Date of Hearing: April 2, 2019

ASSEMBLY COMMITTEE ON JOBS, ECONOMIC DEVELOPMENT, AND THE ECONOMY
Sabrina Cervantes, Chair
AB 639 (Cervantes) – As Introduced February 15, 2019

SUBJECT: Financing Lower Carbon Emissions: seaports

POLICY ISSUE FRAME: While trade-related industries play a primary role in California's economy, this important source of jobs and state GDP also results in significant environmental impacts. The state is currently in the process of developing a plan to transition the state's logistic and goods movement network to zero and near-zero emissions. Research shows that the state's ports and transportation sector have already made substantial progress toward reducing emissions. Achieving this next level of emission reductions, however, will require new financing mechanisms if the state is to deploy clean and zero emission technologies at a much broader scale than today.

This transition is particularly challenging in that it will require operational and technology changes across a wide array of highly interdependent transportation, logistic, manufacturing, and related business and publically-owned enterprises. The timing and technology shifts will need to be coordinated and provide for interoperability, or the production and movement of goods will be jeopardized. Public resources, like California's seaports, play a crucial role in this transition and cannot afford to lag in adaptation and upgrade of facilities.

This measure provides an innovative method for financing key infrastructure and operational improvements. The analysis includes background on the state's efforts toward a more sustainable freight movement strategy, costs of the proposed actions, mechanics of the economic impact report, proposed new task force examining the impacts of modernization on the workforce, and the importance of trade to the California economy. Suggested amendments are outlined in Comment 8.

SUMMARY: AB 639 establishes a process by which a harbor agency can monetize the future economic value to the state of upgrading and modernizing port infrastructure and equipment that result in environmental mitigation and improvement, including greenhouse gas emissions. This valuation is reviewed for accuracy and then used as the basis for a future state appropriation, the repayment of which occurs through the project economic impact, including the payment of state taxes and fees. Specifically, **this bill**:

1) **Legislative Findings**: Makes legislative findings and declarations that include, but are not limited to:
   a) The primary purpose of this act is to encourage California's public agencies to update infrastructure and processes in a manner that will result in lower carbon emissions.
   b) It is in the statewide interest to continually invest in California's infrastructure and economic development facilities, including public seaports, to support the state's economic growth and economy by directly or indirectly employing millions of Californians, contributing billions of dollars in economic activity, and generating significant local and state tax revenues as a result of this activity.
   c) In addition to supporting economic growth, the upgrading and modernizing of California's infrastructure offers an important opportunity to reduce carbon emissions from both stationary and nonstationary sources.

d) In consideration of these environmental matters, the state has a paramount interest in creating market incentives and mechanisms that will precipitate ongoing investments in the newest generation of equipment and provide support for infrastructure.

2) **Specifies Purpose**: Specifies that the legislative purpose of this bill is to facilitate seaport infrastructure financing in a manner that improves public port assets, infrastructure, and operations and achieves the public goals of improving the state's waterborne commerce, enhancing economic prosperity, and financing the costs of environmental mitigation and improvement.

3) **Defines Project and Project Valuation**: Defines certain terms and requires that these definitions be used to interpret the requirements of this act. These terms include, but are not limited to:

a) "Proposed project valuation" means the economic impact of the proposed infrastructure development or equipment purchase, as demonstrated through an economic impact report, as determined by the requirements of this chapter and the criteria, priorities, and guidelines adopted by the Ibank; and

b) "Project" has the same meaning as used by the California Infrastructure and Economic Development Bank (IBank): the "designing, acquiring, planning, permitting, entitling, constructing, improving, extending, restoring, financing, and generally developing public development facilities or economic development facilities within the state."

4) **Sets Adoption of Rules and Procedures**: Requires the IBank, after consulting with the appropriate state and local agencies, to establish criteria, priorities, and guidelines for the selection of projects to receive assistance under AB 639 provisions. All projects are required to comply with the criteria, priorities, and guidelines adopted by the IBank. The IBank is required to notify the Governor and related fiscal and policy committees of the Legislature of changes to the criteria, priorities, and guidelines.

5) **Requires Finding of Consistency with Charter**: Requires a harbor agency formed pursuant to the Harbors and Navigation Code to make a finding that the project is consistent with its charter and the statewide interests in the operation of harbors and ports.

6) **Outlines Project Valuation Application**: Authorizes the IBank to accept applications for a proposed project valuation consistent with IBank adopted criteria, priorities, and guidelines. At a minimum, the application is required to include all of the following information:

a) The proposed infrastructure development or equipment purchases that are the subject of the proposed project valuation;

b) A copy of the finding adopted by the harbor agency that the project is consistent with state tidelands trust, as specified;

c) A copy of the finding adopted by the harbor agency that the project is consistent with its charter, as specified; and

d) The state fiscal and economic impacts estimates developed pursuant to the provisions of this bill.

7) **Sets Economic Basis of the Project Valuation**: Requires a harbor agency to adopt a resolution which sets forth estimates of the state fiscal and economic impacts that will result from the project. The resolution is required to be based on an economic impact report which is peer-reviewed and evaluated by an independent party who is without any financial association with the economist who

completed the economic impact report and developed the economic methodology. The content of the state fiscal and economic impact resolution is required to include, but not be limited to:

a) The total direct and indirect state tax revenues generated by the impact of the infrastructure development or equipment purchase;

b) The total direct and indirect state General Fund and special fund expenditure savings generated by the impact of the infrastructure development or equipment purchase;

c) The total local tax and user fee revenues generated by the infrastructure development or equipment purchase;

d) The total jobs created by the infrastructure development or equipment purchase, including the specific impact on the employment of California residents; and

e) The total direct and indirect public health savings generated by the infrastructure development or equipment purchase.

8) **Sets Process for IBank's Review**: Requires the IBank to approve, require a modification of, or deny the proposed project valuation. In considering the approval of a proposed project valuation, the IBank is required to do the following:

a) Review the proposed project valuation prepared by the harbor agency;

b) Review the economic impact report and the economic methodology prepared for or by the harbor agency; and

c) Approve a proposed project valuation if it can make the finding that the execution of the project is more likely than not to result in the outcomes projected by the harbor agency, as specified.

9) **Defines the Budget Proposal**: Specifies a process for the harbor agency to access moneys associated with the approved project valuation.

a) The IBank is required to provide notice to the Department of Finance (DOF) within 30 days of approving a proposed project valuation. The notice shall include, at a minimum, the dollar amount of the valuation and any other information requested by DOF;

b) DOF is required to include an amount equal to the approved project valuation in the IBank's budget, as specified;

c) Funding to the harbor agency is only available upon an appropriation by the Legislature for this purpose; and

d) The IBank may condition remittance upon the harbor agency demonstrating it has sufficient resources to complete the project or install the equipment purchase.

10) **Mandates Reporting**: Requires the IBank to prepare a report on its related-activities and to post that report on its Internet website. That report may be included as part of the IBank's existing annual report.

11) **Authorizes Tenant Improvements**: Provides that nothing in this chapter prohibits a harbor agency from submitting a proposed project valuation for a project on behalf of a tenant or for the purchase of equipment to be owned and operated by a tenant, if the assets are owned, maintained, and used exclusively in California and, upon the cessation of the lease, ownership and control of the assets shall

revert to the harbor agency on terms enforceable by contract between the harbor agency and the tenant.

12) **Gives Commission Veto Power**: Prohibits the IBank from approving a proposed project valuation if the commission objects to a harbor agency's finding of consistency with the state tidelands trust and the terms and conditions of any grant of trust lands to the harbor agency.

13) **States this is a Discretionary Act**: Specifies that the participation in the proposed project valuation program is voluntary on the part of a harbor agency and that the submission of an application to the IBank is a discretionary act.

14) **Reimburses IBank Costs**: Requires the harbor agency to reimburse the administrative expenses or direct operating expenses that are incurred by the IBank as the direct result of the review and processing of the project valuation.

15) **Finding of Consistency with Tidelands Trust**: Requires a harbor agency acting on granted lands to make a finding that the project is consistent with the state tidelands trust and with the terms and conditions of any grant of trust lands to the harbor agency.

    a) Prior to making the finding, the harbor agency is required to consult with the State Lands Commission and reimburse the State Lands Commission for all reasonable expenses related incurred as a result of this consultation; and

    b) The harbor agency is required to forward a copy of this finding to the State Lands Commission.

EXISTING LAW:

1) Establishes the IBank within the Governor's Office of Business and Economic Development (GO-Biz) and authorizes it to undertake a variety of infrastructure related financial activities, including, but not limited to, administration of a revolving loan fund to finance infrastructure, oversight of the Small Business Finance Center, and issuance of tax-exempt and taxable revenue bonds.

2) Requires the California Air Resources Board to adopt a statewide greenhouse gas (GHG) emissions limit equivalent to the statewide GHG emissions levels in 1990 and coordinate the state's achievement by 2020, and to adopt a statewide greenhouse gas emissions limit equivalent to 40% below the statewide GHG emissions levels in 1990 and coordinate the state's achievement by 2030.

FISCAL EFFECT: Unknown

COMMENTS & CONTEXT:

1) **Moving Toward a Sustainable Freight Plan**: In July 2015, Governor Brown issued Executive Order B-32-15 which called for the development of an integrated plan to improve freight efficiency, transition to zero emission technologies, and increase competitiveness of California's freight system. The mandated new action plan, referred to as the *California Sustainable Freight Action Plan*, was issued July 2016 and identifies state policies, programs, and investments that can be made in order to achieve these zero emission targets.

   According to an Air Resources Board (ARB) policy-related document, a key step toward California achieving its air quality, climate, and sustainability goals is transiting to a zero emission transportation

system. While the state's freight transport system serves as an economic engine, it also accounts for about half of toxic diesel particulate matter (diesel PM), 45% of the emissions of nitrogen oxides (NOx) that form ozone and fine particulate matter in the atmosphere, and 6% of the greenhouse gas (GHG) emissions in California.

Addressing these environmental challenges will require policy and financial solutions that include trucks, ships, locomotives, aircraft, harbor craft, and all types of equipment used to move freight at seaports, airports, railyards, warehouses, and distribution centers. This more efficient, zero and near-zero emission freight system will demand both new equipment and fuels, as well as new transportation infrastructure, communications, and industry operating practices. New technologies will also play an important role in increasing system efficiency, including computerized logistics systems and technologies to physically move containers and trucks.

2) **Funding Options to Meet Demand**: The Executive Order directed the state agencies, among other things, to initiate work on corridor-level freight pilot projects that integrate advanced technologies, alternative fuels, and freight and fuel infrastructure, and provide local economic development opportunities. Caltrans serves as the lead agency for two of the three pilot project models, including Advanced Technology for Truck Corridors, and Advanced Technology Corridors at Border Ports of Entry. The Air Resources Board serves as the lead agency for Dairy Biomethane for Freight Vehicles. Key freight emission targets include:

   - By 2030, improve freight system efficiency by 25% by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon produced.
   - By 2030, deploy 100,000 freight vehicles and equipment capable of zero emission freight operations and maximize near-zero emission freight vehicles and equipment powered by renewable energy.

   Meeting these targets call for substantial new investments in public and private funds, as well as new regulatory and other programs to encourage and mandate zero emission and other clean technology development and deployment. The scale of the currently proposed public funds appears to be nowhere near the anticipated costs. It is also problematic for public and private entities to take on significant new debt or make expenditures for activities that result in no new revenues and potentially result in lower revenues in the short-run.

   Chart 1 displays the estimated capital and operational expenditures for the container terminals at the ports of Los Angeles, Long Beach, and Oakland in order to achieve the zero and near-zero emission goals. This data is from a technical memorandum prepared by Moffatt and Nichol in 2016, which was developed at the behest of the Pacific Merchant Shipping Association. In preparing this analysis, committee staff were unable to identify more current data.

Chart 1 – Capital and Operational Costs for Los Angeles, Long Beach, and Oakland Ports Achieving Zero and Near-Zero Emissions			
Action	**Term**	**Funding**	**Increased Funding**
Zero/Near-Zero Emission Technology Capital Cost Comparison			
Replacement of current conventional terminal operating equipment and associated infrastructure in the normal course of business.	Over 30 years	$7 billion	--

Replacement of current equipment with zero emission or near-zero emission equipment and supporting infrastructure.	Not Set	$23 billion	$16 billion
Replacement of current equipment with electrified high-density stacking equipment and supporting infrastructure.	Not Set	$35 billion	$28 billion
Zero/Near-Zero Emission Technology Operational Expenditure Comparison			
Operational Expenditures to maintain and operate current conventional terminal equipment.	Over 30 years	$239 billion	--
Maintenance and operation costs for zero and near-zero emission electrification equipment.	Not Set	$284 billion	$45 billion
Maintenance and operation costs for zero and near-zero emission electrification equipment.	Not set	$260 billion	$21 billion
Source: Moffatt and Nichol on behalf of the Pacific Merchant Shipping Association, 2016			

State agencies and departments assisting the development of the *California Sustainable Freight Action Plan* include the: California State Transportation Agency, California Environmental Protection Agency, Natural Resources Agency California Air Resources Board, California Department of Transportation, California Energy Commission, and the Governor's Office of Business and Economic Development. Meetings and other outreach events are scheduled by the various state entities for this spring.

It will be challenging to develop and successfully implement a *California Sustainable Freight Action Plan* that can achieve the dual mandates of transitioning to zero emission technologies while also increasing competitiveness of California's freight system. AB 639 could be an innovative tool for front-loading the financing and provide the needed foundation from which other elements of the state's transportation and logistics networks could transition.

3) **Environmental Improvements at the Ports**: California's ports move more than 40% of the containerized cargo entering the U.S., representing nearly 30% of all U.S. exports. While moving such a significant portion of the nation's freight, California ports have also been making significant environmental improvements. Since 2005, the state's largest ports have reduced their emissions of Sulfur oxides (SOx) by 90%, particulate matter by 80%, and NOx by 50%. Examples of key port emission reduction projects submitted by the California Ports Association include:

   - The Port of Oakland reduced diesel truck emissions by 98% and ship emissions by 75%.
   - The Port of San Diego reduced GHG emissions by 3,000 metric tons and criteria pollutants by 125 metric tons.
   - The Port of Long Beach combined two shipping terminals into a single state-of-the-art terminal by adding on-dock rail, shore power, and a longer wharf capable of moving twice the cargo with half the air pollution. The project supports zero emission cargo handling, a solar-powered microgrid, charging infrastructure, and a vessel emissions capture and treatment system. Emission reductions are expected to be equivalent to removing 14,100 cars from the road per day.

4) **Transitioning to a Lower Carbon Economy**: Transitioning to a lower carbon economy requires significant business and economic changes. Developing a comprehensive set of actions is challenging and requires thoughtful and respectful engagement with stakeholders.

On March 20, 2019, the Mayors of Los Angeles, Long Beach, and Oakland wrote to Governor Newsom asking for the establishments of a Statewide Task Force (Task Force) to look at marine terminal automation. A primary focus of the Task Force would be to learn more about and develop strategies to mitigate the adverse impacts of automation on the labor force. Beyond looking at the relative merits of automated, semi-automated, and traditional terminals, the Mayors ask that the discussion also include pathways to new middle-class jobs, including work associated with the new modern and lower emission equipment and ancillary port activities.

With the letter only delivered last week, the Governor's position is not yet known. The purposes of the Task Force, however, seem aligned with the state's attainment of its GHG goals. California needs a workable game plan that supports an inclusive economy, upward mobility, and economic security, while achieving lower GHG emissions. By focusing on economic fundamentals and the practical impacts of this transition, California may be able to obtain the balance necessary to achieve a just transition.

5) **Economic Impact Report**: The central feature of the AB 639 process is the development of the economic impact report. This is the document that establishes project valuation. After reviewing the economic impact report, the IBank will be asked to certify the future economic value to the state for the specified development project and/or equipment purchase to be placed into service. This economic value becomes the basis for a state appropriation, which the IBank board approves. The bill limits the funding to 75% of the project valuation or 50% of the project cost, whichever is less.

   Key elements of the future economic value are based on the amount of direct and indirect:

   - State tax revenues generated by the project or equipment upgrade;
   - General Fund and Special Fund savings which accrue to the state;
   - Local taxes and user fee revenues generated by the project or equipment purchase;
   - Jobs created by the development or through the purchase of equipment; and
   - Public health savings generated by the project or through the installation of the equipment.

   The bill requires that the economic impact analysis be peer-reviewed and based upon a nationally recognized methodology.

6) **Profile of California's Trade Dominated Economy**: California is home to nearly 40 million people, providing the state with one of the most diverse populations in the world, often comprising the single largest concentration of nationals outside their native country. In 2018, this diverse group of business owners and workers produced $178.4 billion, representing 10.7% of total U.S. exports and rendering the state the 28th largest exporter in the world.

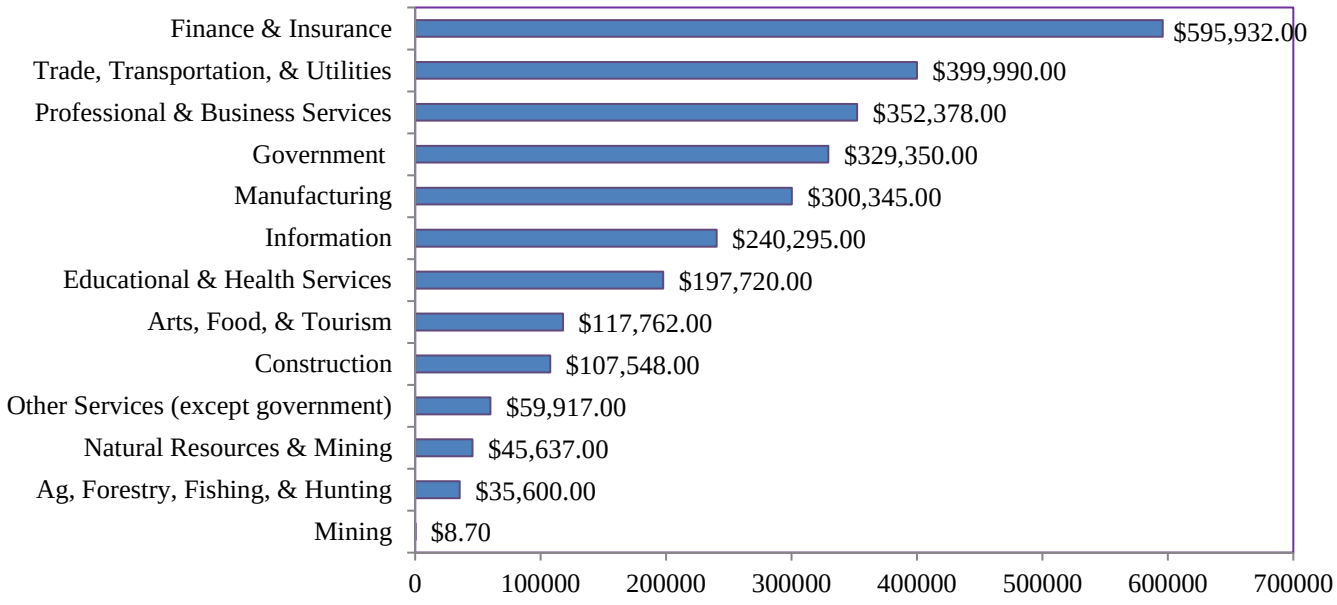
   California's $2.7 trillion economy in 2017 ranked fifth largest in the world – only the national economies of the United States, China, Japan, and Germany being larger. Historically, a number of factors have contributed to California's significant position within the global marketplace, including its strategic west coast location, the size of its consumer base, the strength of its dominant industry sectors, its economically diverse regional economies, its skilled workforce, and its culture of innovation and entrepreneurship, particularly in the area of technology.

   Many policy makers and economists describe California as having not a single economy, but having a highly integrated network of a dozen or so regional economies. While biotech has a comparative advantage in some regions, information technology drives growth in others. This economic diversity is one of the reasons California was able to move out of the Great Recession so aggressively, ranking

number two by *Business Insider* for fastest growing economies in the nation in August 2014 and as having the fourth best overall state economy in March 2015. The following year, Bloomberg, a financial news service, reported that without California, the U.S. economic growth rate would have been flat in 2016. Today California has regained all 1.1 million jobs lost in the Recession and has added, since February 2011, over three million jobs.

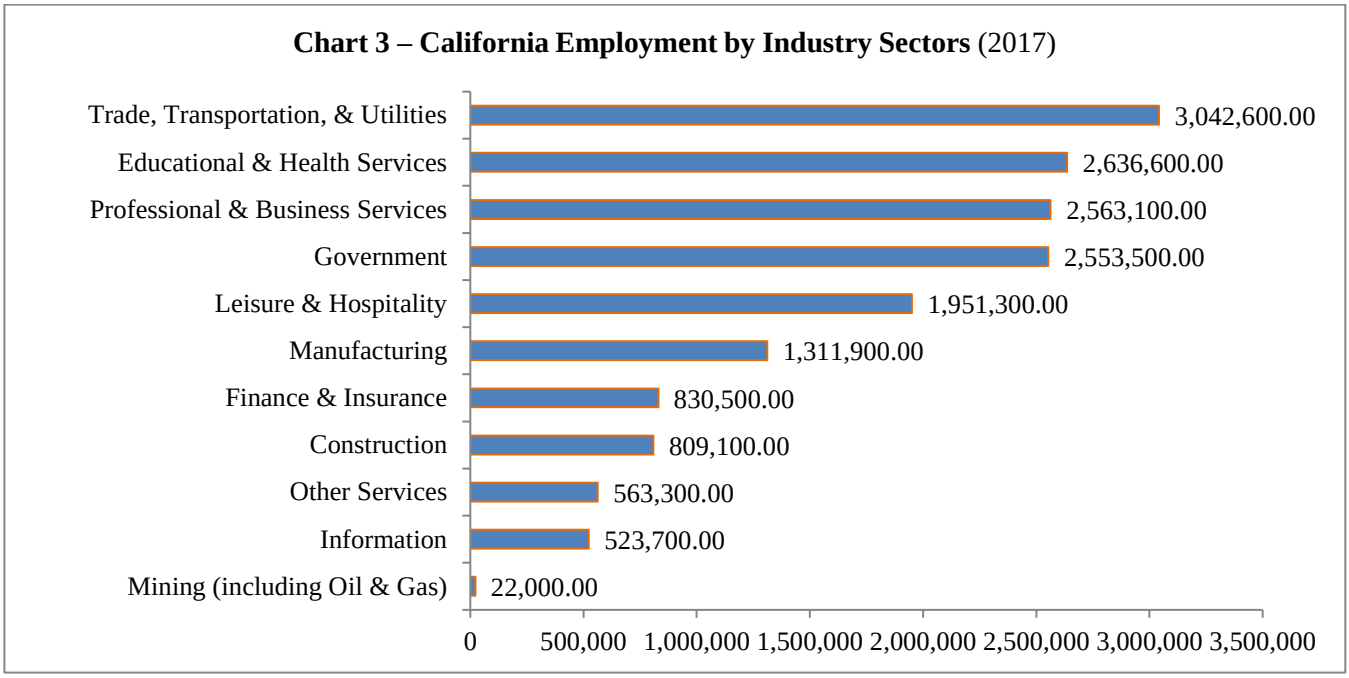
Chart 2 – ***California GDP by Industry Sectors*** shows state GDP in dollars displayed by industry sector. One of the unique qualities of California's economy is its multiple dominant industry sectors. The state's three largest industry sectors in terms of GDP – Finance and Insurance (21.6% of state GDP); Trade, Transportation, and Utilities (14.5%); and Professional and Business Services (12.8%); – also provide a foundation to other industry sectors, including Manufacturing (10.9%) and Information (8.7%).

Chart 1 – California GDP by Industry Sectors (2017) (in millions)



Due to its economic impact exceeding its proportional share of the U.S. population, California's economy has been described as "hitting above its weight." As an example, while California's population comprises 12% of the U.S. population, the state contributed 16% of total job growth between 2012 and 2017.

Chart 3 – California Employment by Industry Sectors shows employment data within the same industry sectors as are measured in Chart 1. In 2017 (most recent available), the Trade, Transportation, and Utilities sector represented the industry with the largest number of employees in California, followed by jobs in Educational and Health Services.



Many of the jobs associated with these major industry sectors are also associated with high wages. Research by the U.S. International Trade Commission undertaken in 2010 and updated in 2015 found a significant earnings premium in jobs within export-intensive manufacturing industries – a 19% premium for blue collar workers and a 9.9% premium for white collar workers.

Manufacturing has many economic advantages and is often considered the "gold standard" for jobs because of its high wages, inclusion of small businesses within its global supply chains, and having a high multiplier effect on related jobs. The Milken Institute estimates that for every job created in manufacturing, 2.5 jobs are created in other sectors. In some industry sectors, such as electronic computer manufacturing, the multiplier effect is 16:1.

As California moves toward a lower commission economy, businesses within the state must also compete within a rapidly evolving global marketplace. California's economic position is being challenged as advances in transportation and communication technologies enable previously undeveloped foreign markets to complete within global supply chains. To remain competitive, California needs a modern logistical network to support its manufacturing base.

7) **California Exports and Imports**: Trade-related industry sectors comprise a majority of what EDD has designated as the state's "economic base" sectors, which include professional services, manufacturing, and transportation, among others. Employment in these economic base industries represents 36% of the state's projected growth between 2014 and 2024.

California's **largest export market** is Mexico, where the value of exports totaled $30.7 billion in 2018. After Mexico, California's top export markets in 2018 were: China and Hong Kong ($26.2 billion), Canada ($17.7 billion), Japan ($13.0 billion), South Korea ($9.9 billion), Taiwan ($6.8 billion), Germany ($6.5 billion), the Netherlands ($6.4 billion), India ($6.1 billion), and the United Kingdom ($5.2 billion).

Many of California's top exports are parts and components. Research shows that California businesses participate in large expanded global supply chains, with components leaving and arriving

in the state assembled and/or partially assembled before becoming available for retail and wholesale distribution. California's **top seven exports** in 2018 were: computer and electronic products ($45.1 billion); transportation equipment ($19.1 billion); machinery, except electrical ($17.7 billion); miscellaneous manufactured commodities ($15.7 billion); chemicals ($13.7 billion), agricultural products ($13.5 billion); and food manufactures ($9.1 billion).

Imports into California were valued at $441.1 billion in 2018, representing 17.3% of total U.S. imports and ranking the state the 13th largest importer in the world. China is the **largest source** of imports to California, valued at $441.1 billion in 2018. Chinese imports totaled $161.1 billion, followed by Mexico ($44.0 billion), Japan ($33.6 billion), and Canada ($27.0 billion). The **largest amount of products imported** in 2018 by dollar: computer and electronic products ($1.2 billion); transportation equipment ($69.4 billion); electrical equipment, appliances and components ($24.8 billion); oil and gas ($24.4 billion); miscellaneous manufactured commodities ($22.1 billion); apparel manufacturing products ($22.0 billion); and machinery, except electrical ($21.2 billion).

8) **Proposed Amendments**: Below is a list of amendments the committee members may wish to review when considering the bill.

   a) Expand the information in the application to include a description of the zero or near-zero emission equipment or infrastructure project that results in lower emission operations at the port.

   b) Modify the economic impact criteria to include the total impact on employment by the infrastructure development or equipment purchase, rather than only job creation.

9) **Related Legislation**: Below is a list of bills from the current and prior sessions.

   a) ***AB 886 (Allen and Ian Calderon) Importer-Exporter Tax Credit***: This bill would have authorized a five-year $500 million tax credit program for importers and exporters that increase cargo through in-state airports and seaports, hire additional staff, or incur capital costs at a California cargo facility. Status: Held on the Suspense File of the Assembly Committee on Appropriations, 2013.

   b) ***AB 962 (Allen and Quirk-Silva) Port Infrastructure Financing***: This bill would have established a process by which a harbor agency can monetize the future financial value of installing and operating a port using technology and processes that result in the reduction of mobile source emissions. This valuation would be used to establish the amount of a future state appropriation, the repayment of which occurs through the payment of state taxes and fees. Status: Held in the Assembly Committee on Appropriations, 2018.

   c) ***AB 2841 (Allen) Port Infrastructure Finance***: This bill would have established a process by which a harbor agency can monetize the future financial value of installing and operating a port using technology and processes that result in the reduction of mobile source emissions. This valuation would be used to establish the amount of a future state appropriation, the repayment of which occurs through the payment of state taxes and fees. Status: Held on the Suspense File of the Assembly Committee on Appropriations, 2016.

   d) ***SB 63 (Hall) Seaport Infrastructure Districts***: This bill authorizes cities and counties to establish Seaport Infrastructure Financing Districts and allows these districts to finance certain port or harbor facilities, as specified. Status: Signed by the Governor, Chapter 793, Statutes of 2015.

e) ***SB 628 (Beall) Enhanced Infrastructure Financing Districts***: This bill authorizes local officials to create Enhanced Infrastructure Financing Districts (EIFDs), which augment the tax increment financing powers that are available to local government under the IFD statutes. City or county officials can create an EIFD, which is governed by a public finance authority, to finance public capital facilities or other specified projects of communitywide significance that provide significant benefits to the district or the surrounding community. Status: Signed by the Governor, Chapter 785, Statutes of 2014.

f) ***SB 308 (Seymour) Infrastructure Financing Districts***: This bill authorizes cities and counties to create infrastructure financing districts (IFDs) and issue bonds to pay for community scale public works: highways, transit, water systems, sewer projects, flood control, child care facilities, libraries, parks, and solid waste facilities. To repay the bonds, IFDs can divert property tax increment revenues, which are revenues generated from increases in property values within the IFD above property values in the base-year when the IFD was formed. However, IFDs cannot divert property tax increment revenues from schools. Status: Signed by the Governor, Chapter 1575, Statutes of 1990.

10) **Double Referral**: The Assembly Rules Committee has referred this measure the Assembly Committee on Jobs, Economic Development, and the Economy and to the Assembly Committee on Natural Resources (ANR). Should this measure pass the committee, it will be referred to ANR for further policy consideration.

REGISTERED SUPPORT / OPPOSITION:

Support

Pacific Merchant Shipping Association

Opposition

None on File

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