MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE OF CALIFORNIA, THE OFFICE OF THE MAYOR OF THE CITY OF LOS ANGELES, AND THE CITY OF LOS ANGELES HARBOR DEPARTMENT CREATING A PARTNERSHIP TO REDUCE GREENHOUSE GASES AND SUPPORT THE PORT OF LOS ANGELES CLEAN AIR ACTION PLAN

This Memorandum of Understanding ("MOU") is entered into by and between Antonio R. Villaraigosa, Mayor of the City of Los Angeles ("Mayor"), the City of Los Angeles Harbor Department ("POLA" or the "Port") and Edmund G. Brown Jr., Attorney General of California, on behalf of the People of the State of California ("Attorney General"), and is dated and effective as of December 7, 2007 (the "Effective Date"). The Mayor, POLA, and the Attorney General are collectively referred to herein as the "Parties."

The intent of this MOU is to establish a forward-going partnership to further mutually shared goals of improving the environmental performance of Port operations by reducing greenhouse gas emissions and establishing a collaborative model that builds upon the Parties' extensive past efforts to situate the state and region at the forefront of environmental leadership.

RECITALS

WHEREAS, the Mayor continues to lead an effort to make the City of Los Angeles the Greenest Big City in America; and

WHEREAS, the Mayor developed and adopted the Los Angeles Sustainability Program and Municipal Climate Action Plan aimed at reducing greenhouse gases by 35% between the years 1990 and 2030; and

WHEREAS, POLA has exhibited strong leadership in reducing Port-related emissions by entering into a landmark partnership with the Port of Long Beach, the South Coast Air Quality Management District, the California Air Resources Board and the United States Environmental Protection Agency Region 9 to develop the first San Pedro Bay Ports Clean Air Action Plan ("Clean Air Action Plan"); and

WHEREAS, the $2 Billion Clean Air Action Plan, the most comprehensive strategy to cut air pollution and reduce health risks ever produced for a global seaport complex, was approved November 20, 2006 by both the Los Angeles Board of Harbor Commissioners and the Port of Long Beach Board of Harbor Commissioners (collectively, the "Ports"); and

WHEREAS, the Clean Air Action Plan specifically calls for aggressive milestones with measurable goals for air quality improvements, recommendations to eliminate emissions of diesel particulates, and a truck replacement program to phase out all "dirty" diesel trucks from the Ports in five years, to name a few, that will reduce emissions by 45 percent over the next five years, including coincidental reduction in greenhouse gases; and

WHEREAS, the Clean Air Action Plan also establishes a $15 Million technology advancement program to establish new technologies that can be applied towards the reduction of the Ports' mobile emission sources; and

WHEREAS, POLA has spent in excess of $100 Million to date to develop and implement clean air improvements and the Clean Air Action Plan and has budgeted an additional $150 Million for future implementation of the Clean Air Action Plan; and

WHEREAS, the Harbor Electrification Committee of the Board of Harbor Commissioners and the Board of Water and Power Commissioners of the City of Los Angeles have exhibited strong environmental leadership through the ongoing development of a solar power project for the Port of Los Angeles; and

WHEREAS, POLA is charged with fostering the orderly and necessary development of the Port of Los Angeles, consistent with the public trust for navigation, commerce, fisheries and recreation; and

WHEREAS, under the leadership of the Mayor, POLA's adopted strategic mission is to promote a "grow green" philosophy; with a strategic objective to "Transform the Port of Los Angeles into the greenest port in the world by raising environmental standards and enhancing public health"; and

WHEREAS, POLA has spent in excess of an additional $100 million to develop and implement related environmental programs and operational strategies, including the habitat improvement programs, environmental compliance programs, clean water initiatives Environmental Management System, green infrastructure improvement programs and the Off Peak Program, to name a few; and

WHEREAS, continuing its national leadership in the environmental arena, the State of California enacted AB 32, the California Global Warming Solutions Act, effective January 2007, which mandates a reduction in California's greenhouse gas ("GHG") emissions to 1990 levels by 2020; and

WHEREAS, the Parties are committed to aggressively addressing the concerns that catalyzed AB 32 and to reducing GHG emissions, and the Port and the City are members of the California Climate Action Registry; and

WHEREAS, the Attorney General for the State of California serves as the chief law officer of California; and

WHEREAS, in that capacity, the Attorney General serves Californians by safeguarding the state's environmental and natural resources; and

WHEREAS, the Parties are committed to comprehensive application of the California Environmental Quality Act ("CEQA") and other applicable statutes to ensure meaningful and constructive consideration of greenhouse gas emissions and feasible mitigation; and

WHEREAS, the Attorney General is committed to the successful implementation of AB 32 and reducing GHG emissions throughout California; and

WHEREAS, the Parties strongly believe that, as reflected in the latest reports of the Intergovernmental Panel on Climate Change, the actions taken now and in the next few years with respect to assessing and limiting GHG emissions will determine our future; and

WHEREAS, the Parties desire to enter into a partnership to further the reduction of Port-related GHG emissions throughout California and to establish model practices to promote the Parties' mutual goal of maintaining national and industrial leadership in the environmental arena; and

WHEREAS, the Parties desire to work together to further the development of projects and technologies at the Port to reduce GHG emissions as an important element of establishing the leadership model that the Parties seek;

PARTNERSHIP MEMORANDUM OF UNDERSTANDING

NOW, THEREFORE, in consideration of the terms, conditions and covenants set forth herein, and for other good and valuable consideration, receipt of which is hereby acknowledged, the Parties agree as follows:

1. Inventories

    a. POLA agrees to conduct a Port-wide annual inventory of GHG emissions, as defined in 1.c., below ("GHG Inventory"), beginning in 2008 (for 2006 emissions) and continuing until regulations governing GHG emissions inventories applicable to the Port or Port facilities are promulgated and become effective pursuant to California Health and Safety Code Division 25.5, sections 38500, et seq., the California Global Warming Solutions Act ("AB 32").

    b. POLA shall utilize its established normal criteria pollutant data-gathering protocols to collect data on GHGs and prepare the GHG Inventory so as not to interfere with the data-gathering protocols previously established in coordination with CARB and SCAQMD for the Port's criteria pollutant inventory.

    c. The geographic boundary for the GHG Inventory shall encompass:

        i. For all ships bound to and from Port terminals, the geographic boundary shall extend beyond the Port to encompass the point of origin/destination; and

        ii. For rail transit to and from Port terminals, the geographic boundary shall encompass major rail cargo destination/distribution points in the United States; and

        iii. For out-of-state truck transit to and from Port terminals, the geographic boundary shall encompass major truck destination/distribution points.

d. POLA shall define and make publicly available a summary of data analysis that supports any assumptions utilized to perform its obligations under 1.c., above, as part of its GHG Inventory.

e. In order to facilitate adoption by others of its model practices, POLA agrees to make public a draft for review and comment and a final of the GHG Inventory and annual updates thereto, and transmit copies of the GHG Inventory and annual updates to the California Attorney General, the California Air Resources Board, the California Climate Action Registry, and the South Coast Air Quality Management District. POLA agrees to third-party verification of the annual inventory.

2. Solar Power Project

a. Continuing the ongoing efforts of the Harbor Electrification Committee of the Board of Harbor Commissioners and the Board of Water and Power Commissioners of the City of Los Angeles, POLA agrees to continue to move forward with a proposed project at the Port, or other land owned by POLA, consisting of an approximately 10 Mega Watt (MW) photovoltaic solar electric system (further described in Attachment C). This Solar Power Project is intended to be a general GHG emission reduction measure to replace electric usage at the Port that would otherwise be provided by the local electric utility by, among other things, the burning of fossil fuels. POLA agrees to use its diligent efforts to perform according to the proposed schedule outlined in Attachment C, subject to reservation of final decision-making authority of all appropriate City decision-making bodies, as required by law.

b. The Mayor and the Attorney General will convene a Port Solar Power Working Group consisting of representatives from the Mayor, the Attorney General, POLA, DWP, and the California Air Resources Board, if the Board should choose to participate. The working group will assist POLA and DWP in completing the project and in making the project available as a model environmental mitigation.

c. POLA agrees to prepare an annual report documenting the progress of each phase of the proposed Solar Power Project described in Attachment C. POLA agrees to prepare the first annual report in June 2008, and every June thereafter until the Solar Power Project is complete. Each report shall be made public and shall be provided to the working group.

d. POLA anticipates that the 10 MW photovoltaic solar electric system will result in an overall reduction of approximately 17,000 metric tons of carbon dioxide equivalent emissions per year at full build-out.

e. In the event that the annual report due in June 2008, or any subsequent annual report, indicates that all necessary and appropriate processing steps of the Solar Power Project, as anticipated to occur according to the schedule outlined in Attachment C, have not occurred, the Working Group shall meet to discuss and agree upon an alternative mechanism by which POLA shall complete the Solar

Power Project, or achieve a model offset or reduction of carbon dioxide equivalent emissions comparable to the anticipated reduction of the 10 MW solar system described in Attachment C.

f. The Parties agree to use the Working Group process described above to use their best efforts to resolve any future disputes that may arise regarding the pace or progress of completion of the Solar Power Project, or regarding the amount of emissions reduction resulting from the Solar Power Project.

3. Environmental Impact Reports ("EIRs")

a. Believing it consistent with law and sound public policy, POLA used the geographic boundary currently set forth in the TraPac DEIR/EIS, and POLA will use the same boundaries for GHG emission assessment and evaluation in the Berths 136-147 (Trapac) Environmental Impact Report ("EIR"), as well as for any future EIRs prepared for those proposed projects set forth in Attachment A. These boundaries are consistent with the California Climate Action Registry recommendations for reporting California emissions, and with the boundaries set forth in the 2007 South Coast Air Quality Management Plan and the California Air Resources Board proposed State Implementation Plan measures for regulation of Port-related criteria air pollutants.

b. In further pursuit of full public disclosure, POLA has included and shall include a discussion of existing and reasonably anticipated effects of global warming on California in the Environmental Setting section of the Trapac Final EIR, and any future EIRs prepared for those proposed projects set forth in Attachment A.

c. POLA shall evaluate and adopt all project-level mitigation measures that it determines to be feasible, including measures in addition to the mitigation measures proposed in the Trapac Draft EIR, to reduce the proposed Trapac Project's GHG emissions.[1] POLA will include this evaluation in the Trapac Final EIR. The additional measures that POLA shall consider for feasibility in the TraPac Final EIR shall include, but are not limited to, those measures listed in Attachment B.

d. POLA further shall evaluate and adopt all project-level mitigation measures determined to be feasible to reduce a proposed project's GHG emissions in any EIR prepared for those proposed projects set forth in Attachment A. The mitigation measures that POLA shall consider for feasibility in these EIRs shall include, but are not limited to, those measures listed in Attachment B.

e. The Port has determined at this time that additional offsets for the GHG emissions of the TraPac project are not financially or otherwise feasible. To achieve maximum disclosure and model best practices, POLA will provide a summary

[1] For purposes of this Agreement, "feasible" shall have the meaning given to that term pursuant to Public Resources Code Section 21061.1.

analysis that supports this conclusion in the TraPac Final EIR and/or Statement of Overriding Considerations for the TraPac project.

f. POLA shall include in the TraPac Final EIR, and in the EIRs for all of the projects listed in Attachment A, a reference to the Port-wide GHG Inventory process in the Environmental Setting description included in these documents.

g. In pursuit of its "grow green" philosophy, POLA has determined that the following shall occur with respect to Berths 136-147:

   i. The Port will review, in terms of feasibility, any Port-identified or other new emissions-reduction technology. Such technology feasibility reviews shall take place at the time of the Port's consideration of any lease amendment or facility modification for the Berths 136-147 property. If the technology is determined by the Port to be feasible in terms of cost, technical and operational feasibility, the tenant shall work with the Port to implement such technology.

   ii. As partial consideration for the Port's agreement to issue the permit to the tenant, tenant shall implement, not less frequently than once every 7 years following the effective date of the permit, new air quality technological advancements, subject to the parties' mutual agreement on operational feasibility and cost sharing, which shall not be unreasonably withheld.

4. The California Attorney General agrees to the following:

   a. To submit a letter of support for the Trapac EIR/EIS.

   b. To not file a legal challenge or otherwise intervene against POLA in any suit challenging the adequacy of the Trapac EIR/EIS.

   c. To not file a legal challenge based upon, or otherwise intervene against the Port in, any suit that challenges the geographic scope of the GHG assessment process outlined in 3.a.

   d. To meet with POLA and the Mayor at their request regarding development of model Port environmental mitigation practices and the broad dissemination of replicable models.

5. Except as expressly stated, nothing in this MOU shall be construed as a waiver of any Party's discretionary authority or deemed to restrict authority granted to any Party under law in any way with respect to future legislative, administrative or other actions, including, but not limited to, those actions related to the proposed Trapac Project and those projects set forth on Attachments A and C. Nothing in this MOU shall be construed as a waiver of any applicable third-party due-process rights.

6. This MOU shall not be construed to bind or limit the discretion of POLA in any manner to add, subtract or modify mitigation measures described in Section 3.c. and d. or

otherwise set forth in the Trapac EIR or considered by POLA in any manner, nor to adopt, reject or modify any mitigation prior to adoption based on the totality of all information brought to the attention of POLA, including information provided by other governmental agencies, members of the public, industry representatives or any other interested persons.

7. This MOU represents the entire MOU of the Parties with respect to the subject matter herein, and merges and supersedes any prior written or oral representations, discussions, understandings or MOUs by or between the Parties relating to the subject matter of this MOU.

8. No addition to or modification of any term or provision of this MOU will be effective unless set forth in writing and signed by an authorized representative of each of the Parties.

9. Each Party represents and warrants that it has the right, power, and authority to execute this MOU. Each Party represents and warrants that it has given any and all notices, and obtained any and all consents, powers and authorities, necessary to permit it, and the persons executing this MOU for it, to enter into this MOU.

10. This MOU shall be binding on and inure to the benefit of the successors and assigns of the Parties to the MOU.

11. This MOU shall be governed by and construed in accordance with the laws of the State of California.

12. This MOU may be executed in counterparts, each of which shall be deemed an original. This MOU shall be binding upon the receipt of facsimile signatures.

13. This MOU shall be deemed to have been jointly drafted, so that the general rule of construction that it be construed against the drafter shall not apply.

14. No Admission. Nothing in this MOU shall be deemed as an admission of any wrongdoing, fault, violation of law, or liability of any kind on the part of the Parties, or any admission by the Parties of any claim or allegations made in any action.

15. Waiver of Civil Code Section 1542. With regard to matters being released herein, the Parties expressly waive the provisions of Section 1542 of the California Civil Code, and any other similar statute, rule or case law. Section 1542 provides as follows:

    A general release does not extend to claims which the creditor does not know or expect to exist in his favor at the time of executing the release, which if known by him must have materially affected his settlement with the debtor.

16. Representation by Counsel. Each of the Parties affirmatively represents that it has been represented throughout this matter by attorneys of its own choosing. Each Party has read this MOU and has had the terms used herein and the consequences thereof explained by its attorneys of choice. This MOU is freely and voluntarily executed and given by each

Party after having been apprised of all relevant information and data furnished by its attorneys of choice. Each Party in executing this MOU does not rely upon any inducements, promises or representations made by any other Party except as set forth herein.

17. Severability. In the event that any provision of the MOU should be held to be void, voidable, unlawful or, for any reason, unenforceable, the remaining portions hereto shall remain in full force and effect.

18. Effective Date: This MOU is effective upon the date that all Parties have signed.

19. Integration. This document constitutes the entire MOU between the Parties to this MOU with respect to the subject matter set forth and supersedes any and all prior MOUs or contracts on this subject matter between the Parties, either oral or written. This MOU may not be amended, waived, or extended, in whole or in part, except in writing signed by both Parties.

20. Compliance With Law. To the extent guidance governing GHG emissions inventories applicable to the Port or Port facilities becomes effective through regulations promulgated pursuant to California Health and Safety Code Division 25.5, sections 38500, et seq., the California Global Warming Solutions Act ("AB 32"), and such guidance is incompatible with any provision of this MOU, POLA's compliance with those regulations shall be deemed compliance with any incompatible provision of this MOU. To the extent a change in statutory or case law occurs that governs performance of, or the obligation to perform, any provision(s) of this MOU, and as a result, continued performance of such provision(s) would conflict with POLA's obligations under governing law, POLA's compliance with governing law shall be deemed compliance with such provision(s). Execution of this MOU by POLA shall not preclude POLA from applying for and receiving credit in the future, if applicable, for early voluntary reductions of GHGs pursuant to AB 32, when and if such credit becomes available.

21. This MOU shall not be construed to limit the right or capacity of any Party to comment upon or take any action under the California Environmental Quality Act with respect to any project except as specifically set forth herein.

22. This MOU shall not be construed to bind any Party in any manner with respect to any person or entity that is not a Party to this MOU, or a successor or assign of a Party.

23. Any notice or report required or permitted to be given under this MOU shall be in writing and shall be deemed to be given when served personally, or on the third day after mailing if mailed in the United States mail, postage prepaid, addressed to the address for each Party set forth below:

For the California Attorney General:

Raissa S. Lerner
Office of the Attorney General
1515 Clay St., PO Box 70550
Oakland, CA 94612-0550

For the Mayor of Los Angeles:

Thomas Saenz
Office of the Mayor of Los Angeles
200 N. Spring St., #305
Los Angeles, CA 90012

For the Port of Los Angeles:

Geraldine Knatz, Ph.D.
Executive Director
Port of Los Angeles
425 S. Palos Verdes St.
San Pedro, CA 90731

In witness whereof, this MOU is executed by the following:

PEOPLE OF THE STATE OF CALIFORNIA,
BY AND THROUGH ATTORNEY GENERAL
EDMUND G. BROWN JR.

Date: 12/7/07

MAYOR OF THE CITY OF LOS ANGELES
ANTONIO R. VILLARAIGOSA

Date: 12/7/07

CITY OF LOS ANGELES, BY AND THROUGH
ITS BOARD OF HARBOR COMMISSIONERS

Date: _____

By _____
Executive Director

Attest _____
Board Secretary

APPROVED AS TO FORM

Dec 6, 2007
ROCKARD J. DELGADILLO, City Attorney

By _____
JANNA B. SIDLEY, Deputy

ATTACHMENT A

MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE OF CALIFORNIA, THE OFFICE OF THE MAYOR OF THE CITY OF LOS ANGELES, AND THE CITY OF LOS ANGELES HARBOR DEPARTMENT CREATING A PARTNERSHIP TO REDUCE GREENHOUSE GASES AND SUPPORT THE PORT OF LOS ANGELES CLEAN AIR ACTION PLAN

No.	*Project Title and Location*	*Project Description*
1	Berths 136-147 Marine Terminal, West Basin, Port of Los Angeles	Element of the West Basin Transportation Improvement Projects. Reconfiguration of wharves and backlands. Expansion and redevelopment of the TraPac Terminal.
2	San Pedro Waterfront Project, Port of Los Angeles	The "San Pedro Waterfront" Project is a 5 to 7 year plan to develop along the west side of the Main Channel, from the Vincent Thomas Bridge to the 22nd Street Landing Area Parcel up to and including Crescent Avenue. Key components of the project include construction of a North Harbor Promenade, construction of a Downtown Harbor Promenade, construction of a Downtown Water Feature, enhancements to the existing John S. Gibson Park, construction of a Town Square at the foot of 6th Street, construction of a 7th Street Pier, construction of a Ports O' Call Promenade, development of California Coastal Trial along the waterfront, construction of additional cruise terminal facilities, construction of a Ralph J. Scott Historic Fireboat Display, relocation of the Catalina Cruises Terminal and the SS Lane Victory, extension of the Red Car line, and related parking improvements.
3	Channel Deepening Project, Port of Los Angeles	Dredging and sediment disposal. This project deepened the Port of Los Angeles Main Channel to a maximum depth of –53 ft mean lower low water (MLLW; lesser depths are considered as project alternatives) by removing between approximately 3.94 million and 8.5 million cubic yards of sediments. The sediments were disposed at several sites for up to 151 acres (61 hectares) of landfill. The EIR/EIS certified for the project identified significant biology, air, and noise impacts. A Supplemental EIS/EIR is being prepared for new fill locations. The Additional Disposal Capacity Project would provide approximately 4 million cubic yards of disposal capacity needed to complete the Channel Deepening Project and maximize beneficial use of dredged material by constructing lands for eventual terminal development and provide environmental enhancements at various locations in the Port of Los Angeles.

No.	*Project Title and Location*	*Project Description*
4	Berth 226-236 (Evergreen) Container Terminal Improvements Project	Proposed redevelopment of existing container terminal, including improvements to wharves, adjacent backland, crane rails, lighting, utilities, new gate complex, grade crossings and modification of adjacent roadways and railroad tracks.
5	Plains All American (formerly Pacific Energy) Oil Marine Terminal, Pier 400, Port of Los Angeles	Proposal to construct a Crude Oil Receiving Facility on Pier 400 with tanks on Terminal Island and other locations on Port property, with the preferred location being the former LAXT terminal, as well as construct new pipelines between Berth 408, storage tanks, and existing pipeline systems.
6	Berths 97-109, China Shipping Development Project	Development of the China Shipping Terminal Phase I, II, and III including wharf construction, land fill and terminal construction and backland development.
7	Berths 171-181, Pasha Marine Terminal Improvements Project, Port of Los Angeles	Redevelopment of existing facilities at Berths 171-181 as an omni (multi-use) facility.
8	Southern California International Gateway Project (SCIG), Port of Los Angeles	Construction and operation of a 157 acre dock railyard intermodal container transfer facility (ICTF) and various associated components, including the relocation of an existing rail operation.
9	Berth 302-305 (APL) Container Terminal Improvements Project	Container terminal and wharf improvements project including a terminal expansion area and new berth on the east side of Pier 300. Currently includes 40 acres of fill that was completed as part of the Channel Deepening Project.
10	Wilmington Waterfront Master Plan (Avalon Blvd. Corridor Project)	Planned development intended to provide waterfront access and promoting development specifically along Avalon Boulevard.
11	Port Transportation Master Plan	Port-wide transportation master plan for roadways and rail in and around its facilities. Present and future traffic improvement needs are being determined, based on existing and projected traffic volumes. Some improvements under consideration include: I-110/SR-47/Harbor Blvd. interchange improvements; south Wilmington grade separations; and additional traffic capacity analysis for the Vincent Thomas Bridge and Terminal Island near-dock rail.
12	Berths 206-224 (YTI) Container Terminal Improvements Project	Wharf modifications at the YTI Marine Terminal Project involves wharf upgrades and backland reconfiguration, including new buildings.
13	Berths 121-131 (Yang Ming) Container Terminal Improvements Project	Reconfiguration of wharves and backlands. Expansion and redevelopment of the Yang Ming Terminal.

No.	*Project Title and Location*	*Project Description*
14	Ultramar lease Renewal Project	Proposal to renew the lease between the Port of Los Angeles and Ultramar Inc., for continued operation of the marine terminal facilities at Berths 163-164, as well as associated tank farms and pipelines. Project includes upgrades to existing facilities to increase the proposed minimum throughput to 10 million barrels per year (mby), compared to existing 7.5 mby minimum.

ATTACHMENT B

MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE OF CALIFORNIA, THE OFFICE OF THE MAYOR OF THE CITY OF LOS ANGELES, AND THE CITY OF LOS ANGELES HARBOR DEPARTMENT CREATING A PARTNERSHIP TO REDUCE GREENHOUSE GASES AND SUPPORT THE PORT OF LOS ANGELES CLEAN AIR ACTION PLAN

California Attorney General's Comments re Global Warming Mitigation Measures in the Draft Environmental Impact Statement/Report For the Port of Los Angeles Berths 136-147 (TraPac) Terminal Expansion Project

Mitigation of significant environmental impacts is one of the most important functions of CEQA. *See* Pub. Res. Code § 21002.1, subd. (b). The TraPac DEIS/R appropriately includes mitigation measures addressed to the global warming impacts of the project. The TraPac DEIS/R must analyze all feasible options for mitigating or avoiding the project's contribution to the global climate crisis, and ensure that proposed mitigation measures "are fully enforceable through permit conditions, agreements, and other measures." Pub. Res. Code, § 21081.6, subd. (2)(b).

While it may not be possible to eliminate the global warming impact of this project altogether, we believe more can be done to reduce the project's greenhouse gas emissions by (1) strengthening proposed mitigation measures, (2) adopting additional feasible measures, (3) offsetting significant impacts that cannot be mitigated otherwise.

(1) **Strengthen Proposed Mitigation Measures**:

MM AQ-6: Alternative Marine Power (AMP): Project will provide AMP for vessel hoteling purposes at new dock facilities. DEIR/S claims that a ship using AMP emits 47% fewer greenhouse gases than one using auxiliary marine engines. DEIR/S assumes 10-year phase-in for implementation of this measure. (DEIS/R at 3.2-104.)

Comment: The DEIR/S does not explain why it will take 10 years to fully implement this measure. Given the significant decrease in both greenhouse gas and criteria air pollutant emissions possible through full implementation of this measure, the DEIS/R must explain why it is not feasible to achieve earlier implementation.

- ***Add incentives for vessels to convert to AMP***: Would incentives achieve earlier implementation? Reduced dockage fees? Credits? Other financial incentives? Technological and/or financial assistance to complete early conversion?

- ***Add or fund solar source for AMP***. The new 500-space parking lot provides additional potential for solar panel installation. Consider feasibility and analyze carbon reduction impact.[1] Terminal user mitigation fees (see below) could also fund off-site alternative power projects (wind, solar, etc.)

MM AQ-10: Vessel Speed Reduction Program (VSRP): Ocean-going vessels shall slow to 12 knots within 40 nautical miles of the Point Fermin. DEIR/S estimates 95% compliance with this measure by 2008, reducing overall container ship transit greenhouse gas emissions by 70% compared to the project without VSRP. (DEIS/R at 3.2-104.)

---

[1] Implementation of AMP will cause the emission of 13,000 metric tons of greenhouse gases per year at full build-out. Presumably this is far less than ships using auxiliary engine power, but the DEIR/S does not provide this analysis.

Comment: The DEIR/S does not discuss any compliance measures for this program. Currently, this is a voluntary program at the port. Without some mechanism for monitoring, compliance and enforcement, this measure cannot be relied upon to achieve the level of greenhouse gas reduction that the DEIS/R predicts.

- ***This measure should be mandatory and include mechanisms for assuring compliance.*** Evaluate feasibility of add monitoring, enforcement mechanisms, program of incentives.

- ***Explain how 95-100 percent compliance will be achieved.***

MM AQ-16: Truck Idling: This measure requires the operator "to ensure" that truck idling is reduced at the terminal, and suggests improved gate design, leaving gates open, implementing a truck appointment system. (DEIS/R at 3.2-105.)

Comment: This measure is merely aspirational. It does not impose any limitation on actual idling. It has no monitoring or enforcement mechanism. Existing regulations appear to allow truck idling while queuing so long as the distance to the nearest residence or school is greater than 100 feet. (DEIS/R at 3.2-20.)

- ***Mandate specific anti-idling measures, monitoring and enforcement mechanisms*** as condition of operator lease. In addition to reducing greenhouse gas emissions, putting teeth into this measure is essential to reduce criteria air pollutants.

- ***Prohibit all non-essential idling*** of construction equipment, yard equipment, off-road vehicles, as condition of operator lease. Require monitoring and enforcement.

- ***In-terminal truck electrification***: Provide electricity plug-in for trucks that must keep engines running for operational purposes while waiting to pick up or deliver cargo. Similar to AMP for ships. Already implemented at truck stops in California.[2]

MM AQ-13: New Vessel Design: This measure requires all new vessels to incorporate NOx and PM control devices. (DEIS/R at 3.2-72.)

Comment: In addition to promoting new vessel design that incorporates conventional pollution controls, adopt all feasible measures to reduce GHGs, including high efficiency design, reduced-power propulsion, design to accommodate emerging and new technologies, etc.

---

[2] Truck electrification is considered cost effective when fuel savings are factored into full cost of installation, coupled with federal and state incentives. *See* Center For Clean Air Policy, *Analysis of Measures for Reducing Transportation Emissions in California* (Oct. 2005) at p. 13.

- ***Evaluate feasiblity of GHG reduction measures*** suggested in International Council on Clean Transportation, *Air Pollution Greenhouse Gas Emissions from Ocean-going Ships: Impacts, Mitigation Options and Opportunities for Managing Growth.*

MM AQ-19 – 24: Green Building Measures: The project includes various green building measures, including LEED "gold" certification for the new terminal building, solar panels on the building, use of compact flourescent lighting within the building, an energy audit, recycling program, and tree planting around the building.

Comment: The DEIR/S does not discuss the feasibility of all available building mitigation measures. Additional feasible measures might include:

- ***Solar Carport*** New 500-space parking provides additional opportunity for solar power generation via installation of solar photovoltaic carport. [3]

- ***Cool Roofs***. Require light-colored, reflective roof materials and paint on all buildings. Thirty square meters of white or "cool" roof can offset 1 ton of CO2.[4]

- ***Recycling Rates***. The DEIR/S proposes to achieve a recycling rate in the main terminal building of 40% by 2012 and 60% by 2015 without explanation for such low expectations. Discuss feasibility of employee education or other programs to produce significantly higher rates, sooner.

- ***Tree Planting***. The DEIS/R suggests that shade trees be planted around the new terminal building to act as insulators, thereby reducing energy requirements. (DEIS/R at 3.2-107.) Evaluate the carbon sink potential of planting additional trees within the terminal area. Consider all available space within the terminal area and access streets where additional trees could be planted: medians, traffic islands, barriers, etc.

(2) **Adopt All Feasible Mitigation For Significant GHG Impacts**. There are numerous sources of additional greenhouse gas emissions associated with the project for which the DEIS/R does include mitigate measures. These sources must be addressed, including:

Terminal and Railyard Equipment: Use of this equipment in furtherance of the project's goals

---

[3] Solar carports have been built in Riverside County, Glendale, Palm Desert, Huntington Beach, and the U.S. Postal Service's Distribution Center in West Sacramento, among other places.

[4] *Achieving the 2050 Greenhouse Gas Reduction Goal*, Arthur Rosenfeld, California Energy Commission, for the Fourth Annual Climate Change Conference (Sept. 10-13, 2007). See, e.g., http://www.energy.ca.gov/title24/coolroofs/index.html

will add 52,000 metric tons of greenhouse gases to the atmosphere annually at full build-out. ***The DEIR/S does not discuss or propose mitigation for this impact.***

- ***Discuss feasibility of converting to electrically powered or fuel-cell equipment***, and assess carbon reduction potential of such a program.

- ***Adopt strict idling restrictions for yard tractors, terminal equipment.***

Truck Transit. Increased truck trips due to port expansion is the biggest contributor to overall GHG emissions of the project, accounting for nearly 500,000 metric tons annually at full-build-out. (DEIR/S at pp. 3.2-103 and 3.2-109.) ***The DEIR/S does not discuss or propose mitigation for this impact.***

- ***Mitigation fees***. Terminal user GHG mitigation fee, tied to size of cargo and distance truck will travel to deliver it as measure of GHG impact to offset. Funds to be used for off-site, community based carbon mitigation.

- ***Fleet Modernization Incentives***. Reduced terminal fees or credits for biodiesel, other alternative fuel, low emission fuels, hybrid-powered trucks.

- ***Mandatory tire check/tire inflation program***. Properly inflated tires maximizes fuel efficiency. Terminal could provide tire check and inflation for all trucks leaving the terminal.

Ocean-going Vessel Emissions: The DEIR/S does not consider total GHG emissions from the project's increase in shipping (only considers impact within CA borders). Is it feasible to create incentives to reduce total vessel emissions?

- ***Consider environmentally differentiated port fee,*** tied to transit-generated GHG emissions. Differentiated fee structure could reward low emissions and/or high efficiency vessels, and provide incentive for vessel modernization, clean engine design.

Coolants Used in Refrigerated Vessels/Containers Hydrofluorocarbons (HFCs) are used as cooling agents in refrigerated vessels, and when released to the atmosphere, have a potent global warming effect. It has been estimated that more than 50% of the HFCs used on a ship are released during operation and maintenance of the vessel.[5] ***The DEIR/S does not discuss mitigation for this impact.***

- ***Require periodic leak inspections*** for ships, truck and any other transport vehicles that use HFC as refrigerants.

---

[5] *See Air Pollution and Greenhouse Gas Emissions from Ocean-going Ships*, at 34.

- ***Impose fees on vessels that leak HFCs***, could be utilized to create mitigation fund.

- ***Implement mechanisms to require or incentivize the use of alternative refrigerants***. (Environmentally differentiated fees; mitigation funds for grants to assist in switching to alternative technologies, etc.)

- ***Provide servicing*** at the terminal to ensure that HFC refrigerants are recovered.

Locomotive Idling: The project will move a greater percentage of cargo by rail with the addition of an on-dock railyard. ***The DEIR/S does not discuss mitigation for this GHG impact.***

- ***Include idling restrictions for locomotives in railyard, within terminal.***

Terminal Lighting: Project will replace and add lighting throughout the 243-acre project area; project operations are 24/7. ***The DEIR/S does not discuss mitigation for this GHG impact.***

- ***Ensure project installs and uses the most energy efficient lighting available.***[6]

Employee commuting: Project will emit 2,500 metric tons of GHGs per year as a result of adding 11,000 employees. ***DEIR/S does not discuss mitigation for this impact.***

- ***Consider variety of available programs to reduce commuter vehicles.*** Create incentives (subsidies) for use of public transit, free shuttle to public transit; promote ride-sharing, van-pools, park n' ride, car share programs; create bicycle-friendly workplace (bike lanes, locking facilities, etc.); work with transit authority on reducing number of commuter vehicles traveling to/from the port, and to educate workforce about public transportation.

Construction: The DEIS/R does not discuss the feasibility of measures to reduce to the maximum extent possible the greenhouse gas emissions related to construction of the project.

- ***Incorporate Efficiency/Low Emissions Standards Into Construction Equipment.***

- ***Consider environmentally preferential contracting with "green" contractors.***

- ***Consider requiring that contractors reuse and/or recycle construction materials; use recycled materials***

---

[6] *See*, e.g., Association of Bay Area Governments, *Energy Smart Streetlighting*, www.abag.ca.gov/lgep/

(3) **Offset Unmitigated Impacts**: Even incorporating all feasible mitigation measures, the project's greenhouse gas impacts will be ***substantial and significant***.

- ***Project carbon offsets***: As additional mitigation for irreducible GHG emissions, offset may fund off-site mitigation (*e.g.*, alternative energy projects) that will produce measurable emissions reductions or sinks, or SCAQMD-managed local mitigation projects, or to purchase credits from another entity that will fund such projects with measurable outcomes.

Provided below are responses regarding the feasibility of GHG mitigation measures recommended by the Attorney General's Office.

AG-1: Final EIS/EIR Mitigation Measure AQ-6 has been revised to increase the AMP compliance rate for total ship calls. Additionally, the measure will state the following: By 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at a 100 percent compliance rate, with the exception of circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship as follows:

> **Mitigation Measure AQ-6: Alternative Maritime Power (AMP).** Ships calling at Berth 136-147 shall use AMP while hoteling at the Port in the following at minimum percentages: (a) 2009: 25% of ship calls; (b) 2010: 50% ~~40%~~ of ship calls; (c) 2012: 60% ~~50%~~ of ship calls; (d) 2015: 80% of ship calls; and (e) 2018: 100% of ship calls. In addition, by 2010, all ships retrofitted for AMP shall be required to use AMP while hoteling at 100% compliance rate, with the exception of circumstances when an AMP-capable berth is unavailable due to utilization by another AMP-capable ship.

Mitsui O.S.K. Lines Ltd (MOL) is TraPac's parent company and they have committed to retrofitting MOL ships dedicated to the Los Angeles service with AMP technology. The phase-in schedule assumes that 100 percent of MOL's P-Class vessels will be AMP-capable and will use AMP by 2010. These P-class vessels will be the most frequent callers at the terminal that provide weekly service between the U.S. West Coast and Asia and they are assumed to make up approximately 50 percent of TraPac's ship calls. The phase-in schedule will allow for the AMP infrastructure to be constructed on the berth.

The longer phase-in schedule is to accommodate MOL's APX class vessels and third-party invitees. MOL's APX service provides monthly service to Europe, the U.S. East Coast, and connections to the U.S. West Coast through the Panama Canal. These ships are not dry-docked as frequently as the P-class vessels, due to their long vessel transits, and therefore they will require a longer phase-in to achieve AMP retrofits. The APX service is only expected to call at the terminal monthly.

While MOL represents TraPac primary business partner, TraPac will also contract with other shipping lines, referred to as third-party invitees, to fill extra terminal capacity. TraPac has recently lost a majority of their third-party invitees in part due terminal upgrades delays and costs associated with expected future environmental requirements. While TraPac anticipates they will be able to attract new third-party invitees with the terminal upgrades assumed as part of the proposed Project, the actual customer mix is not yet known and costs associated with environmental requirements remain an issue. Currently, AMP retrofits cost approximately $800,000 per vessel. Through future lease amendments and the Port's Clean Air Action Plan (CAAP), all Port container terminals and shipping lines are expected to comply with AMP in the future. However, until most or all of the other container terminals and vessels are required to use AMP, with AMP requirements at the Berth 136-147 Terminal, TraPac

will have a hard time attracting third party business. The longer phase-in schedule allows TraPac to negotiate environmental upgrades with the invitees and to also to remain competitive with other Port terminals that do not yet have environmental requirements as part of their leases.

AG-2: Incentives would not achieve earlier AMP implementation. MOL is TraPac's parent company and they have committed to retrofitting MOL ships dedicated to the Los Angeles service with AMP technology. The phase-in schedule assumes that 100 percent of MOL's P-Class vessel string will be AMP-capable and will use AMP by 2010. These P-class vessels will be the most frequent callers at the terminal that provide weekly service between the U.S. West Coast and Asia and they are assumed to make up approximately 50 percent of TraPac's ship calls. The two year phase-in schedule allows time for AMP retrofits to be made on the entire vessel string during the vessel's scheduled dry-dock period. These retrofits are being done without financial incentives.

The phase-in schedule also allows time for the AMP infrastructure to be constructed on the berth. As discussed in Chapter 2, wharf improvements will take approximately two years to construct. Shore-side AMP infrastructure would be installed as part of the AMP improvements. The current schedule calls for installing AMP at Berth 145-147 within the first years with installation at Berths 136-139 during the second year. This construction schedule also includes the lead-time necessary for obtaining transformers from the Los Angeles Department of Water and Power.

The longer phase-in schedule (post-2010) is to accommodate MOL's APX class vessels and third-party invitees. MOL's APX service provides monthly service to Europe, the U.S. East Coast, and connections to the U.S. West Coast through the Panama Canal. These ships are not dry-docked as frequently as the P-class vessels, due to their long vessel transits, and therefore they will require a longer phase-in to achieve AMP retrofits. The APX service is only expected to call at the terminal monthly. As discussed above, TraPac will also contract with other shipping lines, referred to as third-party invitees, to fill extra terminal capacity. TraPac has recently lost a majority of their third-party invitees in part due terminal upgrades delays and costs associated with expected future environmental requirements. While TraPac anticipates they will be able to attract new third-party invitees with the terminal upgrades assumed as part of the proposed project, the actual customer mix is not yet known. The schedule assumes that these yet to be identified customers comply with the AMP requirements without financial incentives.

AG-3. Mitigation Measure AQ-22 has been modified to include the installation of stanchions equipped with solar power cells throughout the parking lot and backlands to further capture solar power.

> **Mitigation Measure AQ-22: Solar Panels.** The Port shall install solar panels on the main terminal building. Solar panels would provide the terminal building with a clean source of electricity to replace some of its fossil fuel-generated electricity use. In addition, as part of project construction, the Port shall install stanchions

equipped with non-reflective solar power cells throughout the parking lot and backlands to further capture solar power.

AG-4. All mitigation measures would be the subject of a Mitigation Monitoring and Reporting Program (MMRP) to be approved by the Board of Harbor Commissioners if they elect to approve the proposed Project. For VSRP, the MMRP would state that vessel calls shall be monitored by the Environmental Management Division and the Marine Exchange, which is presently providing compliance data to the Ports on the ship arrivals and departures. In addition, the tenant would have to prepare annual reports. Enforcement shall include oversight by the Real Estate Division. Annual staff reports shall be made available to the Board of Harbor Commissioners at a regularly scheduled public Board Meeting to disclose VSRP compliance rates.

AG-5. It is possible that there would be 100 percent compliance. The 95 percent compliance is provided to be conservative to allow for situation where a ship could not comply for safety reasons. As discussed above, the MMRP would include oversight by the Port and annual reporting requirements. Compliance would be monitored through such reports (see response to comment AG-4).

AG-6. As discussed in response to comment AG-4, all mitigation measures become part of the lease and are tracked through the MMRP.

AG-7. TraPac states that their new terminal design, plus a container optical character recognition scanning system, will eliminate the need for queuing on terminal. As a result, they do not see the need to provide queuing lines for either the new in or out gate facilities. The features would reduce the 15 minutes of on-terminal truck idling currently assumed in the air quality analysis.

AG-8. At present, the availability/feasibility of requiring idling restrictions on terminal equipment and its effect on terminal operations is unknown. The Port will review the feasibility of such measures through the CAAP's Technology Advancement Program (TAP), and if warranted, include such measures in the next revision to the CAAP.

AG-9. Truck stops provide plug-ins for trucks that are stopped for an extended period of time for example, when the truck is parked overnight. During overnight stops, truck drivers often idle their engines to operate air conditioning or heat in their sleeper cabs, or on-board appliances. Plug-in facilities allow the truck to turn its engine off and draw electricity from the grid to operate heating and/or cooling systems and on-board appliances. The trucks at the TraPac terminal do not park or idle in one place long enough to plug-in. As discussed above, TraPac's new terminal design, plus a container optical character recognition scanning system, eliminates the need for queuing at the gate. Once in the terminal, the truck idles only to yield to other traffic and when hooking or un-hooking loads. These movements are short-term and occur at various locations making plug-in receptacles impractical. Therefore, this is not a feasible measure.

AG-10. Mitigation Measure AQ-17, in conjunction with the lease measure below, provides a process to consider new or alternative emission control technologies in the future and an implementation strategy to ensure compliance.

> "As partial consideration for the Port's agreement to issue the permit to the tenant, tenant shall implement not less frequently than once every seven years following the effective date of the permit, new air quality technological advancements, subject to the party's mutual agreement on operational feasibility and cost sharing."

In addition, Mitigation Measure AQ-13 has been modified to include additional future technologies:

> **Mitigation Measure AQ-13: New Vessel Builds.** All new vessel builds shall incorporate NO_x, ~~and~~ PM, and GHG control devices on auxiliary and main engines. These control devices include, but are not limited to the following technologies, where appropriate: (1) selective catalytic reduction (SCR) technology; (2) exhaust gas recirculation; (3) in line fuel emulsification technology; (4) diesel particulate filters (DPFs) or exhaust scrubbers; (5) common rail; ~~and~~ (6) Low NO_x burners for boilers; (7) implementation of fuel economy standards by vessel class and engines; and (8) diesel-electric pod-propulsion system.

This measure focuses on reducing diesel particulate matter (DPM), NO_x, and SO_x emissions from main engines and auxiliary engines. In addition, this measure would also incorporate design changes and technology to reduce GHG emissions where available.

OGV engine standards have not kept pace with other engine standards, such as trucks and terminal equipment. New vessels destined for California service should be built with these technologies in mind. As new orders for ships are placed, the Port believes it is essential that the following elements be incorporated into future vessel design and construction:

1. Work with engine manufacturers to incorporate all emissions reduction technologies/options when ordering main and auxiliary engines, such as slide valves, common rail, and exhaust gas recirculation;

2. Design in extra fuel storage tanks and appropriate piping to run both main and auxiliary engines on a separate/cleaner fuel; and

3. Incorporate SCR or an equally effective combination of engine controls. If SCR systems are not commercially available at the time of engine construction, design in space and access for main and auxiliary engines to facilitate installation of SCR or other retrofit devices at a future date.

Indeed, the preface to the Port's CAAP includes the following statement by joint Board's of Harbor Commissioners related to GHGs.

"Third, we should recognize that the recently enacted California Global Warming Solutions Act of 2006 (AB 32) requires carbon emissions be reduced back to 1990 levels by the year 2020. In light of the growth prospects of the two Ports that means we must switch to carbon-free fuels (i.e., green electricity) and other carbon-free technologies in every possible application as soon as possible. Toward that end we propose that our respective staffs include such technology in our Technology Advancement Program. As part of that effort, the Ports pledge to contribute, and raise from other interested parties, the many millions need to fund this vital effort."

The TAP included an initial $15 million to fund new technology. To date some of the funds have been utilized to fund a diesel-hybrid tug and electric drayage truck. These are Port-wide measures the will benefit Port-wide emission reductions and will indirectly benefit all the Port terminals.

Additionally, the Report by the International Council on Transportation was taken into consideration in the development of the CAAP for criteria pollutants. In fact, the Port of Los Angeles is presently carrying out a number of the measures listed for ships while "at Port," including:

- Develop GHG emission inventories – Underway at the Port of Los Angeles;

- Market-based measures for vessels – As provided above, the Port has in the past and may be considering some limited incentives. However, there are serious financial limitations on the extent to which the Port can provide incentives and still be able to carry out its legal mandates to maintain and modernize the Port. Presently the Port's main goal is to reduce particulates, which are having a local and regional effect on public health. In that regard, the Port of Los Angeles, along with the Port of Long Beach, has approved the CAAP and the Clean Truck Program. The Clean Truck Program by itself is estimated at an expenditure of $2 Billion over the next five years. As provided in these responses, many of these measures will have GHG benefits; and

- Implement fuel economy standards by vessel class – This measure is not feasible because it is outside the purview of the Port of Los Angeles and needs to be carried forward either at the National level through USEPA or through the International Maritime Organization which sets standards for ships.

AG-11. The Port agrees that additional solar panels can be added and Mitigation Measure AQ-22 has been amended as follows:

Mitigation Measure AQ-22: Solar Panels. The ~~applicant~~ Port shall install solar panels on the main terminal building. Solar panels would provide the terminal building with a clean source of electricity to replace some of its fossil fuel-generated electricity use. In addition, as part of construction, the Port shall install

stanchions equipped with non-reflective solar power cells throughout the parking lot and backlands to further capture solar power.

AG-12. As part of the proposed Project, the building would be designed as a LEED certified Gold Level building which would include light-colored, reflective roof materials.

AG-13. In accordance with the Port's Leasing Policy, the operator would be required to implement an environmental management system approach to activities at their terminal, including their own office operations. This would include the operator to set goals for office recycling with the rates identified in Mitigation Measure AQ-23 set as the minimum. The Port shall work with the tenant to identify methods to first reduce and reduce office products.

AG-14. The Project would include planting and maintaining shade trees around the TraPac Terminal, such as around the terminal building, near the gate structure, and along the facility's perimeter. It is not possible to plant trees in many parts of a container terminal where they would interfere with terminal operations. In addition, additional tree planting/landscaping has been provided for around the relocated Pier A Yard (see Mitigation Measure NOI-2). As part of the Project, the Port is also building a 30-acre landscaped buffer, which will include trees.

AG-15. Electric power is being used at the TraPac Terminal where such application is operationally feasible. Presently, all container cranes are electric. In addition, TraPac has committed to using electric rail-mounted gantry cranes (RMGs) in the new intermodal yard. TraPac also indicates that they are interested in electric rubber-tired gantry cranes (RTGs) on the their backland, but that they plan to evaluate the results of Port tests being conducted at other terminals at the Port before they commit to this measure due to a number of operational and safety issues. Currently, diesel powered RTGs can be moved all around the backlands. Electric RTGs must be plugged in, thereby limiting mobility; electric RTGs also have safety issues that need to be resolved. The Port will conduct tests to examine the best physical terminal layout and whether overhead or trenched electricity provides the most flexible backlands operation.

The Port is actively pursuing advanced technology, including electric RTGs and hybrid yard tractors through the TAP. Because a number of these technologies decrease fuel costs, terminal operators have expressed interest in implementing such technologies. However, such technology is still being tested and cannot be required at this time. Mitigation Measure-17 would require the Berths 136-147 tenant to review, in terms of feasibility, any Port-identified or other new emissions-reduction technology, including yard equipment, and report to the Port. We are unaware of any approved/certified fuel-cell equipment that could be used in mobile source applications at the TraPac Terminal.

In addition to pursuing electric equipment, TraPac has installed energy capacitors on all gantry cranes and substations. Energy capacitors are also called power factor correction (devices). Capacitors react opposite of inductors. Cranes, HVAC, and

refrigeration equipment, or anything that has a motor has inductance that causes inductive reactances; this creates a "lagging" power factor. The current will lag behind the voltage and the spacing causes inductive reactive losses (energy losses also called "wattless energy" or reactive power losses). For electricity to be used efficiently, the voltage and current should be in unison. Properly sized capacitors will counter act the inductance and move the current closer to the voltage. The end result is less waste of electric energy and efficient operation, less heat generated by the motor, and less breakdown. In addition to saving energy, motors and equipment last longer because equipment is running more efficient with less heat losses.

AG-16. Please see response to comment AG-8. At present, the availability/feasibility of requiring idling restrictions on terminal equipment and its effect on terminal operations is unknown. The Port will review the feasibility of such measures through the TAP, and if warranted, include such measures in the next revision to the CAAP.

AG-17. The Port is an active member of California Climate Action Registry (CCAR) and is preparing a Port-wide inventory that will identify both sources of GHGs and potential strategies to reduce such gases Port-wide. The Port is currently not pursuing carbon offsets due to issues with accounting and verifiability.

As discussed on page 3.2-10 of the Draft EIS/EIR, GHGs are a global issue. Unlike criteria pollutants that have mainly localized effects and therefore require local reductions, increased emissions of GHGs are resulting in global effects, namely climate change, and reductions do not need to be local to reduce environmental impacts. As such, a number of organizations and companies have begun to offer voluntary carbon offset programs. Under such systems, the Port could purchase offsets, which are emission reductions elsewhere, to compensate for the GHG emissions at the Port, resulting in a net reduction of global GHGs. While the Port agrees with carbon offset programs in concept, currently such programs are not strictly regulated and the Port cannot verify or guarantee that the credits actually result in GHG emission reductions. However, the Port believes that it is best served by doing on-site measures because of significant costs associated with existing clean air programs, and the concurrent benefits of reducing criteria pollutants and diesel PM which are the most critical environmental issue facing our communities.

On November 1, 2007, the Port of Los Angeles approved a progressive ban on older trucks serving the Port. As a result, trucks entering the Port will have reduced emissions, including reduced GHGs. It is possible that fees will be imposed as a Port-wide program in support of this progressive ban. This fee, which may be considered as early as December of 2007, would be directed at the reduction of NOx and diesel PM from the truck fleet as a priority due to the very significant near term health concerns associated with these pollutants and the contribution of NOx towards the regions nonattainment status for ozone. The reduction in these emissions could also contribute to reduction in GHGs since the Clean Truck Program also includes an LNG program. Recently the two Ports invested over $20 million dollars in contracts to fund the start-up of an LNG fleet to serve the Port terminals.

AG-18. The Ports CAAP already contains a significant alternative fuel component particularly for the use of LNG as part of the Clean Trucks Program including incentive programs. The first step of this Program, which includes a progressive ban on older trucks, was approved by the Board of Harbor Commissioners on November 1, 2007. The reduction in emission as a result of this program would also contribute to reduction in GHGs (see above). The Clean Truck Program is presently valued at $1.8 billion. The Port is contributing over $100 million over the next five years, and to date has sponsored truck replacements through the Gateway City Program totaling over $15 million. The Clean Truck Program also includes an LNG program. Recently the two Ports invested over $20 million in contracts to fund the start-up of an LNG fleet to serve the Port terminals. The CAAP also includes the TAP for developing and testing new technology. Included in this to date is the testing of an electric drayage truck that could be use for short trips to the near dock rail yards. The port may also be testing of a hybrid drayage truck associated with this program

Biofuel use at the Port is not being heavily pursued due to reported increases in NOx emissions. Accordingly yard equipment using biofuel are not expected to meet the percent NO_x reduction assumed in the Draft EIS/EIS. As discussed in the Draft EIS/EIR (page 3.2-3), while the South Coast Air Basin has been in attainment for NO_x since 1991, the region is now considered a maintenance area for NO_x and local air agencies are pursuing further reductions prevent regional increases from increased population.

AG-19. Maintenance and upkeep of trucks should be the responsibility of the truck owner. In this regard, the Port's Clean Truck Program will include a requirement for maintenance of drayage trucks calling at the Port. Further, including mandatory tire checking at the terminal would have to be weighed against emissions created by additional truck idling to carry this out. Presently, the terminal operator is responsible for chassis maintenance including tire maintenance.

AG-20. As discussed in response to comment AG- 17, the Port is taking primary financial and implementation responsibilities for cleaning up of the dirty trucks calling at the Port. This is estimated at a $2 billion program over the next five years (see San Pedro Bay Clean Air Action Plan). Measures identified here relating to ships and terminal equipment are already considered in the customer's business plan. While the Port may consider some level of incentive associated with certain specific activities aimed at reducing emissions Port-wide, these provisions will be limited due to the need of the Port to utilize funds received by customers to maintain and upgrade of Port facilities. Such programs would be implemented through a Port-wide tariff. However, Mitigation Measure AQ-13 has been modified to include consideration of GHGs as shown below.

> **Mitigation Measure AQ-13: New Vessel Builds.** All new vessel builds shall incorporate NO_x, ~~and~~ PM, and GHG control devices on auxiliary and main engines. These control devices include, but are not limited to the following technologies, where appropriate: (1) selective catalytic reduction (SCR) technology; (2) exhaust gas recirculation; (3) in line fuel emulsification technology; (4) diesel particulate

filters (DPFs) or exhaust scrubbers; (5) common rail; ~~and~~ (6) Low NO_x burners for boilers; (7) implementation of fuel economy standards by vessel class and engines; and (8) diesel-electric pod-propulsion system.

This measure focuses on reducing DPM, NO_x, and SO_x emissions from main engines and auxiliary engines. OGV engine standards have not kept pace with other engine standards such as trucks and terminal equipment. New vessels destined for California service should be built with these technologies. As new orders for ships are placed, the Ports believe it is essential that the following elements be incorporated into future vessel design and construction:

1. Work with engine manufacturers to incorporate all emissions reduction technologies/options when ordering main and auxiliary engines, such as slide valves, common rail, and exhaust gas recirculation;

2. Design in extra fuel storage tanks and appropriate piping to run both main and auxiliary engines on a separate/cleaner fuel; and

3. Incorporate SCR or an equally effective combination of engine controls. If SCR systems are not commercially available at the time of engine construction, design in space and access for main and auxiliary engines to facilitate installation of SCR or other retrofit devices at a future date.

In addition, this measure will also incorporate design changes and technology to reduce GHG emissions where available. Mitigation Measure AQ-17 includes the opportunity to include new ship technology in the future.

AG-21. Currently, all new MOL vessel builds include AMP retrofits and MOL has adopted use of the refrigerant R134a, which has an ozone depletion coefficient of zero. MOL also has a program to address and implement measures for maintaining and improving the vessel performance (fuel efficiency and speed). Examples include operational changes such as reducing navigation speed and select optimum routes depending on the situation and technological changes such as energy-saving designed vessels and Propeller Boss Cap Fins (PBCF) systems. In regards to refrigerant use, CFC refrigerants were traditionally used on ships for air conditioning systems and refrigeration of food, as well as to refrigerate cargo containers; and Halon was used in onboard fire extinguishing systems. MOL adopted R-22 (HCFC), which has a smaller ozone depletion coefficient than R-12 (CFC) on vessels launched after the late 1970s. In 2002, MOL began to use R-404A, eliminated Halon fire-extinguishing equipment in favor of carbon dioxide systems, stopped using R-12 and adopted R134a, which has an ozone depletion coefficient of zero. Additionally, according to TraPac, refrigerated containers are checked 2-3 times a day for leaks repaired immediately if a leak is detected.

The terminal is not the proper location to serve as an inspection station for trucks especially in regards to the space that would be required to do this and in the interest

in not incurring additional idling time and waiting by the truck drivers. The appropriate responsibility for this lies with the owner of the truck.

AG-22. Due to the very high value of refrigerated containers (ranging from $20,000 to $50,000/container) shippers conduct a pre-departure inspection of all containers. In addition, the use of HFC is rapidly disappearing from use as discussed in response to comment AG-20. These procedures have been confirmed this with TraPac as well as APM Terminals at the Port. Inspections at the terminal are conducted frequently to ensure no loss of cargo. The literature cited in this publication (Drewry 1996) is now 11 years old and does not reflect existing operations. Therefore, the value of creating a new monitoring program and fee structure on International Carriers is not warranted.

AG-23. Please see response to comment AG-20 regarding HFCs and response to comment AG-10 for additional information on customer incentive programs.

AG-24. Currently TraPac currently services refrigerated containers at the terminal as part of their normal practices.

AG-25. The placement of the on-dock rail yard at the facility was done in part to reduce emissions, which would also include GHGs. In fact this action is consistent with the report cited above: *Center For Clean Air Policy, Analysis of Measures for Reducing Transportation Emissions in California* (Oct. 2005). In accordance with CAAP measure RL-2, by 2011, all diesel-powered Class 1 switcher and helper locomotives entering Port facilities will use 15-minute idle restrictors. In addition, Mitigation Measure AQ-14 requires the on-dock rail yard to incorporate the cleanest locomotive technologies into their operations, and must be consistent with CAAP measure RL-2. These devices are also required on PHL switchers.

AG-26. The Port will utilize the most energy efficient lighting in the terminal that would meet the lighting and safety and security needs of a 24-hour operating terminal. Where the existing lighting does not meet current POLA standards, fixtures would be replaced during proposed Project construction with more efficient lamps. The existing and replacement laps would be high pressure sodium lights at 10,000 watts per fixture. However, the new lamps would be 20 percent more efficient than the existing lamps, as they do not waste input energy by producing non-useable light in the form of glare (See Draft EIS/EIR Section 3.12, Utilities and Public Service).

In addition, the following two mitigation measures are included in the Project.

> **Mitigation Measure AQ-20: Compact Fluorescent Light Bulbs**. All interior terminal building lighting shall use compact fluorescent light bulbs. Fluorescent light bulbs produce less waste hear and use substantially less electricity than incandescent light bulbs.

Mitigation Measure AQ-22: Energy Audit. The tenant shall conduct a third party energy audit every five years and install innovative power saving technology where feasible, such as power factor correction systems and lighting power regulators. Such systems help to maximize usable electric current and eliminate wasted electricity, thereby lowering overall electricity use.

AG-27. Employees working at the terminals are predominantly members of the ILWU who primarily live in the area near the Port, and are called as needed from the ILWU hiring hall in Wilmington. The dispatch of these employees is complicated by the fact that workers may not know from day to day which terminal within the Los Angeles/Long Beach Port complex they may be working or the hours they may be working. The gang deployment is set to a large extent by the arrival times of ships arriving at the Port. In addition, the Port does not have any control of terminal workers and the relationship of the work force with the terminal operator is governed by long term contracts negotiated between the steamship line association and the union. While the Port is incorporating bike paths into its commercial/recreational waterfront developments, it is not safe for bicycles to have access to industrial facilities at the Port. There is no public transit system serving the port terminals.

AG-28. Mitigation measures AQ-2, AQ-3, and AQ4 have been modified to help reduce emissions, including GHGs from on-road and off-road construction equipment:

Mitigation Measure AQ-2: Fleet Modernization for On-Road Trucks. All on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 33,000 pounds or greater used on-site or to transport materials to and from the site shall comply with year 2007 emission standards for Phase I. In addition, Phase II construction (post 2015) all on-road heavy-duty diesel trucks with a gross vehicle weight rating (GVWR) of 33,000 pounds or greater used on-site or to transport materials to and from the site shall comply with year 2010 emission standards where available. Trucks hauling materials such as debris or fill shall be fully covered while operation off Port property.

Mitigation Measure AQ-3: Fleet Modernization for Construction Equipment. All off-road diesel-powered construction equipment greater than 50 hp, except derrick barges and marine vessels, shall meet the cleanest off-road diesel emission levels available but no greater than Tier 3 NO_x emission standards. The construction contractor could meet Tier 3 equivalent PM_{10} emission limits through the use of new or repowered engines designed to meet Tier 2 PM standards and/or the use of ARB approved diesel particulate traps. ~~achieve the Tier 2 emission standards in Phase 1 construction and Tier 4 emission standards in Phase 2 construction~~, as defined in the USEPA Nonroad Diesel Engine Rule (USEPA 1998 and 2004). ~~Equipment not designated Tier 23 by the manufacturer may achieve the emissions requirement by retrofitting the equipment with an CARB Verified Diesel Emission Control System (VDECS) and/or by the use of an CARB verified emulsified fuel~~. For Phase II construction (post 2015), equipment shall meet the Tier 4 emission standards where available.

In addition, construction equipment shall incorporate, where feasible, emissions savings technology such as hybrid drives and specific fuel economy standards.

Mitigation Measure AQ-4: Best Management Practices (BMPs). LAHD shall implement a process by which to select additional BMPs to further reduce air emissions during construction if it is determined that the proposed construction equipment exceed any SCAQMD significance threshold. The following types of measures would be required on construction equipment: (a) use of diesel oxidation catalysts and catalyzed diesel particulate traps; (b) maintain equipment according to manufacturers' specifications; (c) restrict idling of construction equipment to a maximum of 5~~10~~ minutes when not in use; and (d) install high-pressure fuel injectors on construction equipment vehicles. The LAHD shall determine the BMPs once the contractor identifies and secures a final equipment list.

The mitigation measures identified above would further reduce GHGs. At this time, the Port is not sure of availability of equipment and therefore has not calculated or taken credit for GHG reductions as a result of these measures.

AG-29. As a Department of the City of Los Angeles, the Port is somewhat restricted in its contracting methods, which include under other restrictions, the need to select the lowest responsive bidder. However, the Project construction procurement process would include a selection system that favors bidders with clean construction equipment. Final EIS/EIR mitigation measures would result in further emission reductions than assumed in the Draft EIR/SIS. However, due to availability issues, these reductions have not been quantified.

AG-30. This is a standard requirement of Port contracts. Construction materials such as concrete and asphalt are reused in construction at the facility or elsewhere in the Port. The Port presently has its own crusher facility for this purpose.

AG-31. The Port is an active member of CCAR and is preparing a Port-wide inventory that will identify both sources of GHGs and potential strategies to reduce such gases Port-wide. The Port is currently not pursuing carbon offsets due to issues with accounting and verifiability (see response to comment AG-16).

As discussed on page 3.2-10 of the Draft EIS/EIR, GHGs are a global issue. Unlike criteria pollutants that have mainly localized effects and therefore require local reductions, increased emissions of greenhouse gases are resulting in global effects, namely climate change, and reductions do not need to be local to reduce environmental impacts. As such, a number of organizations and companies have begun to offer voluntary carbon offset programs. Under such systems, the Port could purchase offsets, which are emission reductions elsewhere, to compensate for the greenhouse gas emissions at the Port, resulting in a net reduction of global GHGs. While the Port agrees with carbon offset programs in concept, currently such programs are not strictly regulated and the Port cannot verify or guarantee that the credits actually result in GHG emission reductions.

In addition, the Port is best served by doing on-site measures because of significant costs associated with existing clean air programs, and the concurrent benefits of reducing criteria pollutants and diesel PM which are the most critical environmental issues facing our communities.

ATTACHMENT C

MEMORANDUM OF UNDERSTANDING BETWEEN THE STATE OF CALIFORNIA, THE OFFICE OF THE MAYOR OF THE CITY OF LOS ANGELES, AND THE CITY OF LOS ANGELES HARBOR DEPARTMENT CREATING A PARTNERSHIP TO REDUCE GREENHOUSE GASES AND SUPPORT THE PORT OF LOS ANGELES CLEAN AIR ACTION PLAN

Conceptual Scope of Solar Photovoltaic Development Port of Los Angeles

Introduction

The Port of Los Angeles (POLA) has developed a conceptual program plan for installation of solar photovoltaic (solar PV) within the port's footprint. The goal is to provide POLA with ten megawatts (10 MW) of zero-emission electricity to help offset future incremental load resulting from port electrification.

Site Assessment

POLA staff has performed an inventory of potential sites within the port's footprint as shown on the attached figure. See Table 1 below for the locations of these proposed installations.

Table 1 – Inventory of Potential PV Solar Sites at POLA

Berth/Location	Building (sf)	Parking Lot (sf)	MW Potential
93 - Cruise Terminal	50,000	100,000	1.10
152-154 Warehouses	40,000	0	0.40
161 Offices & warehouse	30,000	50,000	0.60
177-181 Warehouses	50,000	0	0.50
Harbor Admin Buildings	30,000	40,000	0.54
Fire Station (5th & Harbor)	15,000	0	0.15
San Pedro Waterfront	50,000	200,000	1.70
57-70 City Dock #1	75,000	0	0.75
Warehouses #9 & 10	40,000	20,000	0.52
various container terminals	150,000	250,000	3.00
			9.26

Staff has concluded that the cruise terminal (Berth 93) and adjacent parking lot(s) would serve as the best candidate for an initial Phase One project. The proposed cruise terminal project offers:

- Immediate access and availability
- Approximately 1 MW potential
- 50,000 sq. ft. of building roof space
- 100,000 sq. ft. of parking space
- No major property, permitting, building or tenant issues identified

Once the initial cruise terminal installation is in place and is successfully operating, the program will be expanded to install solar PV on other POLA buildings and possibly tenant properties. The staff initial assessment estimates an additional 9 MW of potential projects as noted in Figure 1. Staff estimates a total of 3,756,400 Square Feet of rooftop and parking lot space is readily available for this program.

Schedule

Phase One of the POLA PV Solar Program will consist of a 1MW installation at the Berth 93 Cruise Terminal and will proceed on the following schedule:

- Request for Proposals Phase 1 Project: December 2007
- Progress Report to Attorney General[1] June 2008
- Board consideration of Program[2] and Phase 1 Project & CEQA determination: Spring 2008
- Phase 1 Project construction: Fall 2008
- Phase 1 Commissioning Spring 2009

The 1 MW of solar power from the Phase One B.93 project will therefore be on-line by the second quarter of 2009.

Phase Two of the POLA PV Solar Program will proceed upon the successful implementation of the Phase One project. Full implementation of Phase Two will be accomplished by the end of 2012 according to the following schedule:

- An additional 3 MW by the end of calendar year 2010 (for a program total of 4MW),
- An additional 3 MW by the end of calendar year 2011 (for a program total of 7MW), and
- An additional 3 MW by the end of calendar year 2012 (for a program total of 10MW).

Program Implementation Process and Options

POLA will be project manager and will release an RFP for the design, construction, installation, maintenance, and potential third-party ownership of solar PV installations. The first RPF will be for the Phase One installation at the cruise terminal and adjacent parking lot(s). This first RFP

[1] The annual reports to the Attorney General would include accomplishments to date, schedule of next projects and issues for discussion.
[2]This program may require City Council approval.

would be for up to 1 MW of rooftop-mounted, ground-mounted, and carport solar PV system installations. Subsequent RFP's will be issued for the Phase Two projects.

The proposed solar PV RFP evaluation process will be a two-step process. The first step will be to evaluate the qualifications and experiences to short-list bidders. The second step, and dependent on which development approach is pursued, will be to negotiate with the short-list and award contract.

POLA can proceed with direct purchase or lease option under LADWP's current Solar Incentive Program. Depending on the meter location, POLA may have to develop a solar production credit allocation among tenants or facilities. However, this approach can be pursued without delay.

The alternative approach with a LADWP Power Purchase Agreement (PPA) and POLA site-agreement with developer will take some time to develop and gain acceptance both within LADWP and the vendor community. It reduces the administrative and management burden on POLA, and while it may be a better long term option, the timing is uncertain.

For POLA's Phase One PV development, the direct purchase or lease option will be the preferable approach while POLA continues to work with LADWP to work out the alternate approach for Phase Two.

Figure 1. Proposed Photovoltaic Solar Installations at the Port of Los Angeles