Stockton	Stockton Port District	Iron Ore, Sulfur, Coal, Wheat, Rice	Liquid Fertilizer, Molasses, Bulk Fertilizer, Cement

Port of San Francisco	City and County of San Francisco	Tallow, Vegetable Oil	Steel Products, Boats, Wind Turbines, Aggregate
Port of Redwood City	City of Redwood City	Iron Scrap	Aggregates, Sand, Gypsum
Port of Hueneme	Oxnard Harbor District	Autos, Produce, General Cargo	Autos, Produce, Liquid Fertilizer, Bulk Liquid
Port of San Diego	San Diego Unified Port District	Machinery, Metals, Autos, Heavy Equipment	Vehicles, Perishables, Construction Materials, Heavy Equipment
Port of West Sacramento	City of West Sacramento	Agricultural and Industrial Products	Agricultural and Industrial Products
Humboldt Bay Harbor District	Humboldt Bay Harbor, Recreation and Conservation District	Logs, Wood Chips	Logs, Petroleum, Wood Chips
Port of Benicia	Amports	Petroleum Coke	Automobiles

Sources: U.S. Army Corps of Engineers Waterborne Commerce Statistics Center, California Freight Mobility Plan 2020. Pacific Merchant Shipping Association, West Coast Trade Report February 2024.

Economic Impact

California ports' contributions to the global economy range from tourism to agriculture. The following is an overview of the economic contributions of California's ports:

- **Port of Hueneme:** The Port of Hueneme is the nation's 6th largest auto port and the 5th largest refrigerated cargo port in the U.S. importing more than 5 billion bananas annually. Trade through the Port of Hueneme generates more than $236 million in direct and related state and local taxes, which fund vital community services. Port operations at the Port of Hueneme support the community by bringing $2.8 billion in economic activity annually, according to the Port of Hueneme.

- **Humboldt Bay Harbor District:** The District oversees and promotes many port development projects and programs. These include dredging, retention and improvement of commercial fishing facilities, improvement of transportation and maritime facilities, pilotage licensing, Oil Spill Co-op coordination, erosion control, shoreline protection projects, port marketing, mariculture, aquaculture, and permitting for development.

- **Port of Long Beach:** The Port of Long Beach, a key gateway for trans-Pacific trade and a trailblazer in innovative goods movement, safety, environmental stewardship, and sustainability, has built a model of supporting a green economy. The Port of Long Beach handles trade valued at $200 billion annually and supports 2.6 million trade related jobs across the nation, including 575,000 jobs in Southern California.

- **Port of Los Angeles:** The busiest container port in the Western Hemisphere, the Port of Los Angeles has built record volumes for containerized trade over the past two decades. Trade through the Port of Los Angeles runs from every corner of the United States to over 160 countries across the globe. Every year, this cargo generates over $200 billion in economic activity and nearly 3 million jobs in the United States. The Port maintains an efficient, sustainable supply chain, adopting new technologies to improve the reliability, predictability, and efficiency of the flow of cargo across global seaborne trade.

- **Port of Oakland:** The Port of Oakland is unique among California ports by serving an equal balance of export and import container cargo. It is the preferred export gateway to the world for agricultural goods grown in the state's Central Valley and the nation's Heartland. The Port handles nearly all containerized cargo in and out of Northern California.

- **Port of Redwood City:** The Port of Redwood City, the only deepwater port near Silicon Valley, provides essential building materials and large-scale recycling services throughout the region.

- **Port of Richmond:** More than 80,000 cars arrive annually at the Auto Warehousing Company at the Port of Richmond. The Port also supports the broader Northern California

commerce, as it is home to dredging companies, tugboat companies, marine engineering operations, and other critical service providers that keep ships moving.

- **Port of San Diego:** The Port of San Diego is the nation's specialty cargo gateway to the Pacific with regular trade routes to Latin America, Asia, and beyond. In fiscal year 2023, the port handled approximately 400,000 autos, 640,000 MT of dry bulk cargo like sugar, sand, soda ash, and more; 144,000 MT of break bulk cargo like windmill components and yachts; 101,000 MT liquid bulk cargo like jet fuel, and 159,000 containers of refrigerated cargo like bananas, pineapples, and other fruits and vegetables.

  The Port of San Diego supports a total economic impact of $20.9 billion and manages a diverse portfolio that generates revenues to support vital public services, critical infrastructure, and unrivaled amenities.

- **Port of San Francisco:** The Port of San Francisco manages one of the most diverse maritime portfolios in the nation, along with water recreation activities in San Francisco Bay. The Port of San Francisco has historically been one of California's most visited waterfronts. It is the City of San Francisco's global appeal and the Port of San Francisco's ability to provide a safe and clean visitor destination that continues to support economic recovery and ongoing vitality to California.

- **Port of Stockton:** Being situated in the heart of California's Central Valley– one of the most agriculturally productive regions in the world– the Port of Stockton serves as a crucial gateway for the import and export of goods. The Port of Stockton is the 4th largest employer in the Central Valley, providing nearly 11,000 living wage jobs.

- **Port of West Sacramento:** The Port of West Sacramento supports regional agriculture, specifically through its rice exports, and Northern California's construction by importing cement.

Workforce Development & Job Creation

Ports support millions of trade-related jobs across the nation. More than 3 million jobs are supported by California's ports, including more than 800,000 jobs related to exports and nearly 2.3 million jobs related to imports. Dockworkers, construction workers, import-export businesses, insurance, retailers, warehouse workers, manufacturers, growers, among others are all jobs related to the maritime supply chain.

In 2020, Governor Newsom signed AB 639 (Cervantes) into law that required the Labor and Workforce Development Agency and the California Workforce Development Board to oversee a stakeholder process to support the development of findings and recommendations on ways to mitigate the employment impacts of automation and the transition to low- or zero-emission operations at the Los Angeles and Long Beach ports.

The State can support workforce development programs to ensure ports and the broader supply chain have access to a skilled and trained workforce. This is especially critical for new and emerging technology (i.e., operation, maintenance and repair for zero-emission equipment). In recognition of this, the ports of Los Angeles and Long Beach received state funding to develop a workforce training facility to support workforce transition, as well as reskilling and upskilling to accelerate the deployment of zero-emission equipment and technologies. This investment will build on existing programs and ensure the future competitiveness of our ports and the goods movement sector.

In March 2023, the Port of Los Angeles and Port of Long Beach announced the establishment of their joint Port of Los Angeles and Port of Long Beach Goods Movement Training Campus to provide a single and centralized location aimed at attracting, recruiting, and retaining workers in the goods movement sector. The $110 million allocation has been spread across three fiscal years, starting with the 2022-23 state budget with additional installments in 2023-24 and 2024-25.

Centrally located in the San Pedro Bay ports complex, the training center will provide new job opportunities for residents of nearby communities while strengthening skills for the existing logistics workforce.

Dockworkers, truck drivers, warehouse employees and other essential logistics workers will have an opportunity to learn how to operate the cutting-edge equipment, creating and maintaining jobs as the San Pedro Bay ports improve air quality, combat climate change and transition to zero-emissions operations by 2035.

The 20-acre campus, expected to open by 2029, is a partnership between the Port of Los Angeles, the Port of Long Beach, the California Workforce Development Board, the ILWU and the Pacific Maritime Association. The ports will equally split the balance of the project cost while working with partners to secure additional funding for training equipment and curriculum.

Agriculture

California's agricultural sector is a cornerstone of both California’s economy and the broader U.S. agricultural landscape, playing a crucial role in domestic and international markets. The state leads the nation in agricultural production, with over $50 billion in annual output – accounting for more than a third of the country’s vegetables and two-thirds of the fruits and nuts. Key products include almonds, grapes, strawberries, and dairy, which are integral to both national food supply and export markets.

The significance of California agriculture extends beyond its economic contributions. It is vital for food security and supply chain stability in the United States. Internationally, California's agricultural exports bolster trade relationships and economic partnerships. The state's produce is

renowned for its quality and diversity – making it a preferred choice in global markets. California almonds and wines are among the top agricultural exports, finding markets in Europe, Asia, and the Middle East.

To maintain and enhance its competitive edge, it is crucial that California produced agriculture have efficient, reliable access to transportation and ports so that products can reach foreign markets quickly and retain quality. California must continue to foster strong relationships with international trade partners by not only ensuring consistent quality and supply, but also engaging in active diplomacy to mitigate trade barriers and tariffs. Programs like the California Department of Food and Agriculture's (CDFA) International Trade Program can play a pivotal role in this regard, helping to open new markets and strengthen existing ones through trade missions, partnerships, and regulatory alignment.

California's Ports: Beyond Containers

Tourism

California's ports not only stimulate jobs and bring financial benefits to cities and their economies through goods movement, but also by serving as entertainment destinations in cities such as San Francisco, Los Angeles, and San Diego.

In Los Angeles, set against the backdrop of the nation's busiest port, the LA Waterfront features expansive marinas and museums, historical landmarks, award-winning open spaces and a flourishing downtown art scene. A 42-acre visitor-serving commercial development called West Harbor will open in 2025, featuring a mix of dining, retail, fresh, recreation and entertainment. Since 2004, the Port of Los Angeles has invested $1B in public access infrastructure, connected by promenades, bike paths and parks along its 16-mile community-adjacent waterfront.

With approximately 200 sailings annually the Port of Los Angeles is another popular embarkation point for a host of cruise destinations including Mexico, Alaska, Hawaii, Baja California, the Panama Canal, and California's world-famous Wine Country. With each cruise call generating over $1 million in local economic activity, the cruise business is a critical part of the local economy.

The Port of San Diego manages a robust waterfront real estate portfolio, promoting mixed-use developments that include water-dependent commercial, visitor-serving, and world-class recreational spaces. Additionally, the Port of San Diego is a prominent player in the cruise ship industry averaging around 100 calls per season. San Diego serves as a home port and port of call for numerous destinations including Hawaii and the South Pacific, the Mexican Riviera and beyond, South America, the Panama Canal, and up and down the Pacific Coast. Partner cruise lines include Holland America Line, Disney Cruise Line, Princess Cruises, Norwegian Cruise Line, and Celebrity Cruise line, each bringing significant tourism revenue to the region.

Additionally, the Port of San Diego is a prominent player in the cruise ship industry; it serves as a home port and port of call for numerous cruise lines, bringing significant tourism revenue to the region.

The Port of San Francisco manages 7.5 miles of waterfront that includes maritime and industrial uses, offices, transit facilities, and some of the city's most popular visitor attractions such as the Ferry Building, Oracle Park, the Exploratorium, Pier 39, Fisherman's Wharf, and the Hyde Street Pier. Over 10,000 passengers travel to and from San Francisco daily by ferry, while the cruise industry draws over 300,000 visitors and over $27 million tourism revenue to the region annually.

Emergency Readiness, Safety & Security

In addition to their commercial operations, California's ports serve critical roles in disaster preparedness and emergency response.

- In 2002, the Port of Hueneme and the Department of the Navy entered into a Joint Use Agreement (replacing the 1994 Memorandum of Understanding) which authorizes commercial use of Wharf 3 onboard Naval Base Ventura County, including approximately 21 acres of contiguous land, buildings 546 and 548, and up to an additional 10 acres of industrial land located outside of the Wharf 3 area. A standing Joint Use Agreement with Naval Base Ventura County and the Oxnard Harbor District/Port of Hueneme allows the Navy to support commercial supply chain logistics when activated.

- The ports of Long Beach, Oakland, and San Diego are three of 18 strategic ports in the United States designated by the U.S. Department of Defense as critical to national security response and providing capability to support military operations and logistics. These ports provide flexible cargo handling capability and vessel loading and discharge in support of military deployments around the globe. The Port of Redwood City is a FEMA-designated disaster preparedness site for the South Bay, a crucial staging area for cargo and personnel in the event of an earthquake or other event that damages bridges and roadways. The Port regularly conducts multi-agency simulations and drills.

- In 2014, the Port of Los Angeles was the first seaport in the nation to establish a Cyber Security Operations Center (CSOC) and staff it with a dedicated cybersecurity team. The CSOC currently serves as a centralized hub for proactively monitoring the Port's own technology environment to prevent and detect cyber incidents. In 2021, the Port was the first seaport in the world to establish a Cyber Resilience Center (CRC), which is an automated port community cyber defense solution. Focused on detecting and protecting against malicious cyber incidents potentially impacting cargo flow, this first-of-its-kind system also greatly improves the quality, quantity and speed of cyber information sharing, as well as the collective knowledge of threats within the Port's ecosystem. The Port of Richmond is home to the Marine Spill Response Corporation (MSRC), which has responsibility throughout the Bay Area for comprehensive oil spill response, exercise and

training support, spill prevention and mitigation as well as disaster recovery emergency services.

Environmental Impacts & Opportunities

The international trade activities which are undertaken at California's ports are of critical importance to the national, state, and regional economies, but they also create local negative externalities including transportation congestion and environmental impacts. These impacts need to continually be acknowledged, addressed, and managed by ports, industry partners, policymakers, and regulators. Doing so in a manner that is balanced is imperative for maintaining California's competitiveness and economic benefits without unduly burdening communities and residents which are impacted by port activities.

Reducing Port Emissions

The U.S. Environmental Protection Agency (U.S. EPA) is tasked with enforcing the Clean Air Act (CAA), a comprehensive federal statute designed to regulate air emissions from both stationary and mobile sources. The CAA's primary objective is to ensure that air quality meets the health-based National Ambient Air Quality Standards (NAAQS). These standards encompass criteria pollutants including ozone (O_3), particulate matter (PM10 and PM2.5), carbon monoxide (CO), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), and lead (Pb), and has been expanded to include air toxics, as significantly expanded under the 1990 CAA Amendments to enhance requirements for the National Emission Standards for Hazardous Air Pollutants (NESHAPs). The EPA sets these standards and oversees state and local efforts to achieve and maintain them. Areas failing to meet NAAQS are designated as nonattainment areas, requiring the development of State Implementation Plans (developed in California by CARB) and Air Quality Management Plans (AQMPs) by local agencies (air districts in California), to outline strategies for emission reductions and compliance.

Emissions reductions targets in California are driven by a set of legislative actions creating both emissions reduction and clean energy generation goals. California Assembly Bill 32 (AB 32, Nunez, 2006) created the foundation of many of these since-developed regulations, programs, and goals. AB 32 required California to reduce GHG emissions to 1990 levels by 2020, and requires the California Air Resources Board (CARB) to develop and update a Scoping Plan (currently the 2022 Scoping Plan) that assesses progress and delineates strategies for achieving emission reduction goals. The emissions reduction target has since been expanded under Senate Bill 32 (SB 32, Pavley, 2016), establishing the target of a 40% reduction in emissions from 1990 levels to be achieved by 2030. Executive Order (EO) B-55-18 established the current carbon neutrality goal of 2045, with the goal to achieve net-negative emissions beyond 2045, establishing the first state standard and guidance for carbon sequestration targets to achieve negative emissions. The 2045 carbon neutrality and net-negative target was expanded under AB 1279 (Muratsuchi, 2022), affirming the 2045 neutrality and post-2045 net-negative targets, while further developing the 2045 requirements to include an emissions reduction of 85% below 1990 levels, ensuring that direct

emissions reductions are emphasized as opposed to the overdevelopment of carbon removal technologies.

The State Scoping Plan, as established under AB 32, guided by more recent legislation and developed by CARB, is designed to outline a pathway for California to achieve carbon neutrality by 2045, with the inclusion of technology feasibility, cost-effectiveness, and equity in the pathway design. The initial scoping plan was released in 2008, with following versions finalized in 2013, 2017, and the current Plan in 2022. The 2022 Scoping Plan identifies pathways to meet these ambitious statewide targets, and incorporates modern scientific and technological developments in order to address climate change. It incorporates a multi-sectoral approach, addressing emissions from energy, transportation, industry, agriculture, and natural and working lands, and reflects California's commitment to leading global efforts in combating climate change, emphasizing the integration of innovative technologies.

In partnership with CARB, local air quality management districts, federal agencies, local jurisdictions, regional communities, and industry partners, ports have been particularly focused on air quality improvement efforts over the last decade – a focus that has led to significant emissions reductions and lasting transformations in our goods movement system.

California has reduced its large ports report emissions reductions by:

- 80% in particulate matter reductions;
- 90% in SOx reductions; and
- 50% in NOx reductions; and significant GHG reductions.

These achievements are the result of concerted, comprehensive, and on-going air quality improvement efforts and significant investment at California's ports.

Examples of programs and technologies mitigating environmental impacts at California's Ports include:

- In 2017, the Port of Hueneme became the first port in California to become Green Marine certified and was voted the Greenest Port in the U.S. at the Green Shipping Summit. The Port of San Diego and Port of Stockton were also certified in 2018.

- The Port of Long Beach has been a leader in reducing greenhouse gas emissions and implementing environmentally sustainable practices. The Port adopted its award-winning Green Port Policy - the first of its kind - in 2005 and, together with the Port of Los Angeles, its Clean Air Action Plan in 2006. The Port of Long Beach has set a goal of achieving zero emission cargo handling equipment by 2030 and zero emission on-road trucks by 2035. A 2022 emissions inventory at the Port of Long Beach found that sulfur oxides were reduced by 97%, diesel soot fell by 91%, and nitrogen oxides fell by 63% compared to 2005 levels. These improvements occurred as container cargo jumped by 36%.

- The Port of Los Angeles became a pioneer in emission reductions dating back to 2001 and the creation of the No Net Increase Task Force, which produced a final report in 2005 that laid the groundwork for the San Pedro Bay Ports Clean Air Action Plan (CAAP) in 2006. As of its most recent (2022) air quality report card, the Port has reduced diesel particulate matter (DPM) by 77%, nitrogen oxides (NOx) by 59%, and sulfur oxides (SOx) by 93%. Moving forward, the latest version of the CAAP has set the Port on a course to pursue zero-emissions operations by 2030, zero-emission drayage by 2035, and decarbonization of ocean transport via Green Shipping Corridors.

- Similarly, the Port of Oakland has continued to make significant progress towards its goal of zero emissions. In 2020, 83.1% of the Port's energy was carbon-free and 70.3% was renewable.

- The Port of San Diego has reduced energy use by 40% and cut greenhouse gas emissions by 39% compared to 2008 levels. One of the Port of San Diego's biggest environmental focus areas has been reducing emissions and improving air quality in and around the Port. In support of its Maritime Clean Air Strategy (MCAS), adopted by the Board of Port Commissioners in 2021, the Port is improving environmental and public health while also supporting efficient, modern, and sustainable maritime operations. The MCAS includes ambitious goals to reduce emissions from port sources like cargo trucks and handling equipment, along with commercial harbor craft, ocean-going vessels and more. Notable achievements in 2024 include:
    - becoming the first port in North America to have fully electric mobile harbor cranes;
    - being the first port in the U.S. to have an electric tug, which is operated by Crowley;
    - advancing development of a zero-emissions truck stop; and
    - receiving recertification by Green Marine.

- The Port of Stockton is located adjacent to an AB617 community, and continually looks for avenues to reduce emissions, explore and implement alternative energy sources, maintain and improve water quality, and engage the local community and stakeholders to raise awareness about environmental issues and initiatives.

Environmental Technology

California ports are demonstrating their strong commitment to environmental sustainability and stewardship by implementing initiatives to reduce emissions, improve water quality, and enhance marine habitats.

- As part of a multi-stakeholder collaborative project to introduce hydrogen fuel into the Southern California drayage truck market, the Port of Los Angeles and with several partners demonstrated near-commercial heavy-duty hydrogen fuel cell electric trucks at and between freight facilities. The "Shore to Store" project will lay the groundwork to help realize their vision of zero-emission freight operations in the future.

An additional part of this project was hosted at the Port of Hueneme, which demonstrated two battery-electric yard tractors, and demonstrated two zero-emission forklifts at their warehouse facilities providing a model by which freight facilities can structure their operations and what a zero-emission supply chain will look like in the future.

- The Ports of Los Angeles and Long Beach set goals of transitioning to zero emissions cargo handling equipment in marine terminals by 2030 and zero emissions drayage trucks by 2035. The Port of Los Angeles is engaged in more than a dozen separate demonstration projects to test and accelerate the feasibility and commercial availability of zero emissions equipment. In June of 2024, the Port of Los Angeles began using the first commercially available electric top handlers at Yusen Terminals.

- Additionally, AltaSea at the Port of Los Angeles is a unique public-private innovation center that convenes and nurtures the best and brightest pioneers and organizations in ocean-focused science, business, and education. Located on the water's edge, AltaSea at the Port of Los Angeles is advancing an emerging Blue Economy through business innovation and job creation.

- The Port of Long Beach has pioneered and funded technologies and policies that allow massive cargo ships to switch off diesel engines at berth, launched hybrid diesel-electric tugboats in the harbor, replaced a 15,000-vehicle drayage truck fleet in a few short years, and convinced the world's ocean carriers to slow down for clean air near Long Beach.

- The Port of Redwood City invests in the dredging or removal of sediment from our waterways. The dredged materials are transported to nearby sites in need of sediment to help protect, restore and create wetlands and marshes. The transported sediment helps reduce potential storm damage and enhances our region's shorelines by building resilient wetlands to accommodate sea level rise.

- For many years, the Port of Oakland has implemented various programs to reduce emissions and improve air quality. More recently, the Port's focus has transitioned to achieving zero-emissions operations. To advance our bold objectives, to date the Port has applied for (and received) multiple grants, contributed its own funds, and partnered with its tenants and customers to leverage private funding for zero-emissions projects.

- The Port of San Diego is actively driving the sustainable development of California's blue economy with its Blue Economy Incubator (BEI) - a portfolio of businesses and partnerships that deliver multiple social, environmental, and economic benefits to the Port and the region by removing barriers to entrepreneurs and providing funding, key assets, support services including entitlement and permitting assistance, and pilot project facilitation to its partners. By supporting entrepreneurship and partnering with leaders in research and

innovation, the Port brings cutting edge solutions to San Diego Bay, advancing its reputation as Blue Tech Bay.

There are, however, challenges to advancing these new technologies. Additional energy capacity and resilience will be critical to meeting the Ports' future electrical needs that are driven by the transition to zero emissions operations. A 2021 study conducted on behalf of the Pacific Merchant Shipping Association (PMSA) estimated that by 2040 demand for power at California ports will equal approximately 600 megawatts, or approximately what is necessary to fund 390,000 households with a population of about 1 million residents. This is roughly the equivalent of the current power generated by the Diablo Canyon nuclear power station.

In addition to ensuring that adequate energy is available to support increased electrical demands, it is also crucial that regulations embrace investments in new technology so that costly investments do not become stranded assets or are deemed non-compliant with near-future regulations.

Green Shipping Corridors

During the United Nations Climate Change Conference (COP26) several countries signed the Clydebank Declaration to promote the creation of green shipping corridors. The Clydebank Declaration is a set of intentions to promote the creation of green shipping corridors through cooperation between countries. The Declaration's main objective is to reduce the environmental impact of maritime activities worldwide.

Further, the International Maritime Organization's (IMO) revised greenhouse gas emissions strategy sets critical targets that will require a significant and accelerated shift to zero-emission fuels. A key objective of the IMO's strategy to reduce emissions was to establish green shipping corridors through collaborations between industry and public authorities as well as researchers in paving the way for shipping's energy transition.

California's international leadership in port decarbonization is second to none, as evidenced by the State of California's Letter of Intent with the Japanese Ministry of Land, Infrastructure, Transport, and Tourism, as well as recently signed Green Shipping Corridor partnership agreements. California ports have inked numerous different agreements with ports throughout the Asia-Pacific region to establish green shipping corridors in China, Japan, Vietnam, and Singapore.

- In November 2023, the ports of Los Angeles, Long Beach and Shanghai, and some of the largest carriers in the world, unveiled the LA-Long Beach Shanghai Green Shipping Corridor Implementation Plan Outline to accelerate emissions reductions on one of the world's busiest container shipping routes across the Pacific Ocean. The plan was the first of its kind and was developed with support from C40 Cities as part of its effort to reduce carbon emissions from the largest cities in the world.

- The Port of Oakland also signed a Green Trade MOU with the Port of Yokohama in October 2023. It paved the way to share best practices on implementation of green initiatives to transform operations all along the supply chain.

- The Port of Hueneme is now the first U.S. port to sign green automotive shipping corridor agreements with ports in both Japan and South Korea, whose markets represent a majority of the transpacific automobile trade between the three nations. These agreements with the Port of Yokohama and Wallenius Wilhelmsen Pyeongtaek International Ro-Ro Terminal, a WWL automotive terminal located in the Port of Pyeongtaek, South Korea, will help promote cooperation and collaboration regarding environmentally sustainable port development initiatives and automotive logistics at both ports, aiming to transition to a zero-emission future.

Alternative Fuels & Hydrogen

As California pursues GHG reduction targets, there has been a significant focus on adopting zero-carbon fuels, with a focus on hydrogen, methanol, and ammonia. These fuels are considered "zero-carbon" because they do not emit carbon dioxide (CO_2) during combustion (or in the case of methanol, can be produced to be CO_2-neutral in their lifecycle). However, they are not zero-emission fuels, as their use in combustion processes still produces air pollutants such as NOx, PM, and air toxics. Due to the emissions released at the point of use, CARB and the air districts have emphasized zero-emission electric and fuel cell technologies for on-road and off-road equipment.

The Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) is the statewide Public Private Partnership (PPP) built on California's hydrogen and energy leadership. ARCHES developed as California's applicant to the Infrastructure Investment and Jobs Act (IIJA) funded regional Hydrogen Hub. Composed of state agencies, the legislature, local governments, the University of California and its two affiliated national laboratories, ARCHES was awarded $1.2 billion as a Hydrogen Hub in October 2023. This alignment of organizations and visions brings the leadership and vision necessary to execute on these projects, the advocacy to support community engagement, environmental justice, and workforce development, and the matching funding to be awarded and fully leverage this funding. While the funding has not yet been disbursed, the award enabled the progression of project planning which included whitepapers to be completed in summer 2024 by various working groups, including on ports. As these projects are initiated, ARCHES is anticipated to act as a strong example of effective PPPs for large-scale development and projects, and is expected to include projects developing and deploying hydrogen within the goods movement ecosystem.

Offshore Wind

California's success in meeting its ambitious offshore wind generation goals of up to 5 gigawatts in 2030 and up to 25 gigawatts by 2045 is contingent on employing a multi-port strategy benefiting from California ports' extensive experience and expertise in building, operating, and maintaining

large infrastructure projects. Several of California's ports will have a role to play in investing in infrastructure to support a domestic offshore wind industry and meet the state's clean energy goals, requiring adaptability as the industry develops.

At the Port of Humboldt, plans for a high-tech marine terminal to support the building and operation of offshore wind turbines are moving forward. The Humboldt Bay Harbor District has received a $426,719,810 grant from the U.S. Department of Transportation, funded in part by the Infrastructure Investment and Jobs act of 2021 for its project.

The Port of Long Beach is leading on the transition to 100% renewable energy through its Pier Wind project, which would position California to build an entire offshore wind economy on the West Coast. Pier Wind is a proposed 400-acre, deep sea facility, capable of housing the staging and integration of large offshore wind turbines larger than the Eiffel Tower.

The Port of Los Angeles has been identified by the California Energy Commission as a prime location for staging and integration activities. This includes a project at "Pier 500", a 160-acre site that could support the development of an offshore wind terminal or an early activation project using floating dock technology.

The Port of San Diego has increased its laydown capacity for project cargoes including wind turbine components like blades and towers. Additionally, the Port of San Diego now has the heaviest cargo lift capacity on the West Coast with its new all-electric mobile harbor cranes. When used in tandem, they can lift cargoes as heavy as 400 metric tons – most of the heavy-lift cargoes destined for this region weigh more than 200 MT. The cranes further enable the Port of San Diego to support the Ports of Long Beach and Los Angeles with their offshore wind projects.

The Port of San Francisco's location, infrastructure and business plans all contribute to it being an excellent candidate to support California's ambitious offshore wind development goals. The Port's southern waterfront has multiple maritime terminals with deepwater berths and available workspace to be an essential fabrication hub.

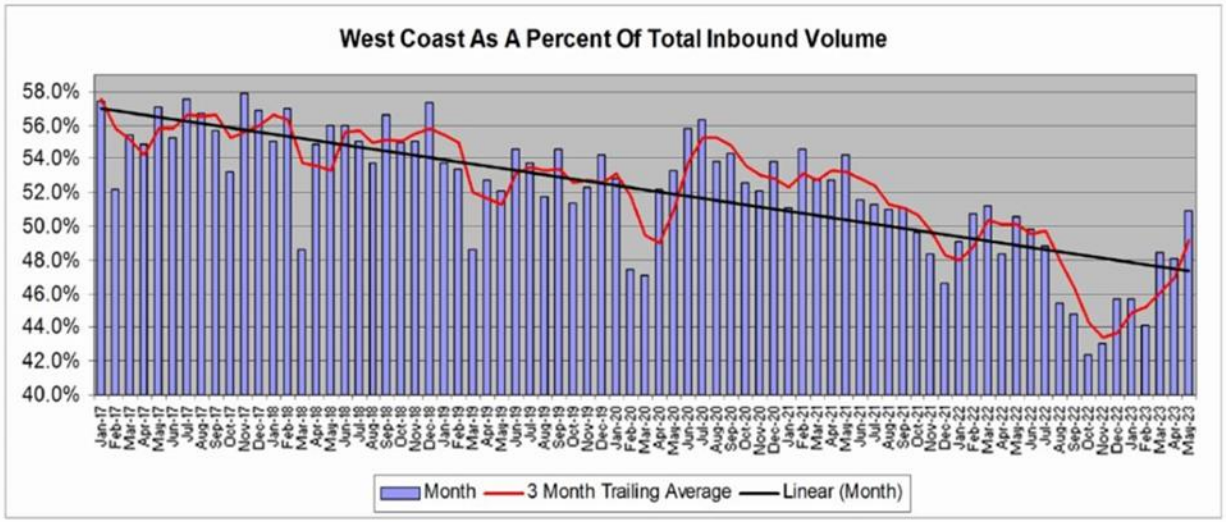
Key Issues

Maintaining California's Market Share

Historically, California's ports have been the preferred destination for containerized cargo entering the U.S. Yet, over the past decade, California Ports have faced intense competition from Eastern and Gulf Coast Ports and have lost market share. A comprehensive economic and trade analysis conducted by international trade economist Jock O'Connell, highlighted a continuous loss of cargo from ports along the Western United States to East Coast and Gulf Coast Ports:

> "The deterioration in the U.S. West Coast ports' collective market share has been almost relentless since the years immediately prior to the Great Recession. The trend has been

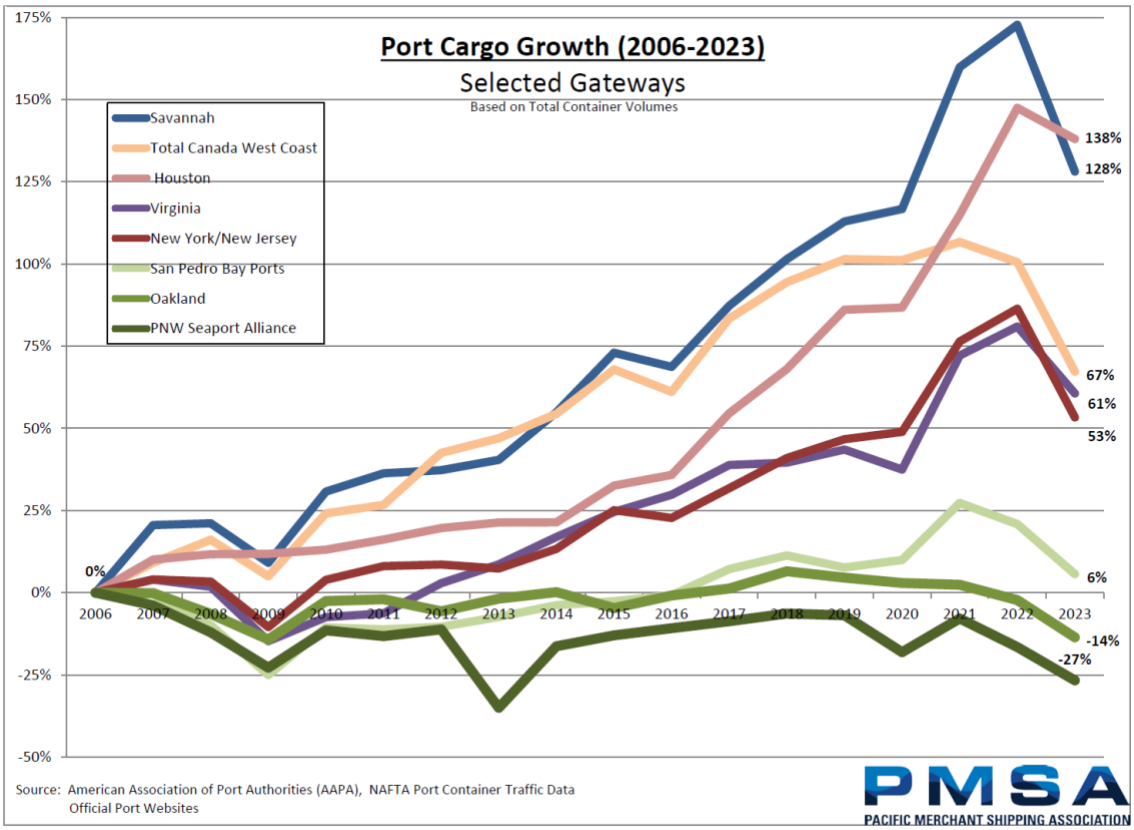
especially evident with respect to the all-important eastbound transpacific container trade. Typically, containerized imports from East Asia have accounted for approximately half of all containerized import and export tonnage handled at the five major U.S. West Coast ports and between 70% and 75% of the declared dollar value of those ports' two-way container trade."



Since 2006, the West Coast ports' market share - measured by the percentage of containers with consumer goods coming in and out of American ports - has declined almost 20 percent. During that same period, market share at both East Coast and Gulf Coast ports has increased. The loss has been attributed to high California-only costs, excessive regulation, and lack of infrastructure investment. This trend accelerated over the last 6 years where the West Coast has seen a 10 percentage point shift away from the West Coast.

As California loses market share to out-of-state ports, it experiences job losses and business flight. These losses not only impact California's Ports, but the state's general economy. Amidst the pandemic, trade emerged as the sole blue-collar sector sustaining middle-class wages, particularly in Southern California, and has since continued to generate such employment opportunities. Keeping California ports competitive is a vital component to the strength of our state's labor market.

The following graph shows how the San Pedro Bay Ports (Los Angeles and Long Beach) and the Port of Oakland have struggled to keep up with East Coast competitors.



Federal Funding Gap

Despite the outsized role of California's ports in the domestic economy and international trade, the federal funding received by Californian ports is disproportionately low. Even as total federal ports spending has increased, West Coast ports, including the San Pedro Bay complex, which handles about 36% of U.S. imports, have lagged behind in federal investment as compared to East and Gulf Coast facilities.

The tide has changed slightly in California with the most recent allocation of Inflation Reduction Act (IRA) awards, specifically ARCHES, increased Harbor Maintenance Trust Fund (HMTF) eligibility, and associated HMTF donor port allocations. The EPA Clean Ports Awards have not been yet announced.

The enhanced federal investments are due in large part to being able to leverage the State's investments through the Port & Freight Infrastructure Program (PFIP), as well as having members of the Governor's administration travel to Washington, DC, with California port leaders to advocate for federal funding. Continued state funding, combined with enhanced advocacy efforts in Washington, DC, is critical to achieving a more equitable distribution of federal dollars to California ports.

Four of California's Ports—Los Angeles, Long Beach, Hueneme and San Diego—are HMTF "Donor Ports" and receive only a fraction, less than 3%, of funding that they contribute to the federal Harbor Maintenance Trust Fund (HMTF). Last year, for the first time, the US Army Corps of Engineers distributed HMTF funds to donor ports in accordance with provisions of the Water Resources Development Act (WRDA) of 2020. This will allow donor ports to make critical investments in their water infrastructure. This appropriation must be maintained in future federal budget years to sustain these investments and give California port users a return on their HMTF tax dollars.

Federal funding is being infused in Gulf and East Coast ports, which act as competitors to California and take the state's market share as they grow. Since the pandemic, historic levels of federal funding have been made available, through IIJA and IRA. To date, California has received approximately 16% in IIJA funding.

By passage of AJR 30 (Gipson)(Chap. 149, Statutes of 2022), the California State Legislature has called on the federal government "to provide a fair allocation of federal transportation funding for freight projects in California, specifically, and on the Pacific Coast of the United States, generally, based on the volume of containerized freight moved." With the continuous increase in cargo volumes moving through California's ports, the need for infrastructure improvements, and the costs of adoption of environmentally sustainable technologies, California should continue to advocate for the receipt of its fair share of federal funding.

Maritime Oversight

While California's State government does not directly operate, own, or manage seaports, it maintains a high-level of involvement with ports through policymaking, regulation, and generalized transportation infrastructure development. Currently, the state lacks a lead coordinator of supply chain and maritime operations in California. Instead, these responsibilities are distributed across several agencies, including:

- California Coastal Commission,
- California Department of Food and Agriculture (CDFA),
- California Energy Commission (CEC),
- State Lands Commission (SLC),
- California Department of Transportation (Caltrans),
- California State Transportation Agency (CalSTA),

- California Workforce Development Board (CWDB),
- California State Water Resources Control Board,
- California Office of Emergency Services (CalOES),
- Office of Spill Prevention and Response (OSPR),
- California Air Resources Board (CARB), and
- Governor's Office of Business and Economic Development (GO-Biz).

Each entity has different responsibilities regarding both ports as well as goods movement in general. The State Lands Commission oversees land use for conformity with state law and manages the state's ballast water programs for ships. Caltrans and CalSTA lead the state planning processes for freight transportation, which includes ports, and hosts the California Freight Advisory Committee (CFAC). CARB is a direct regulator of the emissions from mobile sources, including the trucks, trains, and equipment that operate at seaports and enforces state goals for ports to transition to zero-emission technologies. GO-Biz hosts an economic competitiveness working group to address issues impacting California's freight movement and is administering a new program for the introduction of new digital technology at California's ports.

Additionally, California agencies have promulgated various major policy making documents to govern these activities over the past several Administrations, these include:

- California Freight Mobility Plan (2017, 2020, 2023)
- California Sustainable Freight Action Plan (2016)
- California Goods Movement Emissions Reduction Program (2008)
- California Goods Movement Action Plan (2007)

This framework is not only disparate at the jurisdictional level, but also within the levels of government; multiple agencies, each with distinct roles and responsibilities oversee varying aspects of operations and environmental compliance. *See Appendix 5: California's Ports Regulatory Landscape*.

To support the success of California's ports – in addition to increased infrastructure investment – California needs to find a more efficient way for various agencies to exist as a system.

CARB

California ports are at the crossroads of implementing CARB's clean air rules. These include the Ocean Going Vessels at Berth Rule (At-Berth Rule), the Commercial Harbor Craft Rule, the Advanced Clean Fleets Rule, the Cargo Handling Equipment Rule, the Drayage Truck Rule, the Ocean Going Vessel Fuel Rule, and the Advanced Clean Fleet Regulations. California's ports play a critical role in implementing and administering these rules. While California ports and industry partners are working diligently to comply with all regulations, there remains significant cost and risk to our ports in meeting the deadlines set in each of these rules. As early adopters of new technologies,

California ports face the headwinds of high costs, grant fund availability, and access to market solutions.

Through the implementation of the At-Berth Rule, California's ports have played a key role in port electrification to provide shore power. At present, California's ports plug-in more container ships and cruise ships to shoreside power than any other ports in the world. However, there are still significant funding, technological and supply chain constraints that are barriers to meeting implementation deadlines in CARB's At-Berth Rule for additional fleets. These barriers may have substantial economic impacts for "Roll On/Roll Off" ("ro-ro") vessels, tankers, and other types of vessels where technologies are not readily implemented – especially where the originating markets have not developed products that can meet operational needs.

The lack of a CARB-approved emissions control strategy (CAECS) for ro-ro and tanker vessels is creating difficulties in meeting the 2025 deadline to treat emissions from these vessel categories with an alternative technology (such as emission capture systems). Many ships are not capable of using shoreside power and wharves have not yet been equipped with shoreside power infrastructure (due to cost recovery, permitting timelines, feasibility of operations, and lack of vessel adoption of this technology versus CAECS compliance). Accordingly, the only compliance option will be paying into the remediation fund until a CAECS for these vessel types is certified as shore power installation on enough of these vessel types will take several years.

In addition to technological constraints, infrastructure and resources for full electrification remains challenging. To date, the Ports of Los Angeles and Long Beach, for example, have each invested more than $200 million worth of electrical infrastructure to provide shore power. However, significant additional funding is needed for further build-out.

The Port of Hueneme experienced a "once in a 1,000-years" storm event in 2023 and sustained catastrophic storm damage to its shoreside power system that is used to plug in its ships. The Port of Hueneme incurred between $14M - $38M in damages and it is anticipated to take almost a year to come back online – thus, despite being an early adopter of shore power, there are potential difficulties in regulatory compliance as the remediation from the storm occur.

Ports must also implement reporting systems to ensure compliance with regulations. The Port of San Diego has spent two years developing a technology solution to facilitate CARB reporting. The ports of Los Angeles and Long Beach have been regularly meeting with CARB staff since 2023 in order to ensure proper communication between CARB and port systems to meet compliance.

Further, how regulators define terms and apply rules is a potential challenge for California's ports. CARB appears to have delegated regulatory enforcement to local agencies for high priority fleets, creating uncertainty. A specific example is the application of the drayage truck rules to the Port of Redwood City. No drayage vehicles (those that move only within the port) operate at the Port of Redwood City; however, regulators are asserting that new requirements to monitor drayage truck emissions apply to all trucks entering the facility.

As ports seek to comply with the CARB At-Berth Rule, they must also contend with limited power supply and immense infrastructure expense.

Indirect Source Rules

An indirect source rule (ISR) is an environmental strategy that aims to reduce emissions by regulating locations where mobile sources operate, such as buildings, facilities and structures. Beginning in March of 2018, the South Coast Air Quality Management District (SCAQMD) began development of facility-based mobile source measures on airports, rail, warehouses, and ports due to the contribution of mobile sources to regional emissions, contributing towards air quality nonattainment and elevated health risks. In May 2021 the South Coast Air Quality Management District (SCAQMD) developed Rule 2305, known as the Warehouse ISR, to curtail emissions stemming from sources associated with the activity at warehouses such as heavy-duty trucks, tractor-trailers, and diesel backup generators. Under Rule 2305, warehouses larger than 100,000 have a compliance obligation based on truck activity; however, warehouses can earn credits by implementing various emission-reducing measures, such as using cleaner trucks, installing zero-emission vehicle infrastructure, or deploying advanced technologies to reduce onsite emissions. These requirements are intended to decrease NOx, PM, and other pollutants, thereby improving air quality in the region, especially in communities disproportionately affected by pollution from freight activities. Rule 2305 has faced significant pushback and legal challenges from industry stakeholders.

Following the warehouse ISR, SCAQMD shifted its focus towards rail and ports ISRs in hopes of further reducing emissions, especially NOx, given the South Coast air basin's sustained non-attainment with federal air quality standards. These efforts have been met with ongoing questions of SCAQMD's authority and the effectiveness of these untested measures given the potential negative impacts to industry, port operations, and the regional and national goods movement economy. SCAQMD voted to approve a rail ISR (Rule 2306) on August 2, 2024 and is expected to vote on a port ISR in 2025.

The San Diego Air Pollution Control District is currently evaluating the implementation of an ISR to reduce emissions from freight-related activities such as warehouses, distribution centers, and logistics operations. This initiative mirrors regulations adopted by the SCAQMD, indicating a regulatory trend with potential state and nationwide impacts.

Given the importance of both the economic importance of goods movement and the preservation of improvements of air quality to the state of California, it is critical that all regulatory tools be employed in a manner which ensures that significant environmental improvements and economic growth and competitiveness are not at cross-purposes, and that we are avoiding unintended consequences to one or the other or both in the deployment of our regulatory initiatives. It remains unknown at this time whether indirect source rules ultimately achieve reduced emissions in a manner which also supports growth in employment, competitiveness, and revenues, all of which

are essential to deploying future infrastructure for cargo and the transition to zero-emissions operations in this essential industry.

Public Policy Solutions & Initiatives

Supply Chain Coordination

In 2020, during the start of the global pandemic, California ports saw significant decreases in trade with record breaking impacts. But demand rose for medical equipment, along with home improvement items, exercise equipment, and office furniture as consumers endured shelter-in-place orders and worked from home. The surge in cargo made for some of the busiest years overall in the history of California ports – but it has also created an unprecedented challenge for the global supply chain. California ports are continuing to step up to address the supply chain disruptions.

Operationally, California member ports have proactively taken steps to alleviate supply chain congestion. These steps included:

- Creating policies that incentivize reduced trucking turn times and increased dual transactions.
- Implementing best practices to ensure there is better use of current terminal capacity and existing truck gate appointments.
- Coordinating gate activity, providing greater information transparency, and improving cargo velocity for cargo owners.
- Extending gate hours at certain Port terminals where needed, to evaluate its impact on relieving congestion.
- Activating nearby properties surrounding Ports to serve as cargo support facilities to free up equipment.

Accordingly, the California Ports recognize the significance of the California State Transportation Agency (CalSTA) designating a Deputy Secretary to oversee freight policy and the Governor's Office of Business and Economic Development (GO-Biz) for their involvement in supporting ports' needs.

There is still a need for the establishment of a key executive official in the Governor's Office or an office focused on ports and goods movement would ensure the continued success of California's ports. A key recommendation made by the California Supply Chain SUCCESS initiative was to establish roles for statewide agencies with regard to freight, and continuing to explore options for a statewide freight policy coordinator that works with industry on a regular basis to address short term and long term challenges.

The State should be coordinating a multi-port strategy for goods movement to ensure a more efficient supply chain. This includes direct collaboration with industry stakeholders in each aspect of the economy, including agriculture, manufacturing, retail, and energy. A California-coordinated

freight policy would not only maximize the space and geographic strengths of each port, but also create a more efficient supply chain system to benefit California's economy. Having a statewide plan of investment needs would also better advise the state of under-invested facilities. The supply chain network can more effectively compete for federal investment where the needs and operational improvement are needed the most to improve the supply chain.

During the pandemic, when the global supply chain faced severe bottlenecks and congestion, California ports worked closely with the White House and state policymakers to develop policy recommendations on how to improve the supply chain. While the public policy discussion surrounding the supply chain has since evolved, in October 2021, the White House Port Envoy John Porcari visited California ports to discuss the latest developments in the supply chain challenges being faced nationwide. California ports made the following policy recommendations to address challenges facing the supply chain:

- Incentivize Use of All Trade Gateways: Encourage and incentivize all the supply chain partners to utilize and maximize capacity in all trade gateways. For example, Oakland has experienced a recent reduction in shipping and cargo activity due to global shipping delays.
- Secure Properties for Container Storage: Identify and secure state surplus properties for temporary container storage, in addition to loosening restrictions that might hinder use of off-site temporary storage locations.
- Incentivize Equipment Manufacturers: Support tariff exemptions for the purchase of foreign-made chassis and create incentives for component parts to increase the supply of critical equipment used in the supply chain.
- Establish Advisory Group: Convene a Supply Chain Advisory Group with third party stakeholders and a dedicated point person within state leadership to develop and implement a California Freight Policy that can identify additional levers to ease congestion in times of crisis.
- Workforce Training Initiatives: Continue efforts to develop and roll out workforce training initiatives that increase the pipeline for skilled labor and supply chain workforce jobs.

State Freight Policy

A comprehensive statewide freight policy is essential for the coherent and strategic development of ports and goods movement operations. The state legislature is instrumental in crafting and enacting such a policy, which should encompass key areas such as infrastructure investment, environmental sustainability, and economic competitiveness. The policy should be developed through a collaborative process involving stakeholders from across the freight and logistics sectors, including port authorities, transportation agencies, industry representatives, and community groups. This inclusive approach ensures that the policy addresses diverse needs and perspectives, fostering broad support and effective implementation.

In 2013, Assemblymember Bonnie Lowenthal introduced AB 14, which established an advisory committee to help the state create a freight plan to boost the competitiveness of California's ports.

To build on this report, a next step would be to codify a freight mobility plan. Key components of the policy may include the prioritization of critical infrastructure projects, the adoption of advanced technologies to enhance efficiency and reduce environmental impact, and the promotion of workforce development initiatives to ensure a skilled labor force. By establishing a clear and cohesive statewide freight policy, the state legislature can provide a strategic framework that guides the development of ports and goods movement operations, ensuring that they remain competitive and resilient.

Infrastructure Investment

Developing California's ports to maintain or grow their competitiveness requires significant and regular capital investment. Californian ports are not directly managed by state or federal agencies or supported by recurring infrastructure investment for development or operation. The ports must undertake the critical work of managing, operating, and developing the gateways of global trade. The decentralized and varied approach to investments, policy, and operations of the supply chain continues to impact the goods movement sector.

Many of California's ports face aging and deteriorating infrastructure. Wharves and piers were not built to withstand the weight of current heavy cargo equipment or cargo. Additionally, upgrades to utility systems are needed to meet the demands of the adoption of zero emission equipment. There is no consistent source of State or Federal resources to address the infrastructure needs of California's ports. According to recent reports from industry analysts, California ports require an estimated $2.3 billion in investments over the next decade to address infrastructure deficiencies and maintain competitiveness in global trade markets. This includes investments in technologies that improve operational efficiency and environmental sustainability.

In recent years, there have been several competitive opportunities for ports to receive one-time funding. For example, California's historic $1.2 billion Port and Freight Infrastructure Program (PFIP) seeks to improve the capacity, safety, efficiency, and resilience of goods movement to, from, and through California's ports. These funds will also help to reduce greenhouse gas emissions, air pollution, and negative impacts to the public's health.

These improvements are critical to enhancing and modernizing the multimodal freight transportation system, transitioning to zero-emission freight transportation, and growing the economic competitiveness of California's ports and freight sector. However, these are one time investments in California's ports and even for these funds the demand exceeded the budget allocation.

California's ports have made great strides to address deferred maintenance and growth with these investments; however, continued funding is needed to keep California ports competitive.

Data Sharing & Information Logistics

New technology has the potential to improve operational capacity as it becomes commercially available, affordable to owners, and supportable by appropriate infrastructure.

In 2024, California made a groundbreaking $27 million investment in California's goods movement and supply chain. The California Containerized Ports Interoperability Grant Program will fund ten critical data interoperability projects at the Port of Los Angeles, Port of Long Beach, Port of Oakland, Port of San Diego, and Port of Hueneme. The projects funded under the program will drive statewide economic, supply chain, and environmental benefits.

The projects funded through this program incorporate artificial intelligence (AI), climate resiliency and emissions reduction measures, data infrastructure expansion, small business integration, and new data standard development.

The program will revolutionize interoperability across the five California ports, meeting the unique needs of each location while prioritizing cross-facility engagement and knowledge sharing. Importantly, this program will serve as a replicable model for similar investments in port data interoperability across the United States, demonstrating achievable efficiency improvements and emissions reductions associated with comprehensive data management.

Government Funding

Consistent State Investment

Several states, including Texas and Georgia, have made substantial state allocations for port infrastructure and expansion. Many other states like Florida, Minnesota, Missouri and Virginia have dedicated annual funding for ports. One example is the nearly $1 billion state investment at the Port of Savannah to complete deepening of its waterway and raising of the restrictively low Eugene Talmadge Memorial Bridge, as part of the Savannah Harbor Expansion Project.

Similar state-level efforts, combined with federal funding for dredging or deepening of harbor channels, have developed the Port of Houston, Port of New York and New Jersey, and the Port of Charleston have improved capacity and led to increased business.

In addition to receiving outsized federal investment, as well as state resources, these competing ports, particularly in the Gulf and Southern U.S., also typically operate under less stringent environmental regulations, reducing their compliance costs and enabling the ports to invest in growth in a manner different from California's ports.

Notably, Governor Ron DeSantis has expressed that Florida has capacity to take cargo originally slated for California ports, we will continue to see more of this as those ports who have received public funding show strength in their infrastructure. In October 2021, DeSantis said:

> "Florida is here. We've got capacity, and we also have incentive packages to make it worth your while to be able to bring your business to our ports."

In November 2021, Governor Greg Abbott released a marketing video that intended to attract cargo to Texas ports. In a video posted to his social media profile, he claimed:

> "Port delays are up to 100 days in California. In less than two weeks your cargo can set sail from California and be at one of our 24/7 functioning Texas cargo ports, unloaded and on their way to shelves near you. Choose a state that doesn't see inflation and America's supply chain backlog as a good thing. Escape California. Everyone's doing it. Choose Texas."

In April 2024, Georgia Ports Authority CEO Griff Lynch proclaimed that his state would continue to gain market share and compete with West Coast ports:

> "We are always focused on growth. We want to go above and beyond to build a port that handles both future growth and supply chain disruption. We are creating a safe, trusted harbor for your cargo. Leadership is being able to see what's coming and staying ahead of it. At the Georgia Ports, we are building a resilient link in the global logistics chain, one that is ready to withstand any future challenges."

To maintain California's competitiveness as other ports expand and grow due to outsized state and federal investment, California must develop opportunities for continuous funding.

Federal Advocacy

The state legislature can directly support investments in the goods movement environment by effectively leveraging state funds to secure additional federal support by demonstrating a strong commitment to the development and maintenance of ports and goods movement infrastructure. By allocating state funds as matching funds for federal grants and programs, the legislature can enhance the attractiveness of state projects to federal agencies. This strategic use of state resources can act as a catalyst, encouraging federal investment and amplifying the impact of available funds, as well as creating opportunities to leverage additional private funds.

Environmental Initiatives

Incentivizing Early Adoption of Clean Technologies

California should continue to offer competitive and incentive funding for electric cargo handling equipment and infrastructure adoption and expand access to those funds even after regulations are in place to incentivize compliance and maximize technology adoption. Similar support for upgrading stormwater capture and treatment infrastructure at terminals, piers, and shoreline facilities is helpful to improving underlying infrastructure and environmental protection.

Funding for terminal equipment and facility upgrades can significantly reduce environmental impacts by accelerating a shift to zero-emission equipment, and by improving efficiency at facilities. Examples include investing in electric or zero-emission vehicles, which eliminate the risk of leaking fluids, installing enclosed conveyor systems that protect products from outdoor elements, and improving terminal ingress/egress operations for trucks and rail. Implementing water capture systems to treat runoff before it reaches our bays and ocean can further enhance environmental protection.

The Oxnard Harbor District/Port of Hueneme made the historic announcement at its World Oceans Day event held on June 11, 2024 to aim for zero emissions operations by 2030. Becoming zero emissions with grid power requires a huge investment in electrical charging infrastructure and equipment and will cost tens of millions of dollars. However, the Port is well on its way having invested tens of millions to date with another $100+ million in investments and grants in queue to continue this transition away from fossil fuels. The Port has already made significant progress in reducing emissions by using low and zero emissions vehicles and equipment over the years, and by working with Port partners to use better, cleaner technology.

Through its MCAS, and with approximately $120 million spent or allocated in recent years, the Port of San Diego and its tenants are in a competitive position to acquire additional state and federal funding as it becomes available to accelerate emission reductions by electrifying as much as it can as fast as it can. In just the past couple of years, the port has committed $14.7 million to its electric crane system, another $11.5 million for an emissions capture and control system (bonnet), $9.6 million for a microgrid, $10.7 million in shore power, and $3 million for heavy and light duty truck electrification.

Transitioning to Zero Emissions

California's ports are market leaders in the deployment of low emission and zero-emission trucks and terminal equipment. Substantial investments are being made in new and promising technologies as ports play an essential role in goods movement decarbonization that can yield outsized benefits. However, reaching these ambitious goals is constrained by the lack of available funding and the lack of commercially available technology and/or equipment that is cost competitive with conventional equipment.

Port tenants, including shippers and marine terminal operators should be supported in their investments and assured that adequate electrical power will be made available and that investments will not be rendered obsolete or non-compliant before the equipment's useful life. These new innovation investments are fiscal risks for companies and California should reduce risk for these businesses and their efforts.

Ports across California have set aggressive goals to reduce their on-terminal emissions, including the ports of Los Angeles, Long Beach, and San Diego's goals of transitioning to 100% zero emission cargo handling equipment by 2030. These port goals are among the most aggressive zero-emission

targets for any sector of the economy in the world, going above and beyond both state and federal regulations and achieving zero emissions before other sectors, including trucking.

The immense scale of the energy transition required for the ports and goods movement sector to make these changes requires expanded electrical generation and infrastructure expansion. The total cost for equipment and infrastructure to transition California's port terminal operations will likely exceed $5 billion.

Because of the many demonstration projects, California ports are making strides to achieve their goals. However, these projects represent less than 2% of the equipment needed to transition to all zero emission. California Ports have partnered with various stakeholders, including agencies, equipment manufacturers, and equipment owners and operators on human-operated zero emissions demonstration projects, including:

- At the Ports of Hueneme and Los Angeles, the "Shore to Store" project funded by CARB developed and tested 10 Class 8 hydrogen fuel cell electric trucks, 2 hydrogen fueling stations, 2 zero-emission yard tractors and 2 zero-emission forklifts.
- At the Port of Long Beach, the SWIFT project, funded by the California State Transportation Agency, will replace nearly 65 pieces of cargo handling equipment with zero-emission, deploy ship-to-shore power at three terminals, and build out new incentive programs targeting emission reductions from cargo handling equipment and harbor craft and advancement of zero-emission locomotive technology.
- At the Port of Oakland, a PFIP funded project, will convert all cargo handling equipment at the Port's Matson Terminal to zero emissions technology, including the procurement and installation of 22 electric yard tractors, 8 hydrogen fuel cell top handlers, chargers and a stationary hydrogen storage/fueling site.
- At the Port of San Diego, a grant from the California Energy Commission allowed for a demonstration project with electric yard tractors, heavy lifts, and drayage trucks.

Conclusion

California's seaports play a critical role in the state's economy, facilitating international trade and generating significant employment and revenue. However, the erosion of California's market share since 2006 due to increased competition from Eastern and Gulf Coast ports is a pressing concern. To maintain California's market share, it is essential to enhance competitiveness through strategic investments, particularly in state and local infrastructure. Moreover, ensuring California receives its fair share of federal funding is vital to support the ports' development and innovation, preventing further diversion of cargo and associated economic costs.

Investing in port infrastructure and technology is crucial for maintaining operational efficiency and environmental sustainability. California's ports have made significant strides in addressing environmental challenges, but ongoing efforts are needed to balance regulatory requirements with

practical feasibility. Protecting funds allocated for zero-emission goals and providing incentives for clean technology adoption will support the state's environmental objectives without compromising competitiveness. Additionally, reducing supply chain barriers through streamlined permitting and improved data coordination will enhance the efficiency of port operations and maintain California's competitive edge.

To ensure the long-term success of California's ports, a comprehensive strategy involving state leadership, coordinated goods movement, and workforce development is necessary. A dedicated state leader for goods movement can advocate for public investment in freight infrastructure and environmental improvements, fostering a more efficient supply chain. Supporting workforce development programs will ensure a reliable labor force capable of meeting future demands. Finally, developing port infrastructure for emerging industries, such as offshore wind generation, will position California as a leader in new energy sectors, driving economic growth and sustainability.

Appendix 1: Agendas and Materials from Select Committee on Ports and Goods Movement Hearings/Tours

Sacramento Hearing: To begin the hearings and tours for the Select Committee, a hearing in Sacramento California was held on August 17th. The goal of this hearing was to uncover the complexity of all of the industries in the supply chain and how they operated within and around each other. In this hearing, Panelists included representatives from the governor's office and state agencies to give the Select Committee an overview of their jurisdiction and how they collaborate with ports to optimize efficiency. Hearing from leaders in the industry was also essential as they were able to provide the Select Committee with their unique perspective of their part in the supply chain and how the Legislature could assist industry and workers to improve supply chain safety and resilience.

> Panelists: Rachel Ehlers (Deputy Legislative Analyst, Legislative Analyst Office), Trelynd Bradley (Deputy Director of Sustainable Freight and Supply Chain Development, Governor's Office of Business and Economic Development), Eric Fredericks (Freight Policy Manager, California State Transportation Agency), Kristine Zortman (Vice President, California Association of Port Authorities), Mike Jacob (Vice President and General Counsel, Pacific Merchant Shipping Association), Rudy Gonzalez (State Building and Construction Trades Council of California), Matthew Hargrove (President, CA Business Property Association), Juan Acosta (State Government Affairs, Burlington Northern Santa Fe Railroad), Chris Shimoda (Senior Vice President, California Trucking Association), Rachel Michelin (President, California Retailers Association)

Port of Los Angeles Hearing: The second hearing for the Select Committee was held on September 26th at the Port of Los Angeles. This was a collaborative hearing that included the Port of Long Beach as well and assisted in providing a tour of the San Pedro Port Complex. For this hearing, the perspective of the local ports were essential as we could gain a better understanding of the needs of some of the biggest ports in our nation as well as strategic ports in Hueneme and San Diego. As a Select Committee, it was essential that we heard from industry regulators that assist in implementing regulations that were enacted by the Legislature. This is a key partnership and it was a priority for the Select Committee to hear what these agencies had to say. Testimony from the California Energy Commission, California Air Resources Board, and the South Coast Air Quality Management District were essential in learning how we are progressing towards our environmental goals and helped highlight the rigorous work the ports have been doing to meet or exceed these goals. The Final panel showed this work in action as we had industry leaders who created and manufactured reusable equipment that could be used in the ports to reduce their carbon footprint.

Panelists: Gene Seroka (Executive Director, Port of Los Angeles), Mario Cordero (Executive Director, Port of Long Beach), Kristin Decas (CEO & Port Director, Port of Hueneme), Mike LaFleur (Vice President, Port of San Diego), Patty Monahan (Commissioner, California Energy Commission), Cari Anderson (Chief - Freight Transport Branch, California Air Resources Board), Derrick Alatorre (Deputy Executive Officer - Legislative, Public Affairs & Media, South Coast Air Quality Management District), Sal Dicostanzo (ILWU Local 13 Port Liaison - LRC Representative), Michele Grubbs (Vice President, Pacific Maritime Shipping Association), Matt Hillyer (Director of Engineering, Taylor Equipment Manufacturing), Matt Schrap (Chief Executive Officer, Harbor Trucking Association), Otis Claitt (President, Pacific Harbor Line), Mitchell Ponce (Business Agent, Vice President, Ironworkers Local 433)

Port of San Francisco Hearing: The third, and last hearing, was located at the Port of San Francisco on November 2nd. This hearing was also a collaborative effort with the Port of Oakland who assisted in providing a tour of each port for the Select Committee. For this hearing, the Select Committee once again heard from Executive Directors of each four local ports to hear the biggest issues facing the region. In this hearing the Select Committee wanted to highlight the need for California ports to be competitive and spent an extended time having conversations with industry leaders in the Agricultural sector to highlight the importance of this industry and the economic development that comes from our exports.

Panelists: Danny Wan (Executive Director, Port of Oakland), Elaine Forbes (Executive Director, Port of San Francisco), Jason Katindoy (Deputy Port Director, Maritime & Real Estate, Port of Stockton), Kristine Zortman (Executive Director, Port of Redwood City), Aubrey Bettencourt (Chief Executive Officer, Almond Alliance), James Johansson (President, the California Farm Bureau), Rayne Thompson (VP for Govt. Relations & Public Policy, Sunkist Growers and Fruit Growers Supply Company), Captain Ezra "Sly" Hunter (Regional Representative, International Organization of Masters, Mates, and Pilots), Kyle T. Burleson (Director, State Advocacy, The American Waterways Operators), Dan Jacobson (Legislative Director, Environment California), Alex Podolsky (Senior Director of CA Business Development, Ameresco), Beverly Yu (Legislative Director, State Building and Construction Trades Council)

Appendix 2: Grant Funding within California and the United States

Generally, California's seaports are owned by public port authorities who develop port facilities which are then leased to private marine terminal operators and stevedoring companies who load and unload cargo from ships. This requires efficient interaction between the public and private sectors to meet the needs of the ports, and by extension the cargo needs of the entire country. All parties must work together toward improvements in efficiency and productivity to minimize delays

in the supply chain, stay competitive in both the national and global economies, and to reduce and eliminate the environmental and community impacts of freight from these critical freight facilities.

California's seaports are extraordinarily complex business operations that support a mix of public and private operations. Additionally, within California, each port has a unique governance structure.

Further, unlike other ports in other jurisdictions, California's ports are not consistently funded through the state's general fund or local tax base. Accordingly, operations of these key economic engines depend on a complex and varied approach for maintenance and investment in both capital and operational improvements. The capital and operational expenses must also include the costs of compliance with the nation's leading environmental and safety regulations.

The current state and federal grant funding programs involve (at differing scales) complementary programs, offering one-time funds for projects ranging from critical infrastructure, pilot or pre-commercial deployment of less mature technologies, and large-scale deployment of more mature technologies. An array of funding opportunities and the complete grant landscape that individual programs create will direct the potential development for ports and the overall supply chain. A suite of available funding sources which complement each other can lead to transformative developments, but the existing system of one-time large-value grants can also lead to inflexible results if funding is not awarded for a project. Recent shifts in funding programs that include awarding agency and applicant feedback and improvement and the overall availability of funding and total programs have provided considerations for the model of one-time funding, while developing recurring and known funding pathways could be considered.

One of the largest challenges with the existing funding system in the U.S. is the risk of an application not being awarded. Other funding structures, as in Europe, are composed of multiple smaller funding opportunities that can be awarded independently. The U.S. system of fewer large funding opportunities can lead to binary outcomes if an application is not funded, particularly in the context of supply chain competitiveness where the funding may be awarded to competing ports. This can be further challenged by each port being unique - within the state and throughout the country. The structure of each funding opportunity, including focuses on pilot-scale or commercial deployment of mature technology, may advantage different ports or otherwise be less suitable to the critical needs of a given port.

Additional considerations towards grants may include the technology or energy resource emphasis and potential for longer-term market development of immature applications. The range of energy resources to power the ports of the future include electric, hydrogen, e-fuels derived from hydrogen, among other potentially later maturing energy resources, each requiring different infrastructure to implement at-scale, and will require market development of both the technology/application and the infrastructure component. The large-scale deployment of zero-emission technology through one-time funding (e.g., the EPA's Clean Ports program) could be expected to grow the demand for the necessary energy resource, prompting market development

for the supply and infrastructure. In these one-time funding sources developed under the IRA and IIJA, California has thus far performed well. This notable includes the July 2024 announcement of $500 million awarded to SCAQMD's transportation and goods movement focused application to the IRA-funded Climate Pollution Reduction Grant, and the July 2024 announcement that California's Hydrogen Hub (ARCHES) became the first to be awarded its initial funding as part of $1.2 billion in federal funding as part of a $12.6 billion agreement.

Current State Funding Opportunities

Seaports may be eligible to receive funding through state and federal funding programs designed primarily for developing and maintaining infrastructure or environmental improvements. These state and federal funds typically make up a relatively small share of ports' budgets.

Recent State programs have included:

- Trade Corridor Enhancement Program (TCEP) administered by the California Transportation Commission (about $400 million in state funds and $120 million in federal funds available annually), several programs administered by the California Air Resources Board (funding varies annually), and a couple of programs administered by the California Energy Commission for charging infrastructure. Private businesses that operate within ports may also be eligible for some competitive state grants, for instance making drayage truck drivers eligible to purchase zero-emission vehicles. Some of these state air quality programs are funded with special funds, such as the Greenhouse Gas Reduction Fund which receives revenues from the state's cap-and-trade program. The state's approach to port system support and funding in California is one of many different approaches; other states have direct State investment and ownership in Port infrastructure, including through a State-administered Port Authority, while others have special districts set up for their ports to be subsidized by local property tax levies.

In addition to these one-time state grant programs, the seaports are also eligible for several federal grants. Similar to state funding, federal funding for Ports is one-time and limited in nature, and is not dedicated to funding California's port operations or any ongoing overhead at ports. While there is ongoing federal funding for some harbor maintenance and navigational improvements, these are also not revenue streams for California ports. Port projects are eligible to receive funding from several competitive federal programs, including the Port Infrastructure Development Program (PIDP), Harbor Maintenance Trust Fund, and the Marine Highway Program. In 2021, PIDP provided $241 million in grants and the Marine Highway Program awarded $12.6 million in grants, nationwide. These programs have also been augmented by the federal Infrastructure and Investment Jobs Act (IIJA). California projects have regularly received funding through PIDP in the last several years, including $32.7 million in 2019, $10 million in 2020, and $57.5 million in 2021. To become eligible for these and other freight funding sources California must file a state freight plan.

Appendix 3: Regulatory Structure

The regulatory landscape governing California's ports and overall freight and goods movement industry is composed of a complex overlap of federal, state, and local jurisdictions with regulations aimed at managing air pollution, energy use, land and coastal resources, and climate impacts. This multifaceted regulatory framework involves multiple agencies, each with distinct roles and responsibilities in overseeing aspects of operations and environmental compliance.

At the federal level, the U.S. Environmental Protection Agency (U.S. EPA) sets nationwide standards for air quality under the Clean Air Act, regulating emissions from mobile sources that travel beyond state or national boundaries, including marine vessels, aircraft, and locomotives. The EPA's jurisdiction includes setting and enforcing the National Ambient Air Quality Standards (NAAQS) for pollutants such as particulate matter (PM) and nitrogen oxides (NOx), of which ports and goods movement operations are significant contributors and lead to local and regional attainment challenges.

At the state level, CARB is responsible for controlling emissions from mobile sources and consumer products (except where federal law preempts CARB's authority), controlling GHGs and toxic emissions from mobile and stationary sources, developing fuel specifications, and coordinating state-level air quality planning strategies with other agencies. Beyond air quality, California ports and goods movement industries and operators are subject to regulations from various state agencies governing energy use, transportation, coastal resources, and climate change mitigation.

Regionally, air districts are primarily responsible for controlling emissions from stationary sources within their regions, and further tailoring regulations to meet regional air quality goals. These districts develop and enforce rules specific to their jurisdictions, often focusing on the industrial and transportation activities that create environments unique to their regions.

This complex regulatory framework requires port authorities, terminal operators, fleet operators, and associated industries to navigate a diverse array of compliance requirements, balancing priorities of California's ports contributing to the state's ambitious environmental and public health objectives while maintaining their critical role in global trade and logistics.

United States Environmental Protection Agency (U.S. EPA)

The U.S. EPA serves as the federal authority responsible for regulating air quality across the nation. Established in 1970 in order to implement requirements of the Clean Air Act of 1970, the EPA's mission is to protect human health and the environment by setting and enforcing standards for air quality, water quality, and hazardous waste management. The Clean Air Act (CAA) is the comprehensive federal law that regulates air emissions from stationary and mobile sources. The primary goal of the CAA is to ensure that air quality meets health-based standards, known as the National Ambient Air Quality Standards (NAAQS), for the pollutants: ozone (O3, colloquially referred to as smog), particulate matter (coarse; PM10, and fine; PM2.5), carbon monoxide (CO),

sulfur dioxide (SO2), nitrogen dioxide (NO2), and lead (Pb). The EPA sets these standards and oversees state and local efforts to attain and maintain them.

Under the CAA, areas that do not meet the NAAQS are designated as nonattainment areas. The South Coast Air Basin, managed by the South Coast Air Quality Management District (SCAQMD) and including the San Pedro Bay Ports, is one of the most severe nonattainment areas in the United States, particularly for ozone and PM2.5. To address nonattainment, SCAQMD is required to develop Air Quality Management Plans (AQMPs) that outline strategies and measures to reduce emissions and achieve compliance with the NAAQS. These plans must be submitted to the EPA for approval and are subject to periodic revisions to ensure progress toward attainment.

One of the key aspects of the multi-level regulatory and policy collaboration between the EPA and state and local air districts is the provision of technical assistance and funding while providing regulatory oversight. The EPA supports state and local air quality programs by providing grants for monitoring air quality, developing control strategies, and implementing emissions reduction measures. This financial and technical support enhances the capacity of state and local agencies to address air quality challenges effectively.

The agency reviews and approves Air Quality Management Plans (AQMPs) and State Implementation Plans (SIPs) to ensure they meet federal requirements. These ensure that regulations are effectively enforced under federal requirements, although can add challenges to regions non in attainment of the NAAQS.

California Air Resources Board (CARB)

The California Air Resources Board (CARB) is the state's premier agency for air pollution control and climate change mitigation. Established in 1967, CARB is tasked with promoting and protecting public health, welfare, and ecological resources through the effective reduction of air pollutants. CARB operates under the authority of both state and federal laws, including the California Clean Air Act and the federal Clean Air Act. The agency's broad mandate encompasses setting air quality standards, developing regulations to reduce emissions from mobile and stationary sources, and implementing comprehensive climate change programs.

CARB regulatory programs are designed to reduce emissions to protect public health, achieve air quality standards, reduce GHG emissions, and reduce exposure to toxic air contaminants (TACs). CARB establishes regulatory requirements for reduced-emission technologies (zero- and near-zero emissions) and their deployment into the fleet, for cleaner fuels, and to ensure in-use performance. CARB's regulatory programs are broad - impacting stationary sources, mobile sources, and multiple points within product supply chains, from manufacturers to distributors, retailers, and end-users. CARB's regulations affect cars (otherwise referred to as light-duty or passenger vehicles), trucks (medium or heavy-duty vehicles), ships, off-road equipment, consumer products, fuels, and stationary sources.

CARB has adopted a number of comprehensive air quality and climate plans over the last several years that lay out emissions reduction actions and proposed strategies. These plans include the State Strategy for the State Implementation Plan, the California Sustainable Freight Action Plan, California's 2017 Climate Change Scoping Plan, and the Short-Lived Climate Pollutants Reduction Strategy, along with a suite of targeted regulations and incentive programs. The CAPP Blueprint identified additional actions to reduce the air pollution burden in heavily impacted communities throughout the state.

One important and relevant regulatory authority of CARB's is to adopt measures to reduce emissions of toxic air contaminants from mobile and stationary sources, known as Airborne Toxic Control Measures (ATCM). These regulatory measures include process requirements, emissions limits, or technology requirements. Additionally, CARB implements the Statewide Air Toxics Hot Spots Program (developed under the Air Toxics Hot Spots Information and Assessment Act, AB 2588, Connely, 1987) to address the health risk from toxic air contaminants at individual facilities across the state. The Air Toxics Hot Spots Program includes several components to collect emissions data, identify facilities having localized impacts, ascertain health risks, notify nearby residents of significant risks, and reduce those significant risks to acceptable levels.

Under the Air Toxics Hot Spots Program, air districts are required to set a threshold for facilities that pose a significant health risk and prioritize facilities for health risk assessments. Air districts also establish a risk value above which facilities must conduct a risk reduction audit and emissions reduction plan. Facilities must develop these health risk assessments, risk reductions audits, and emissions reduction plans, with CARB providing technical guidance to support smaller businesses in these actions.

Additionally, CARB has pursued enforceable agreements with industry that result in voluntary but enforceable adoption of the cleanest technologies or practices and provide assurance that emissions reductions will be realized. CARB's 1998 MOU (Memorandum of Mutual Understandings and Agreements) with the Union Pacific Railroad Company and BNSF Railway Company to accelerate the introduction of cleaner locomotives in the South Coast Air Basin is an example of an enforceable agreement.

Air Quality Management Districts in California

California's 35 Air Districts (Air Quality Management Districts, AQMDs, or Air Pollution Control Districts, APCDs) are integral components of the state's operations to regulate and enhance air quality. These districts are responsible for the development and implementation of comprehensive air quality management plans, the enforcement of air pollution regulations, and ensuring adherence to both state and federal air quality standards. Air quality management districts in California are established pursuant to the California Clean Air Act of 1988 and are tasked with regulating air pollution from stationary sources within their respective jurisdictions. These districts are responsible for developing air quality management plans, adopting and enforcing rules and regulations, issuing permits, monitoring air quality, and conducting public education and outreach

programs. Each district operates independently within the framework of state and federal air quality laws, tailoring its programs to address the specific air quality challenges of its region.

The Ports of Oakland, San Francisco, Redwood City, and Richmond are overseen by the Bay Area AQMD (BAAQMD), the Port of San Diego by the San Diego APCD (SDAPCD), the Port of Hueneme (Oxnard) by the Ventura County APCD (VCAPCD), the Port of Stockton by the San Joaquin Valley APCD (SJAPCD), the Port of West Sacramento by the Sacramento Metropolitan AQMD (SMAQMD), and the Port of Humboldt Bay by the North Coast Unified AQMD (NCUAQMD). The South Coast Air Quality Management District (SCAQMD), with jurisdiction over the San Pedro Bay Ports, is particularly noteworthy due to the severe air quality challenges faced by the South Coast Air Basin, a region that consistently experiences some of the highest levels of air pollution in the United States.

SCAQMD and Non-Attainment

The SCAQMD is the air pollution control agency for the South Coast Air Basin, which includes all of Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino counties. This region, home to approximately 17 million people, is one of the most densely populated and industrialized areas in the United States, including California's largest ports and the distribution network supporting the flow of goods movement. The SCAQMD region has the highest levels of smog (ozone) in the nation, being in extreme nonattainment of the ozone and serious nonattainment of the fine particulate matter (PM2.5) NAAQS. In response to this, the SCAQMD prepared an Air Quality Management Plan (AQMP), last revised in 2022, providing proposed emissions reductions and the pathways proposed to meet these ambient air quality standards.

Due to the high population density and industrialization, combined with smog formation-promoting sunlight, meteorology, and topography of the basin, the South Coast Air Basin faces complex and significant air quality challenges. Under the Clean Air Act, regions that do not meet the NAAQS for pollutants such as ozone and particulate matter are classified into various nonattainment categories: marginal, moderate, serious, severe, and extreme. The South Coast Air Basin's designation as an area of "extreme nonattainment" signifies the highest level of pollution severity, requiring the most stringent control measures and longer timeframes for attainment.

Regions in extreme nonattainment are subject to increasingly stringent federal regulations and oversight. The U.S.EPA requires these regions to develop comprehensive SIPs detailing how they will achieve and maintain compliance with NAAQS. Failure to demonstrate adequate progress can result in federal sanctions, including the imposition of Federal Implementation Plans (FIPs) that supersede local control.

Another major risk of remaining in elevated levels of nonattainment is the potential loss of federal highway funds. However, this is not tied directly to nonattainment status; under the Clean Air Act, highway funds are only withheld if states do not submit any plans or do not submit acceptable plans to achieve the NAAQS. Highway fund sanctions have been enacted 11 times nationally since 1980, and with an air plan disapproval from the EPA on SCAQMD's plan to meet the 1997 federal

ozone standard those penalties are an active risk. While the South Coast region has not been in attainment of these standards since its inception, the disapproval of the attainment plan is currently past the June 15, 2024 compliance deadline while determinations to defer sanctions by the EPA are active.

Due to the challenges of jurisdiction in controlling air pollution within the region, SCAQMD statement in response to the air plan disapproval that "[m]ore than 80% of the smog-forming emissions in the South Coast region are from mobile sources – the trucks, ships, trains, planes, and equipment that make up the thriving goods movement industry. Meeting national air quality standards is impossible unless these emissions are substantially reduced." In both SCAQMD's AQMP and CARB's SIP, requests have been made with regard to the necessity of federal regulatory action by the U.S.EPA in controlling sources understood to not be under the local and state jurisdiction, making attainment plans otherwise unfeasible for the stationary and mobile sources regulated by SCAQMD and CARB. This complex regulatory environment has been criticized for a lack of predictability, and a need for both stability and flexibility in regulatory approaches to accommodate technological advancements and economic realities, particularly with the goods movement and related industries in California which carry significant weight for the U.S. supply chain and economy as a whole.

Other State Agencies Impacting California Ports and Supply Chain

California's ambitious environmental regulations are administered primarily by CARB with support from the CEC and CalSTA. These agencies are responsible for the development, implementation, and enforcement of stringent emission reduction mandates affecting ports and associated industries.

While CARB and other state agencies conduct public hearings, workshops, and advisory committees to gather input from industry stakeholders, these efforts have been criticized for being insufficient. Ports and associated industries have reported that their unique operational challenges are often not adequately considered, leading to a perception of exclusion from the regulatory process. The current regulatory landscape and engagement has resulted in extensive litigation, further complicating the regulatory environment in California.

Appendix 4: Key Environmental Regulations

A. Sustainable Freight Action Plan (Executive Order B-32-15)

The Sustainable Freight Action Plan, established by Executive Order B-32-15 (Brown, 2015), provides a comprehensive strategy for transforming California's freight system to be more efficient, economically competitive, and environmentally sustainable. The plan sets ambitious targets for reducing emissions, increasing the adoption of zero-emission technologies, and enhancing the efficiency of the freight system, including ports. Key components of the plan include developing advanced technology demonstration projects, optimizing freight routes, and improving freight infrastructure. The plan involves multiple state agencies, including CARB, CalSTA, and the CEC, working with industry stakeholders to achieve these goals.

B. Low Carbon Fuel Standard (LCFS) (Executive Order S-01-07)

The Low Carbon Fuel Standard (LCFS), introduced by Executive Order S-01-07 (Schwarzenegger, 2007), aims to reduce the carbon intensity of transportation fuels used in California. The LCFS requires fuel providers to decrease the carbon intensity of their fuels by at least 10% by 2020, and by 20% by 2030, from the 2010 baseline, through the use of biofuels or cleaner alternative fuels.

C. Cap-and-Trade Program (Assembly Bill 32, Global Warming Solutions Act of 2006)

The Cap-and-Trade Program, established under AB 32 (Nunez), the Global Warming Solutions Act of 2006, developed a market-based program to set a statewide cap on GHG emissions from major industrial sources and allows entities to buy and sell emission allowances. The cap is designed to decrease over time, ensuring a gradual reduction in overall emissions. The program credits are intended to incentivize businesses to adopt cleaner technologies and practices by making it economically advantageous to reduce emissions.

D. California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA), mandates state and local agencies to assess and disclose the environmental impacts of their proposed projects. CEQA aims to ensure the inclusion of environmental factors and impacts of a project in decision-making processes, including requirements for public participation and environmental impact assessments (with the result of an environmental impact report (EIR)).

E. Community Air Protection Program (AB 617, C. Garcia, 2017)

On July 26, 2017, Governor Jerry Brown signed into law AB 617, an act to amend and add sections regarding air pollution to California's Health and Safety Code. The bill directs CARB and local air districts throughout the state to enact measures to promote public health and welfare by reducing air pollution on a local scale, particularly in communities that are disproportionately burdened by air pollution. AB 617 was designed to accomplish this through CARB's Community Air Protection Program Blueprint, developed with input from communities and air districts, and involving five central components:

- Community-level air monitoring
- A state-level strategy and specific community emission reduction plans (CERPs)
- Accelerated review of retrofit pollution control technologies on industrial facilities subject to Cap and Trade
- Enhanced emission reporting requirements
- Increased penalty provisions for polluters

The communities included under AB 617 are disproportionately located near the ports and major goods movement operations in California, making them a critical focus of environmental justice, air pollution, and emissions control efforts in the state.

F. Advanced Clean Trucks Regulation (CARB)

The Advanced Clean Trucks Regulation was adopted in 2020 to accelerate the market for zero-emission trucks. This regulation requires truck manufacturers to increase the percentage of zero-emission trucks sold in California annually, with the ultimate goal of achieving a fully zero-emission truck fleet by 2045. Advanced Clean Trucks, furthered when paired with Advanced Clean Fleets, was intended to contribute holistically to the market development and industry implementation of electric trucks through the manufacturer requirements.

G. Advanced Clean Fleets Regulation (CARB)

The Advanced Clean Fleets Regulation, administered by CARB, was enacted to mandate the transition of heavy-duty vehicle fleets to zero-emission technologies. Passed in 2021, this regulation sets a series of progressive targets to achieve a fully zero-emission truck and bus fleet by 2045. This regulation applies to fleet operators, including those servicing ports in drayage operations, which must gradually replace their vehicles with zero-emission models. The regulation aims to significantly cut emissions from heavy-duty vehicles, which are substantial contributors to air pollution in port areas. However, the regulation has faced significant backlash from goods movement operations due to the cost, availability, and operation of existing compliant (zero-emission) trucks, particularly drayage fleets which service the ports and face the earliest compliance timeline.

Critically relevant for drayage trucks, the deadline to register new combustion-powered (i.e., diesel fueled) trucks for drayage operation was December 31, 2023. On December 28, 2023, CARB issued an Enforcement Notice stating that: "CARB has decided to exercise its enforcement discretion and will not take enforcement action as to the drayage or high priority fleet reporting requirements or registration prohibitions until U.S. EPA grants a preemption waiver applicable to those regulatory provisions or determines a waiver is not necessary." However, for drayage trucks this enforcement notice included that fleets adding internal combustion engine vehicles after the December 31, 2023 deadline may receive enforcement actions (restriction drayage services) once the USEPA grants the waiver or determines that no waiver is necessary.

H. At-Berth Regulation (CARB)

The At-Berth Regulation, administered by CARB, was first adopted in 2007 and later updated to strengthen its requirements, most recently as the Control Measure for Ocean-Going Vessels At Berth (2020 At Berth Regulation). This regulation mandates that container ships, passenger ships, and refrigerated cargo vessels plug into shore power, also known as Alternative Maritime Power (AMP), while docked at California ports. By connecting to the electrical grid, ships can turn off their auxiliary engines, significantly reducing emissions of NOx, SOx, and PM. The regulation applies to fleets that make multiple annual visits to California ports, requiring them to reduce their emissions at berth by specific percentages.

The regulation has broadly reduced emissions from ships while docked, addressing a significant source of pollution in port areas. However, a challenge exists for older vessels that are not designed to operate off of shore power and must use emissions control/capture systems (ECS), commonly implemented through the use of barges. These barges accompany the vessels while docked, capturing and treating the exhaust from the operation of auxiliary engines. This method does enable older vessels to meet at-berth compliance requirements through emission controls, however, their utilization does come with additional operational and compliance costs for vessel owner/operators.

I. Commercial Harbor Craft Regulation (CARB)

The Commercial Harbor Craft Regulation, originally adopted by CARB in 2008 and updated in subsequent years, targets emissions from various types of commercial harbor craft, including tugboats, ferries, and fishing vessels. The regulation aims to improve air quality in and around port areas by addressing one of the significant sources of state-regulatable maritime emissions. The 2022 Amendments introduced requirements that began as early as January 1, 2023, and include the first zero-emission compliance timelines for some vessel applications while other CHC have timelines to meet the most stringent emission standards (Tier 4 + Diesel Particulate Filter (DPF)). This regulation mandates the adoption of cleaner technologies and the use of alternative fuels to reduce emissions of NOx, SOx, and PM. Owners and operators of commercial harbor craft are required to comply with stringent emission standards and retrofit existing vessels with cleaner engines or install emission control technologies based on their vessel application.

J. Transport Refrigeration Unit (TRU) Regulation (CARB)

The California Air Resources Board (CARB) has implemented regulations for Transport Refrigeration Units (TRUs) to address significant emissions from these mobile sources. TRUs, or reefers, are refrigeration systems powered by internal combustion engines used in trucks, trailers, railcars, and shipping containers for transporting perishable goods. These units contribute to emissions of NOx, PM ,and GHGs, impacting air quality, particularly in communities near distribution centers and freight corridors. While each TRU is a small emission source, commonly only 9-36 hp, their air pollution contributions become significant at the large scale of their usage, particularly in dense goods movement pathways such as at ports and distribution centers.

Initially adopted in 2004 and updated subsequently, the TRU regulation mandates stringent emissions standards and operational requirements. The regulation requires TRU engines to meet Ultra-Low Emission TRU (ULETRU) standards by specific compliance dates, significantly reducing NOx and PM emissions. New TRUs must comply with the most recent standards at the time of manufacture, and existing TRUs must be retrofitted or replaced within seven to ten years of their model year to meet ULETRU standards.

The regulation promotes, with current update activities planning enforced conversion timelines, the adoption of zero-emission TRU technologies, such as electric-powered units. CARB offers incentives and funding opportunities to support the transition to these advanced technologies,

helping to offset the associated costs. TRU owners and operators are required to maintain detailed records and report compliance status to CARB, including documentation of retrofits, replacements, and maintenance activities.

K. In-Use Locomotive Regulation (CARB)

CARB has introduced stringent regulations aimed at reducing emissions from rail operations, targeting locomotives as a significant source of NOx, PM, and other air pollutants. The new rail rule mandates the adoption of cleaner technologies and stricter operational practices to meet the state's ambitious air quality and climate goals. Key components of the rule include requirements for the gradual transition to zero-emission locomotives, enhanced maintenance standards to reduce emissions from existing fleets, and the installation of emission control systems.

While the rule aims to take a critical step towards reducing pollution from rail operations, it has faced substantial opposition from major rail operators. These stakeholders argue that the rule imposes unrealistic technological and financial burdens. The costs associated with upgrading locomotives to meet zero-emission standards and installing necessary infrastructure are cited as significant challenges. Additionally, the availability and reliability of zero-emission locomotive technology are still evolving, making compliance within the proposed timelines daunting.

Legal and jurisdictional challenges have also been raised, questioning CARB's authority to regulate interstate rail operations. Rail operators contend that such regulations fall under federal jurisdiction, specifically the Surface Transportation Board and the Federal Railroad Administration. The conflict centers on the preemption of state regulations by federal law, with rail companies arguing that CARB's rule oversteps its regulatory bounds and could lead to a fragmented regulatory landscape, complicating operations across state lines.

The pushback highlights the broader tension between state-led environmental initiatives and the operational and economic realities of industries with significant interstate activities. As CARB seeks to implement its rail rule, ongoing litigation and negotiations will likely shape its final form and enforcement.

L. SCAQMD Rule 2305 (Warehouse Indirect Source Rule)

The SCAQMD implemented the Warehouse Indirect Source Rule (ISR) in May 2021 as part of its broader efforts to address air pollution from freight facilities. This rule requires warehouses larger than 100,000 square feet to take specific actions to reduce emissions associated with their operations, particularly from diesel trucks. The ISR aims to mitigate pollution from indirect sources, which are not directly regulated but contribute significantly to local air quality issues through related activities.

Under the ISR, warehouses must earn points by implementing various emission-reducing measures such as using cleaner trucks, installing zero-emission vehicle infrastructure, or deploying advanced technologies to reduce onsite emissions. These requirements are intended to decrease NOx, PM,

and other pollutants, thereby improving air quality in the region, especially in communities disproportionately affected by pollution from freight activities.

Despite its environmental objectives, the ISR has faced significant pushback and legal challenges. Industry stakeholders, including warehouse operators and logistics companies, argue that the rule imposes excessive costs and logistical burdens. They contend that compliance with the ISR could increase operational expenses and disrupt supply chain efficiencies, potentially leading to economic repercussions for the region.

Legal challenges to the ISR have also emerged, focusing on issues of jurisdiction and authority. Opponents claim that SCAQMD overstepped its regulatory authority by imposing requirements on indirect sources of pollution, which they argue should fall under state or federal jurisdiction. The legal disputes highlight the complexities of regulating emissions from sources that are not directly controlled by a single entity but are integral to the broader logistics and transportation network.

M. SCAQMD Proposed Rule 2304 ("ports ISR")

While the San Pedro Bay Ports CAAP has yielded significant success in emissions reductions of all pollutants targeted, activities at the ports remain as major contributors of DPM and NOx in the South Coast Air Basin. This includes 0.59 tons/day of DPM (48%) from OGVs) and 36 tons/day of NOx (63% from OGVs), contributing an estimated 13-20% of the total NOx emissions in the South Coast Air Basin. These emissions contributions also lead to the communities adjacent to the ports (also established as AB 617 communities) being in the 96th percentile for air toxics cancer risk within the South Coast Air Basin.

These immediate health risks and significant pollutant contributions, leading to further challenges in the SCAQMD proposing a path to the federal NAAQS attainment, have driven CARB's suggestion of and SCAQMD's consideration of Proposed Rule 2304: an ISR for the Commercial Marine Ports - Container Terminals. In the aim of achieving air quality standards and protecting public health, SCAQMD has held working group meetings beginning February 2022 in order to consider the balance of industry business models and port operations, the limitations of ISR authority, the technology availability and feasibility of measures, the impact on jobs associated with these activities, and input from the communities.

SCAQMD has stated that the proposed rule is not finalized, and so the impacts of the rule cannot be fully assessed or predicted. However, following the implementation of the warehouse ISR major concerns exist on the potential disruptions or limitations of operations due to increased port activity leading to emissions beyond a prescribed limit. The rulemaking process has included a range of potential levers, including potential mechanisms for annual cargo caps or the jurisdictional boundaries of emissions from vessels, trucks, and rail, each pathway raising different concerns on the practical implementation of a rule. Clarity is also needed on how ports or terminal operators may be held accountable for emissions from the range of trucks, locomotives, ships, and harbor craft that operate within the port ecosystem, each with roles in supporting efficient and safe operations in goods movement.

N. San Diego APCD Consideration of an Indirect Source Rule

The SDAPCD is currently evaluating the implementation of an ISR to reduce emissions from freight-related activities such as warehouses, distribution centers, and logistics operations. This initiative mirrors regulations adopted by the SCAQMD, targeting emissions from indirect sources contributing to regional air quality issues. Based on the 2019 passing of AB 423, the amendment to the California Health and Safety Code directed the SDAPCD to consider an ISR to address stationary source-related mobile sources of pollution. The working group is actively holding public meetings through 2024 in order to assess regulatory and non-regulatory strategies to further reduce emissions from these indirect sources.

As with the SCAQMD ISRs, supporters of the ISR argue that it is essential for protecting public health and achieving environmental goals. Conversely, industry groups have voiced concerns about the financial and logistical burdens of the rule, noting that compliance costs could be substantial and potentially disrupt supply chain operations.

The Port of San Diego, which encompasses a diverse range of activities including maritime trade, tourism, and recreation, risks significant impacts by this rule. The port's operations involve a substantial amount of freight movement and associated emissions. Implementing the ISR could necessitate substantial changes in how the port and its tenants manage transportation logistics, potentially increasing operational costs and requiring investments in new technologies and infrastructure to meet new emission standards.

O. SCAQMD Rule 2306 (Freight Rail Yards)

Rule 2306 by the SCAQMD, passed on August 2, 2024, aims to reduce emissions of NOx from freight rail yards and the mobile sources they attract. The rule is designed to help meet state and federal air quality standards for ozone and fine particulate matter (PM2.5). Given that the San Pedro Bay ports, including the Port of Los Angeles and the Port of Long Beach, are major hubs for freight rail operations, this rule could have significant impacts on rail activities in and around these ports. Criticism of the proposed rule have been raised, including by PMSA stating that this rule would be duplicative of existing CARB regulation.