Appendix E

Energy Conservation

INTRODUCTION

Appendix F of the State CEQA Guidelines states that "the goal of conserving energy implies the wise and efficient use of energy. The means of achieving this goal include the following: decreasing overall per capita consumption; decreasing reliance on fossil fuels such as coal, natural gas and oil, and increasing the reliance on renewable energy sources." Appendix F further states that EIRs must "include a discussion of the potential energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful and unnecessary consumption of energy." This analysis has been prepared to address energy consumption and conservation related to the Revised Project consistent with the guidance in Appendix F.

Appendix F states that "Potentially significant energy implications of a project shall be considered in an EIR to the extent relevant and applicable to the project," and suggests content for the project description and impact analysis portions of the EIR.

Project Description

With respect to the project description, CEQA Guidelines Appendix F suggests that the EIR include the following items:

1. Energy consuming equipment which will be used during operation of the project (the Revised Project does not include any construction), including, as appropriate, the energy intensiveness of materials and equipment required for the project.
2. Total energy requirements of the project by fuel type and end use.
3. Energy conservation equipment and design features.
4. Identification of energy supplies that would serve the project.
5. Total estimated daily vehicle trips to be generated by the project and the additional energy consumed per trip by mode.

The analysis below addresses all five items, either by referring to sections of the Recirculated Draft SEIR in which the item is discussed or by providing new information as appropriate.

Environmental Setting

Appendix F states that the environmental setting "may include existing energy supplies and energy use patterns in the region and locality." The existing setting of energy supplies and utilities is presented in adequate detail in Section 3.13.2.2 of the 2008 EIS/EIR. Energy consumption data related to the Revised Project can be found throughout the Recirculated Draft SEIR as it is an integral data component of addressing and identifying air quality impacts related to emissions of criteria pollutants and greenhouse gases from the Revised Project as well as all project alternatives. For example, Appendix B1 highlights air quality calculations, methodology and assumptions and includes energy consumption in order to complete the calculations.

Impact Analysis

According to Appendix F of the CEQA Guidelines, the analysis of impacts may include the following:

1. The project's energy requirements and energy use efficiency;
2. The effects of the project on local and regional energy supplies and requirements for additional capacity;
3. The effects of the project on peak and base period demands for electricity;
4. Compliance with energy standards;
5. Effects of the project on energy resources; and
6. The project's projected transportation energy use requirements and overall use of efficient transportation alternatives.

The analysis below addresses all six issues, either by reference to the Recirculated Draft SEIR or by providing additional information.

Finally, although Appendix F of the CEQA Guidelines suggests that a project's cost effectiveness could be reviewed as it relates to energy conservation, that issue is not considered in this analysis. A quantitative analysis of overall cost effectiveness of the Revised Project is not applicable for the following reasons:

- First, as an existing use there are no alternatives for handling containerized cargo at the site that might be more cost effective. The Revised Project involves changes in the operation of an existing cargo-handling facility and does not involve new construction; accordingly, there are no opportunities to incorporate specific energy-saving features into, for example, new buildings. Energy efficiency may be increased by future equipment purchases mandated by the mitigation measures incorporated into the Revised Project, but that is speculative and cannot be analyzed quantitatively.
- Second, to the extent that operation of the terminal and the vessels that serve it is driven by the desire of the terminal operating company and its customers to reduce costs by reducing energy consumption, future operation of the CS Terminal would be more cost effective than existing operations. For example, as the analysis below shows, the larger vessels and increased use of rail transport anticipated for future operations would result in lower energy use per container, which can be assumed to translate into increased cost-effectiveness in energy usage. Again, however, without specific data on vessel sizes and vessel and terminal energy costs, a quantitative analysis is not feasible.

PROJECT DESCRIPTION: ENERGY CONSERVATION

Sections 3.1, Air Quality and Meteorology, and 3.2, Greenhouse Gas Emissions, highlight mitigation measures that effectively conserve energy, and also highlight existing regulations related to GHGs and air quality that have secondary benefits related to energy conservation.

Project Equipment

The Revised Project is described in Section 2.5 (Revised Project) of this Recirculated Draft SEIR. As noted above, the Revised Project does not include construction: all changes from the Approved Project involve operational equipment and practices. The

operational equipment of the Revised Project is described in Section 2.5.2, and consists of yard tractors and cargo-handling equipment that would have lower emissions of air pollutants than existing equipment. The Revised Project also includes mitigation measures that require the use of shore power at berth by cargo vessels calling at the terminal and expanded compliance with the Vessel Speed Reduction Program.

Energy Requirements

Operation of the Revised Project would consume energy in the form of electricity and fossil fuels. Electricity would power wharf cranes, terminal lighting, shore power for container vessels, and, at some point in the future, some or all cargo-handling equipment. Fossil fuels would power most other activities: diesel fuel, LNG, and gasoline for trucks, trains, worker vehicles, harbor craft, and (in the short term) cargo-handling equipment, and marine distillates and residual fuels oil for ocean-going vessels.

As Table E-1 shows, electrical usage in the baseline year (2008) was approximately 4,000 megawatt-hours (MWH). Increased use of electrically-powered cranes and the overall increase in demand caused by increased terminal activity would result in an estimated demand at full operation in 2045 of approximately 14,500 MWH (Table E-1).

Table E-1: Revised Project Operational Electrical Usage (MWH)

Project Year	Scenario	Electricity Usage [MWh]		
		Backlands	AMP-related	Total
2008	Baseline	1,571	2,474	4,046
2012	Mitigated Project	3,199	2,474	5,673
2014		6,841	7,067	13,908
2018		5,176	6,500	11,677
2023		9,559	6,604	16,163
2030		10,673	4,559	15,233
2036		10,673	4,694	15,367
2045		10,673	4,694	15,367
2012	Revised Project	3,199	742	3,941
2014		6,841	5,293	12,134
2018		5,176	6,403	11,579
2023		8,877	4,331	13,209
2030		9,991	4,459	14,451
2036		9,991	4,459	14,451
2045		9,991	4,459	14,451

Notes: 1) 2008 baseline electrical usage of existing wharf cranes and backlands is estimated as proportions of total non-AMP electrical usage based on crane units wattage usage. Backlands electricity consumption reduced starting in 2021 due to retrofitting of light poles with LED lighting fixtures. Wharf crane electricity consumption is scaled in the future by TEU throughput. AMP-related electricity consumption is scaled by the auxiliary engine energy consumption eliminated by AMP usage.
2) Electrical consumption represents mitigated Revised Project. Future year figures include application of MM GHG-1 (LED Lighting) and AMP of 95% of vessel calls.
3) "Backlands" includes container-yard lighting poles, and building and other uses.

Estimated baseline consumption of fossil fuels (Table E-2) was 6 million gallons of diesel equivalent (diesel, marine diesel fuels, and gasoline). Increased cargo throughput in future years would result in increased consumption of all three types of fossil fuels, to approximately 20 million gallons at full operation (Table E-2).

Table E-2: Operational Energy Consumption for the Baseline and Revised Project

Scenario	Source Type	Fuel Type	Fuel Consumed (Diesel Equivalent Gallons)	Annual TEUs Handled	Fuel Consumed (Gallons) per TEU	Difference to Baseline
2008 Actual Baseline	OGVs	MDO/Diesel	607,966			
	Harbor Craft	MDO/Diesel	3,675			
	Trucks	Diesel/LNG	2,973,867			
	Locomotives (Line-haul and Switch)	Diesel	1,278,842			
	Cargo Handling Equipment	Diesel/LPG	1,024,853			
	Worker Vehicles	Gasoline	89,085			
	Total		**5,978,288**	**387,004**	**15.45**	**0%**
2045 Mitigated Project	OGVs	MDO/Diesel	6,821,980			
	Harbor Craft	MDO/Diesel	29,340			
	Trucks	Diesel/LNG	11,464,464			
	Locomotives (Line-haul and Switch)	Diesel	2,217,853			
	Cargo Handling Equipment	Diesel/LNG	3,071,925			
	Worker Vehicles	Gasoline	135,274			
	Total		**23,740,835**	**1,698,504**	**13.98**	**-10%**
2045 Revised Project	OGVs	MDO/Diesel	6,536,983			
	Harbor Craft	MDO/Diesel	29,340			
	Trucks	Diesel/LNG	8,513,451			
	Locomotives (Line-haul and Switch)	Diesel	2,217,853			
	Cargo Handling Equipment	Diesel/CNG	3,037,676			
	Worker Vehicles	Gasoline	135,274			
	Total		**20,470,578**	**1,698,504**	**12.05**	**-22%**

Note: "MDO" is used to denote all types of fuels (distillates, residuals, marine diesel oils) used in OGV and harbor craft main propulsion engines.

Energy Conservation Features

There are no equipment or design features that relate specifically to energy conservation. However, operation of the Revised Project would facilitate the use of more energy-efficient equipment (e.g., larger cargo vessels) and processes (e.g., increased use of rail transport and electrically-powered equipment). Mitigation measures AQ-9 (AMP), AQ-10 (VSRP), AQ-15 (Yard Tractors), AQ-17 (CHE), and GHG-1 (LED Lighting would

require that vessels comply with the AMP and VSRP requirements, that terminal equipment comply with rigorous emissions standards, and that the CS Terminal have LED lighting installed. Lease measures LM AQ-1and LM AQ-2 would ensure that new equipment be the cleanest available and that zero- and near-zero-emissions drayage trucks would have priority access to the terminal, thereby reducing idling times. All of these measures would enhance energy efficiency and conserve energy.

Energy Supplies

Energy supplies available to the Revised Project are described in Section 3.13.2.2 of the 2008 EIS/EIR.

Vehicle Trips

Vehicle trips associated with the Revised Project are described in Table 2-3, Section 3.3.4.4 (Table 3.3-5), and Appendix C of this Recirculated Draft SEIR.

IMPACT CONSIDERATIONS

Energy Requirements and Energy Use by Amount and Fuel Type

Operational energy usage by the Revised Project is presented in tables E-1 and E-2. The Revised Project would be more fuel-efficient than baseline operations at the CS Terminal. This increased efficiency is illustrated by the figures for energy consumed per TEU handled by the CS Terminal for fossil fuels (Table E-2): overall, by 2045 the Revised Project with the additional mitigation measures that have been imposed would consume approximately 10 percent less fuel per TEU than under baseline conditions. In addition, over time, as existing terminal equipment is replaced, the Revised Project would include decreased reliance on fossil fuels through the increased use of electricity, much of which is already generated by renewable sources, and expected increases in fuel efficiency.

Another measure of energy efficiency is the emissions of GHGs per TEUs (Table E-3), which shows a reduction from baseline levels of approximately 14% by 2045. Note that for energy sources consuming electricity, the same CO_2e per MWh emission factor was used for the 2008 Baseline and for the Revised Project in 2045. Thus, this analysis likely overestimates future GHG emissions because it does not take credit for future reductions in electricity emission rates associated with the introduction of higher percentages of renewable resources into LADWP's energy portfolio.

Table E-3: CO_2e emissions per TEU (metric tons CO_2e/TEU)

Year	Baseline	Mitigated Scenario	Revised Project
2008	0.114		
2012		0.092	0.094
2014		0.110	0.114
2018		0.125	0.125
2023		0.120	0.119
2030		0.111	0.108
2036		0.106	0.103
2045		0.101	0.098

Note: Revised Project CO_2 emissions are based on application of all revised AQ and GHG mitigation measures

Future operations would be subject to the Port of Los Angeles' conservation and sustainability goals, standards, and initiatives, as set forth in the Sustainability Assessment and Plan Formation (LAHD 2008). These include a number of programs under the 2017 Clean Air Action Plan, various greenhouse gas reduction and zero-emissions programs, recycling and other sustainability programs, and the Port Leasing Policy (see Section 1.7 of the Draft SEIR for details).

Furthermore, the future use of larger vessels (Table 2-3) would also increase energy efficiency, as the amount of fuel used to transport each container decreases with increasing vessel size. In addition, older, less efficient pieces of equipment and vehicles would be replaced by newer, more efficient units, in accordance with Lease Measure LM AQ-1, Cleanest Available Cargo Handling Equipment (see Section 3.1). Finally, the Port's Energy Management Action Plan and Alternative Energy Program would promote increasing efficiency of energy usage in terminal operations (POLA 2017).

Effects of the Project on Local and Regional Energy Supplies

As discussed in Section 3.13.2.4 of the 2008 EIS/EIR, the Revised Project is not expected to have a significant impact on regional supplies of diesel fuel, gasoline, natural gas, or electricity. Consistent with state and local goals of conserving energy, the Revised Project would decrease the CS Terminal's reliance on fossil fuels through the accommodation of larger vessels, thereby reducing significant transiting time and unnecessary fuel consumption, and the accelerated phasing in of modern, more efficient terminal equipment. Future operations would be subject to the Port of Los Angeles' conservation and sustainability goals, standards, and initiatives, as set forth in the Sustainability Assessment and Plan Formation (LAHD, 2008). These include a number of programs under the 2017 Clean Air Action Plan, various greenhouse gas reduction and zero-emissions programs, recycling and other sustainability programs, and the Port Leasing Policy. Finally, the Port's Energy Management Action Plan and Alternative Energy Program would promote increasing efficiency of energy usage in terminal operations.

The Effects of the Proposed Project on Peak and Base Period Demands for Electricity

As discussed in Section 3.13.2.2, the Los Angeles Department of Water and Power (LADWP) is charged with maintaining sufficient capability to provide its customers with a reliable supply of power, and will continue to do so with proper planning and development of facilities in accordance with the City Charter, using such mechanisms as the Power Integrated Resources Plan (IRP). Based on the LADWP Power IRP, electricity resources and reserves at LADWP will adequately provide electricity for all of its customers, including the Revised Project, through the current Power IRP planning horizon of 2040 (LADWP, 2017); in fact, LADWP does not forecast that peak demand will reach capacity through 2040. The CS Terminal's estimated annual electrical consumption at full operation (14,500 MWH) represents a negligible fraction of LADWP's generating capacity of 63 million MWH per year. Accordingly, the Revised Project's effects on peak and base period demand would not be substantial.

Compliance with Energy Standards

Through the new lease and existing regulations, the CS Terminal would continue to be required to comply with current state energy efficiency standards and regulations

pursuant to the California Building Code (CBC), California Green Building Standards (CALGreen) and City of Los Angeles Green Building Code (LAGBC) that would reduce long-term energy demand. These requirements would reduce wasteful, inefficient, and unnecessary consumption of energy over the long-term. Additional information regarding these and other regulations and programs that support energy conservation through the reduction of GHGs are described in further detail for information purposes below and in Section 1.10, Section 3.1.3, and Appendix B1.

Natural Gas and Electricity Infrastructure

Electrical power within the City of Los Angeles is supplied by LADWP, which serves approximately 3.8 million people. LADWP obtains electricity from various generating sources that utilize coal, nuclear, natural gas, hydroelectric and renewable resources to generate power (Section 3.13.2 of the 2008 EIS/EIR)). LADWP is committed to increasing the share of renewable energy and promoting increased energy efficiency and conservation by its customers. Diversification of LADWP's energy portfolio, increasing electricity through renewable energy and new customer energy efficiency measures will all help meeting the City needs.

LADWP has adopted a number of initiatives to increase its use of renewable energy resources to support the goal of reducing GHG emissions, reducing reliance on fossil fuels and meeting state mandates requiring all utilities to provide 33 percent of their energy from renewable resources by 2020.

Green LA

In May 2007, the City of Los Angeles introduced Green LA – An Action Plan to Lead the Nation in Fighting Global Warming (Green LA). Green LA presents a framework targeted to reduce the City's GHG emissions by 35 percent below 1990 levels by 2030. The plan calls for an increase in the City's use of renewable energy to 35 percent by 2020 in combination with promoting water conservation, improving the transportation system, reducing waste generation, greening the ports and airports, creating more parks and open space and greening the economic sector. Green LA identifies objectives and actions in various focus areas.

Executive Directive No. 10

Executive Directive No. 10 was issued in 2007 regarding environmental stewardship practices. Consistent with the goal specified in Green LA, Executive Directive No. 10 requires that City departments create a "Statement of Sustainable Building Policies" including sustainable design, energy and atmosphere, materials and resources, water efficiency, landscaping and transportation resources. City departments are required to submit annual sustainability reports to the Mayor for review.

Sustainable City Plan

In 2014, Mayor Eric Garcetti launched the City of Los Angeles's first-ever Sustainable City Plan. The pLAn is a comprehensive policy roadmap that prepares the City for an environmentally healthy, economically prosperous and equitable future. The framework of the pLAn includes the vision of things to be accomplished over the next 20 years and highlights near-and long-term outcomes. Through the pLAn, the City's goal is to become a national leader in carbon reduction and climate action by eliminating coal from the City's energy mix, prioritizing energy efficiency, and inspiring other cities to take similar action. The pLAn sets targets of reducing GHG emissions below 1990 levels by at least 45 percent by 2025, 60 percent by 2035 and 80 percent by 2050.

LAHD Sustainable Construction Guidelines

In February 2008, the LAHD Board of Harbor Commissioners adopted the Los Angeles Harbor Department Sustainable Construction Guidelines for Reducing Air Emissions (LAHD Construction Guidelines). These guidelines will be used to establish air emission criteria for inclusion in construction bid specifications. The LAHD Construction Guidelines reinforce and require sustainability measures during performance of the contracts, balancing the need to protect the environment, be socially responsible, and provide for the economic development of the Port. The intent of the LAHD Construction Guidelines is to facilitate the integration of sustainable concepts and practices into all capital projects at the Port and to phase in the implementation of these procedures in a practical yet aggressive manner. These guidelines are currently being revised to include additional measures to ensure that construction activities are conducted in the most sustainable manner possible.

San Pedro Bay Ports Clean Air Action Plan (CAAP)

In 2006, the ports of Long Beach and Los Angeles created and approved the San Pedro Bay Ports Clean Air Action Plan, or "CAAP." The CAAP provides the overall strategy for dramatically reducing air pollution emissions from cargo movement in and around the Ports. Since the adoption of the original CAAP, diesel particulate emissions from mobile sources in and around the Ports are down 84 percent.

Despite this significant progress, the Ports recognize that more needs to be done. The CAAP 2017 Update (SPBP, 2017) provides new and updated strategies and emission-reduction targets to cut emissions from sources operating in and around the Ports, setting the Ports firmly on the path toward zero-emissions goods movement. The CAAP 2017 Update contains 14 strategies to reduce emissions from sources in and around the Ports, plan for zero-emissions infrastructure, encourage freight efficiency, and address energy resources. These strategies include:

- Advancing the Clean Trucks Program to phase out older trucks and transition to zero-emission trucks by 2035;
- Support and advance state-led efforts to transition terminal equipment to zero emissions by 2030;
- Further reducing emissions from ships at-berth, and transitioning the oldest, most polluting ships out of the San Pedro Bay fleet;
- Accelerating the deployment of cleaner harbor craft engines and operational strategies to reduce harbor craft emissions;
- Expanding use of on-dock rail to shift more cargo leaving the port to go by rail;
- Reduce population-weighted residential cancer risk of Port-related DPM emissions by 85 percent by 2020;
- Reduce port-related emissions by 59 percent for NOx, 93 percent for SOx and 77 percent for DPM by 2023; and,
- Reduce GHGs from port-related sources to 40 percent below 1990 level by 2030 and 80 percent below 1990 levels by 2050.

In addition to the abovementioned policies and regulations pertaining to energy usage, there are numerous adopted ordinances related to energy efficiency as well. Additional regulations that apply to the proposed Project to ensure that energy is conserved to the maximum extent feasible include:

- Renewable Portfolio Standard

- LADWP Power Plan
- Climate LA
- GHG and Fuel Efficiency Standards for Passenger Cars and Light-Duty Trucks
- AB 1493 – Pavley
- California Advanced Clean Cars/Zero Emission Vehicle Program

Effects of the Revised Project on Energy Resources

As discussed above, implementation of the Revised Project would result in reduced fuel consumption per unit of cargo, which equates to improved energy efficiency. The Revised Project's impacts on energy resources during operation would be less than significant (see Section 3.13.2.5 of the 2008 EIS/EIR).

Transportation Energy Use Requirements

Table E-2 details the Revised Project's estimated transportation energy uses. The largest energy use would continue to be diesel fuel for trucks and trains, followed by marine fuels for ocean-going vessels. Most of the diesel fuel used to transport cargo in Southern California is assumed to be produced by refineries in California; accordingly, its use in goods movement could affect regional energy supplies. Marine fuels are largely supplied from out-of-state sources; accordingly, their use would not affect regional energy supplies related to transportation.

Operation of the CS Terminal under the Revised Project is projected to consume at least 15 million gallons of diesel fuel per year at full capacity (Table E-2; the remaining 9 million gallons would be marine fuels, gasoline, and LNG/LPG). That consumption would represent a very small fraction (0.4%) of the approximately 4 billion gallons of diesel sold in California in 2016 (USEIA 2017). Because there is no reason to suppose that refinery capacity will substantially decrease by 2045, diesel fuel consumption associated with the Revised Project would not have a substantial impact on regional energy supplies.

The CS Terminal would also use small amounts, relative to the total market, of gasoline and LNG/LPG. Gasoline is a substantial market in Southern California: nearly 15 billion gallons were sold in California in 2016 (USEIA 2017). The CS Terminal's consumption of a few million gallons (Table E-2) would represent a negligible fraction of that market. Natural gas is an abundant energy source in California because large amounts are used in electric generation plants. For example, SCGC's Aliso Canyon storage field, in Los Angeles County, has a capacity of 165 billion cubic feet (CPUC 2012). The Revised Project would consume small amounts for building uses, in-terminal cargo handling equipment, and some on-road trucking. Those uses would represent a negligible fraction of the region's gas supply.

Truck, train, and vessel transportation will become more efficient over time as technology improvements are implemented. A small portion of the CS Terminal's cargo throughput would continue to be handled by LNG-powered trucks and, it is reasonable to assume, eventually by diesel-electric hybrid and even all-electric trucks. It is not possible to assume that alternative-fueled vessels and railroad locomotives will be widely available in the foreseeable future. However, the combination of increasing efficiency in existing technologies and the introduction into commercial use of zero-emissions and near-zero-emissions technologies into the goods movement industry would further reduce

the per-unit fuel consumption and GHG emissions of the transportation elements of the Revised Project.

ENERGY CONSERVATION MITIGATION MEASURES

As described above, implementation of the Revised Project would result in decreased fuel consumption and energy usage per unit of cargo in the future. In addition, mitigation and lease measures that have been incorporated into the Revised Project would result in additional energy savings. These include:

- MM AQ-9 – Alternative Maritime Power (AMP) (reduction in use of fossil fuels by allowing electric plug-in capability)
- MM AQ-10 – Vessel Speed Reduction Program (VSRP) (increase fuel efficiency)
- LM AQ-1 – Cleanest Available Cargo Handling Equipment (may result in fuel efficiency depending upon results of technology review)
- LM AQ-2 – Priority Access for Drayage (increased fuel efficiency from reduced truck idling)
- MM GHG-1 – LED Lighting (electricity reduction for outdoor terminal lights)
- LM GHG-1 – GHG Credit Fund (funding local programs aimed at the reduction of GHGs and generally result in a decrease on the reliance of fossil fuels)

These measures can be found Section 3.1, Air Quality and Meteorology and Section 3.2, Greenhouse Gas Emissions, of this Recirculated Draft SEIR. These mitigation measures and lease measures not only have the direct benefit of reducing emissions of GHGs and criteria pollutants but they have the secondary benefit of reducing energy consumption and usage (see above).

OTHER ENVIRONMENTAL IMPACT CONSIDERATIONS

The Revised Project does not pose a significant adverse impact to energy usage and is expected to avoid wasteful, unnecessary, or inefficient consumption of energy. As stated above, energy consumption would decrease over time at the CS Terminal through the use of cleaner equipment, compliance with regulations and policies, and implementation of the mitigation measures and lease measure described above. Because there would be no significant impacts related to energy supplies, there would also be no unavoidable adverse effects, an irreversible commitment of resources, or growth-inducing effects created or exacerbated by the Revised Project.

REFERENCES

CPUC (California Public Utilities Commission). 2012. Aliso Canyon Turbine Replacement Project. Draft Environmental Impact Report. April 2012. http://www.cpuc.ca.gov/Environment/info/ene/aliso_canyon/DEIR/Aliso_Canyon_DEIR_Vol1.pdf.

Federal Railroad Administration. 2009. Comparative Evaluation of Rail and Truck Fuel Efficiency on Competitive Corridors. Final Report. Prepared by ICF International. https://www.fra.dot.gov/eLib/details/L04317.

LADWP (Los Angeles Department of Water and Power). 2017. 2016 Power Integrated Resource Plan. Available at: https://www.ladwp.com/ladwp/faces/wcnav_externalId/a-p-doc?_adf.ctrl-state=7kprz7w7b_4&_afrLoop=1153502544412802.

POLA (Port of Los Angeles). 2017. Port of Los Angeles Sustainability Report July 2013-June 2014. https://www.portoflosangeles.org/Publications/POLA%20FY13-14%20Sustainablity%20Report%202016%2002%2029.pdf.

SPBP, 2017. San Pedro Bay Ports Final Clean Air Action Plan (CAAP) Update. November Available at http://www.cleanairactionplan.org/documents/final-2017-clean-air-action-plan-update.pdf/

SCGC (Southern California Gas Company). 2017. Reliable Natural Gas. https://www.socalgas.com/smart-energy/reliable-natural-gas-for-the-future.

USEIA (US Energy Information Administration). 2017. Petroleum and Other Liquids: Prices, Sales Volumes, & Stocks by State. https://www.eia.gov/dnav/pet/pet_sum_mkt_dcu_SCA_a.htm.