



Testimony to Little Hoover Commission
Climate Change Adaptation
Logistics and Trade: Moving Goods, Moving People
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Introduction

The Pacific Merchant Shipping Association (PMSA) represents terminal operators and ocean carriers that operate on the west coast of the United States. PMSA's position is that international shipping is best regulated at the international level to avoid patchwork regulations and to maintain the competitive parity for California's ports. PMSA has supported the international regulations on vessels and has sponsored joint resolutions in the California Legislature to support the adoption of the IMO standards and the establishment of the U.S./Canada Emission Control Area.

Shipping is the most efficient mode of moving goods. Ships are estimated to be 3-times more efficient than Rail, and up to 10-times more efficient than trucks. Since the days when ships first started using steam the maritime industry has been seeking ever more efficient means of moving cargo. The resulting reduction in carbon emissions over the decades has been dramatic. Globally, commercial vessels contribute 2.7% of GHGs according to the International Maritime Organization.

Climate Change Infrastructure Impacts

The maritime industry relies on the State's port authorities to design and build facilities to withstand the anticipated effects of sea level rise and increased storm surge. The ports are actively engaged in addressing these issues and provide facilities that meet the highest practical engineering standards. Of greater concern is the ability of the power grid to respond to the expected changes in power use at the terminals. Already high in electrification, many terminals are about to implement automated cargo movement systems that will increase electrical demand by double, or even triple, current levels. The shore power regulation also creates large demands on the electrical capacity and further stresses the existing infrastructure. Reliability of the electrical infrastructure is key. Disruptions in the power supply results in extended periods resetting equipment and conducting safety checks before operations can resume. Since reliability is already a sporadic problem, the concern about future electrical capacity and reliability is increased.

Economic Impacts

California's ports serve as a major economic engine for the state and the nation. In 2008, port facilities processed an estimated \$500 billion of goods. More than 40 percent of containerized imports

enter the country through California ports, and nearly 30 percent of the country's exports depart through them. Their far-reaching economic contributions to the regional economy include:

- The ports of Los Angeles and Long Beach generate more than \$10 billion in state and local tax revenues a year.
- Businesses that receive imports or ship exports through the Port of Los Angeles generate about \$12.1 billion and stimulate an additional \$5.5 billion in local industry indirect sales.
- Employees for businesses that receive imports or ship exports through the Port of Los Angeles spend about \$4.1 billion in the region.
- With more than \$100 billion of cargo moving through the Port of Long Beach every year, foreign and domestic shippers and steamship companies spend more than \$5 billion in the region.
- More than \$10 billion a year is spent on wholesale distribution services for goods imported through the Port of Long Beach.

California ports also have a significant nationwide impact:

- More than three million jobs across the country are linked to California's public ports.
- The Port of Los Angeles generates \$21.5 billion in federal tax revenue.
- More than \$32 billion a year is spent nationwide on wholesale distribution services for goods that come through the Port of Long Beach.

International Regulations

The International Maritime Organization (IMO), a part of the United Nations, operates under international treaty, the Prevention of Pollutions from Ships at Sea (MARPOL 73/78). Annex VI of the treaty, signed by the U.S. in 2008, provides the regulations that are specific to air pollution and greenhouse gases. These regulations address the sulfur content of marine fuels, vessel engine standards, and Greenhouse Gas (GHG) emissions. These measures have already reduced particulates (PM) by 73% and sulfur oxides (SOx) by 80%. Current and future engine emission standards are estimated to reduce oxides of nitrogen (NOx) by 80%, although it will take time to phase out the legacy vessels. Amendments made to the treaty added the U.S./Canada Emission Control Area (ECA) that was implemented in August 2012. Currently the ECA requires all vessels transiting within 200 nautical miles (nm), to switch to fuels with a maximum sulfur content of 1.0%, in 2015 the level drops to 0.1% sulfur. The ECA also requires that vessels constructed in 2016 and later to operate in the ECA at NOx levels 80% below those for a vessel constructed in 2010. The regulations are jointly enforced by the U.S. Coast Guard and EPA.

In 2011, IMO amended the international treaty to add Chapter 4 to Annex VI, the "Regulation on Energy Efficiency for Ships". This is the first international treaty on Climate Change since Kyoto. It is also the only international industry wide regulation on GHGs. The provisions are for new build standards and operational best practices for vessels. The Energy Efficiency Design Index (EEDI) requirement began in 2013 and calls for an initial 10% GHG reduction. That percentage will be adjusted every five years up to 30% in 2030. The Ship Energy Efficiency Management Plans

(SEEMP), also required in 2013, is to implement industry best management practices to reduce GHGs on operating vessels. The IMO will also consider expanding Chapter 4 with a number of additional requirements at their meeting in March 2014.

California Regulations

The state of California, through the California Air Resources Board (CARB), has also passed regulations on international vessels operating in international waters and in the California Ports. California currently regulates marine fuels and mandates vessel fleets to connect to shore side power to achieve emission and GHG reductions. Both of these regulation imposed significant new requirements on vessels on January 1, 2014. These regulations have not been harmonized with the international fuel requirements and the shore power regulations are unique to California. PMSA, using CARB data, has estimated that the cost to the goods movement industry of all the CARB regulations is \$5 billion. These costs have to be adsorbed at a time when freight rates are low and most companies are operating as a loss. The approach taken in adopting these regulations has created additional costs and administrative burdens that do not aid California's competitiveness. Perhaps even more troubling are efforts of local air districts and CARB towards further requirements on the goods movement industry that are likely to be unique to California.

As part of their responsibilities under AB 32, CARB estimated the GHG emissions from all sources in California and estimated that goods movement contributes roughly 3%. Not surprisingly, due to the rubber wheel culture in California, vessels are a smaller percentage (1.5 to 2%) than the 2.7% global estimate by IMO.

One of the early actions by CARB for GHG reduction was the At-Berth Vessel Regulation, more commonly referred to as either cold ironing or shore power. Requirements of the regulation went into effect on January 1, 2014. Container, refrigerated cargo, and cruise vessels, are now required to connect a portion of their vessel fleets to grid based power while at berth at the Ports of Los Angeles, Long Beach, Oakland, Hueneme, San Diego and San Francisco. The requirement begins at 50% of the vessels in the fleets and increases to 80% in 2020. Many of the affected ports have adopted requirements to go beyond the regulation and have imposed lease conditions as high as 100%.

The shore power regulation has not been well received. The prevailing feeling is that CARB should have set a emission goal and allowed the industry to find the best way to comply instead of mandating a specific technology. Although the industry and the Ports have invested hundreds-of-millions to come into compliance there have been a number of long standing issues that have only been recently addressed. More problematic, the regulation has actually been an obstacle to the development of any alternate technologies. Only recently has CARB indicated that they are rethinking their position and may allow other technologies to meet the requirements of the regulation. But we're not there yet, and if we do get there it will create a tremendous equity issue for the early adopters of the shore power technology. Individual shipping companies have spent tens-of-millions to comply with the current regulation. Late comers may be able to comply at a fraction of the cost creating a competitive disadvantage for the early adopters. This is an issue that must be addressed and PMSA has made recommendations to CARB.

In 2012 CARB released the “Vision for Clean Air: A Framework for Air Quality and Climate Planning” that evaluated meeting the GHG requirements of AB 32 in combination with the air quality attainment requirements of the federal Clean Air Act. The magnitude of the problem is overwhelming and the scenarios provided by CARB suggest the phasing out of gasoline and diesel and replacing them with electricity and hydrogen technologies by the year 2050. How the transition would be implemented has not been determined. In the recently released “AB 32: Scoping Plan Update”, CARB directed staff to proceed with a “Sustainable Freight Strategy”. This is in addition to the ongoing CalTrans “California Freight Movement Plan” development. While the objects of these two state efforts may be different, coordination and consolidation of these efforts should be a priority.

Voluntary Programs

In contrast to the regulatory approaches there are a number of voluntary efforts that have made significant contributions to reducing emissions. In fact, both the low sulfur fuel and shore power regulations began as voluntary initiatives developed by the industry. An example of a very successful voluntary program is the Vessel Speed Reduction Program of the Ports of Los Angeles and Long Beach. Recent reports by the ports claim over 95% compliance. The benefits of slowing from cruising speed to the 12 knot limit can approach 80% reduced fuel consumption. The VSR program and the Ports’ Clean Truck Program are examples of outstanding progress that can be made without regulations.

Competition

The Panama Canal expansion is a game changer, how much impact remains to be seen. If all water routes to the gulf and east coasts are cost effective then California Ports could suffer further market share loss. Ports throughout the gulf, the east coast and Canada, are making massive investments to infrastructure in anticipation of the Canal’s opening hoping to take market share from California’s ports. Market share is already down at the major west coast ports.

Recommendations

- Support the development of a National Freight Policy. Highlight and leverage the importance of California’s ports to the national economy to procure federal funding.
- Address the long lead times necessary to complete infrastructure development projects in California.
- Limit California only approaches, especially impacts to international trade and interstate commerce.
- Improve California’s infrastructure. Emphasize the need to repair and expand existing transportation and electrical infrastructure and to integrate future infrastructure with minimal disruption.

Conclusion

The main advantages of California ports are deep water, efficient terminals, adequate infrastructure, access to large population centers, and proximity to Asia. Continuing the development and modernization of the California ports provides both the market advantages and the ability to transition to new, more efficient technologies. Competition from other ports, especially with the Panama Canal

Expansion, will continue to place pressure on California ports to maintain market share. California centric regulations do not help in retaining and expanding goods movement in California. New and expanded terminals, capable of handling the newest and cleanest vessels, combined with electrified cargo movement systems and automated cargo tracking will help maintain the competitive advantages of California's ports.

PMSA is proud of the proactive approach our industry has taken towards climate change. Improvements have already made tremendous progress in reducing the carbon footprint of our industry, and regulations are already in place to make sure that those improvements continue. However, the industry realizes that much needs to be done and remains committed to seeking solutions.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "T.L. Garrett". The signature is written in a cursive, flowing style.

T.L. Garrett