

As also specified under the Project Specific Standards, the emissions from an individual project will be analyzed based upon its contribution to cumulative effects. The project contribution will be evaluated in conjunction with the Clean Air Action Plan and other federal, state and local adopted and/or implemented control measures to ensure that the contribution to cumulative effects will allow for the timely achievement of the San Pedro Bay Standards.

The Ports have established Source Specific Performance Standards to assist in Clean Air Action Plan implementation which lay out particular strategies to attain the ultimate goals. However, the Ports encourage innovation and will accept equivalent strategies once proven. The Source Specific Performance Standards proposed in the Clean Air Action Plan are:

Heavy-Duty Vehicles/Trucks

- By the end of 2011, all trucks calling at the Ports frequently or semi-frequently will meet or be cleaner than the EPA 2007 on-road particulate matter (PM) emissions standards (0.01 g/bhp-hr for PM) and be the cleanest available oxides of nitrogen (NOx) at the time of replacement or retrofit.

Ocean-Going Vessels

- 100% compliance with the Vessel Speed Reduction (VSR) Program (initially out to a distance of 20 nm from Point Fermin, and expanded to 40 nm).
- The use of $\leq 0.2\%$ sulfur Marine Gas Oil (MGO) fuel in vessel auxiliary and main engines at berth and during transit out to a distance of 20 nautical miles (nm) from Point Fermin and expanded to 40 nm or equivalent reduction (starting 1st quarter 2008).
- The use of shore-power (or equivalent) for hotelling emissions implemented at all major container, selected liquid bulk, and cruise terminals in POLA within five years and at all container terminals and one crude oil terminal in POLB within

five to ten years (the implementation time difference being due to the Port of Long Beach's more extensive infrastructure development schedule).

- The use of diesel particulate matter (DPM) and NOx control devices on auxiliary and main engines mandated on new vessel builds and existing frequent callers.

Cargo Handling Equipment

- Beginning 2007, all CHE purchases will meet one of the following performance standards:
 - Cleanest available NOx alternative-fueled engine, meeting 0.01 g/bhp-hr PM, available at time of purchase, or
 - Cleanest available NOx diesel-fueled engine, meeting 0.01 g/bhp-hr PM, available at time of purchase.
 - If there are no engines available that meet 0.01 g/bhp-hr PM, then must purchase cleanest available engine (either fuel type) and install cleanest Verified Diesel Emissions Controls (VDEC) available.
- By the end of 2010, all yard tractors operating at the San Pedro Bay Ports will meet at a minimum the EPA 2007 on-road or Tier IV engine standards.
- By the end of 2012, all pre-2007 on-road or pre-Tier IV top picks, forklifts, reach stackers, rubber tired gantries (RTG), and straddle carriers <750 hp will meet at a minimum the EPA 2007 on-road engine standards or Tier IV off-road engine standards.
- By end of 2014, all CHE with engines >750 hp will meet at a minimum the EPA Tier IV off-road engine standards. Starting 2007 (until equipment is replaced with Tier IV), all CHE with engines >750 hp will be equipped with the cleanest available VDEC verified by CARB.

Harbor Craft

- By the second year of the Plan, all Harbor Craft (HC) home-based at San Pedro Bay Ports will meet EPA Tier II for harbor craft or equivalent reductions.
- By the fifth year, all previously repowered HC home-based at San Pedro Bay Ports will be retrofitted with the most effective CARB verified NO_x and/or PM emissions reduction technologies.
- When Tier III engines become available, within five years all HC home-based at San Pedro Bay Ports will be repowered with the new engines.

Railroad Locomotives

- By 2008, all existing Pacific Harbor Line switch engines in the Ports shall be replaced with Tier II engines equipped with 15-minute idling limit devices, retrofitted with either DOCs or DPFs, and shall use emulsified or other equivalently clean alternative diesel fuels available.
- Any new switch engine acquired after the initial Pacific Harbor Line replacement must meet EPA Tier III standards or equivalent to 3 grams NO_x/bhp-hr and 0.023 g PM/bhp-hr.
- By 2011, all diesel-powered Class 1 switcher and helper locomotives entering Port facilities will be 90% controlled for PM and NO_x, will use 15-minute idle restrictors, and after January 1, 2007 use ULSD fuels.
- Starting in 2012 and fully implemented by 2014, the fleet average for Class 1 long haul locomotives calling at Port properties will be Tier III equivalent (Tier II equipped with DPF and SCR or new locomotives meeting Tier III) PM and NO_x and will use 15-minute idle restrictors. Class 1 long haul locomotives will operate on USLD while on Port properties by the end of 2007.

Technologies to get to these levels of reductions will be validated through the Technology Advancement Program.

- Any new rail yard developed or significantly redesigned at the San Pedro Bay Ports shall be required to operate the cleanest available technology for switcher, helper, and long haul locomotives, utilize idling shut-off devices and exhaust hoods, use only ULSD or alternative fuels, and have clean only CHEs and HDVs consistent with the Clean Air Action Plan.



IMPLEMENTATION

Given that most of the control measures go beyond existing regulatory requirements (none are mandated as part of regular port operations), the Ports must take steps to implement the measures. In order to maximize effectiveness of implementation, multiple strategies will be evaluated and developed.

The primary implementation methods that both Ports agree upon are incorporation of control measures into lease requirements and utilization of appropriate mitigation measures, which may be identified as part of the CEQA evaluation process. The advantage of these methods is that the control measures will be tied to the lease or permit and, from a compliance standpoint, failure to meet the control measures would mean a violation of the lease or permit. The limitation of this strategy is that the timing of implementation port-wide will depend on the timing of lease negotiations. To make up for this limitation, the Ports will use targeted incentive funding to "encourage" early emissions reduction measures and other strategies such as tariffs changes wherever possible.

As the Clean Air Action Plan is put into practice, several implementation strategies will be utilized to maximize the reduction of public health risk, criteria pollutant mass emissions reductions, and meet the stated goals. Implementation will adapt so that strategies may be added, changed, or abandoned based on the experience that will be built up as the Clean Air Action Plan moves forward. Updates to each Port's Board will be made on how the various implementation strategies are progressing and any changes to the initial suite of strategies.

The Ports have evaluated numerous implementation strategies for the proposed standards, extensively reviewed options, and evaluated several scenarios. Strategies evaluated to date are:

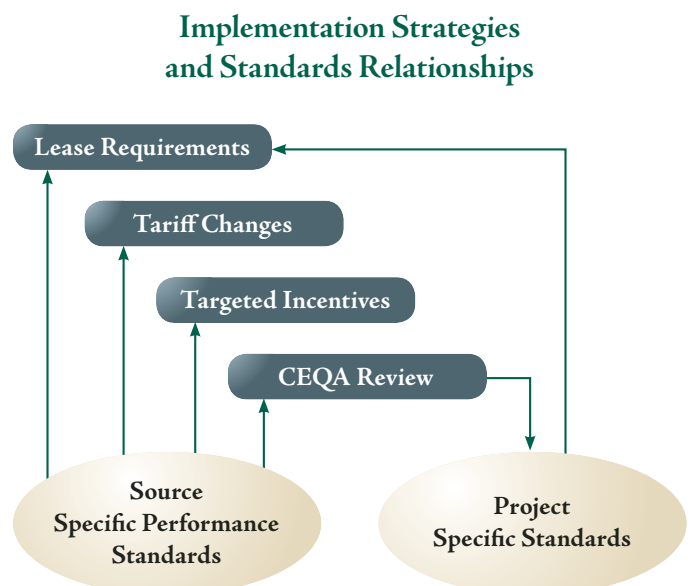
- Lease Requirements
- Tariff Changes
- CEQA Mitigations
- Incentives
- Voluntary Measures

- Credit Trading
- Capital Lease Backs
- Government-Backed Loan Guarantees
- Third Party Discount Leasing/
Purchasing
- Franchises
- Joint Powers Authority Trucking Entity
- Environmental Mitigation Fee
- Recognition Program

All control measures and implementation strategies are subject to further legal analysis by the City Attorneys of the two Ports. Encouragement of voluntary efforts and the recognition program strategy will be implemented as part of the Clean Air Action Plan independent of which additional strategies are ultimately used.

The most effective combination of implementation strategies identified at this time is a mix of lease requirements, tariff changes, CEQA mitigations, and incentives. This combination provides redundancy in implementing the Source Specific Performance Standards should any one of the other specific strategies fail to be applied.

The following flow diagram illustrates how the Source Specific Performance Standards and the Project Specific Standard will be implemented by the various strategies, and how the performance and project standards are related.



Tariff changes offer an opportunity to affect a broader range of tenants but have potential implementation issues. Lease requirements may be able to go further than tariffs, but requirements can generally only be negotiated when the lease is reopened, such as when:

- A terminal change/modification triggers an Environmental Impact Report (EIR)
- A new lease is sought
- An existing lease comes up for renewal

Therefore, these lease reopening dates are a key component in determining potential emissions reduction magnitudes from control measures.

The following table presents the Port of Los Angeles' major leases, expiration dates, and currently anticipated upcoming Board action dates related to Environmental Impact Reports and/or lease actions.

POLA Leases & Status

Land Use	Grantee	Terms of Agreement	Date Expires	Anticipated Board Action
Container	POLA Container Terminal (berths 206-209)	Vacant	Vacant	Within 5 years
Container	Eagle Marine Services, Ltd.	30 Years	12/31/2026	1 st Quarter 2008
Container	APM Terminals Pacific, Ltd.	25 Years	7/31/2027	Not in 5 yr period
Container	China Shipping Holding Company, Ltd.	25 Years	New	1 st Quarter 2007
Container	Evergreen Marine Corporation, LTD.	32 Years	12/31/2028	2 nd Quarter 2008
Container	TraPac	15 Years	9/30/2002	2 nd Quarter 2007
Container	Yang Ming Marine Transport Corporation, Ltd.	20 Years	10/10/2021	1 st Quarter 2008
Container	Yusen Terminals Inc.	25 Years	9/30/2016	2 nd Quarter 2008
Passengers/Sup Com.	Pacific Cruise Ship Terminals, LLC	18 Months	6/30/2005	Within 5 years
Automobile	Distribution & Auto Services, Inc.	N/A	N/A	N/A
General Cargo	Rio Doce Pasha Terminal, L.P. (berths 174-181)	15 Years	Holdover	1 st quarter 2008
General Cargo	Stevedoring Services of America (berths 54-55)	10 Years	10/31/2009	4 th Quarter 2009
Dry Bulk	Hugo Neu-Proler Company	30 Years	8/30/2024	Not in 5 yr period
Dry Bulk	Los Angeles Export Terminal Corporation	35 Years	8/30/2032	N/A
Liquid Bulk	Equilon (berths 167-169)	35 Years	2/11/2023	Not in 5 yr period
Liquid Bulk	Exxon Mobil Corporation (berths 238-240)	25 Years	12/31/2015	Not in 5 yr period
Liquid Bulk	Pacific Energy Marine Oil (pier 400)	TBD	TBD	2 nd Quarter 2007

POLA Leases & Status (continued from previous page)

Land Use	Grantee	Terms of Agreement	Date Expires	Anticipated Board Action
Liquid Bulk	Conoco Phillips (berths 148-151)	TBD	Holdover	Not in 5 yr period
Liquid Bulk	Ultramar (berth 164)	25 Years	Holdover	3 rd Quarter 2007
Liquid Bulk	Vopak (berths 187-191)	38 Years	8/29/2023	Not in 5 yr period
Liquid Bulk	Westway Terminal Company, Inc. (berths 70-71)	30 Years	3/23/2025	Not in 5 yr period
Liquid Bulk	GATX Tank Storage (berths 118-119)	25 Years	4/13/2013	Unknown
Liquid Bulk	Amerigas (berth 120)	TBD	Holdover	Not in 5 yr period
Liquid Bulk	Valero (berth 163)	20 Years	6/24/2014	Not in 5 yr period

The following table presents the Port of Long Beach's major leases, expiration dates, and currently anticipated upcoming Board action dates related to Environmental Impact Reports and/or lease actions.

POLB Leases & Status

Land Use	Grantee	Terms of Agreement	Date Expires	Anticipated Board Action
Container	PCT	20 Years	4/30/2022	Not in 5 yr period
Container	SSAT - Pier C	20 Years	4/30/2022	Complete
Container	SSAT Long Beach - Pier A	25 Years	10/21/2027	Not in 5 yr period
Container	TTI	25 Years	8/11/2027	Not in 5 yr period
Container	CUT	30 Years	6/30/2009	4 th Quarter 2007
Container	LBCT	25 Years	6/30/2011	4 th Quarter 2007
Container	Pier S	TBD	New Lease	3 rd Quarter 2007
Container	ITS	20 Years	8/31/2006	Complete
Auto	Toyota	16 Years	12/31/2006	4 th Quarter 2006
Break Bulk	Cooper/T. Smith	20 Years	12/31/2008	4 th Quarter 2008
Break Bulk	Crescent Terminals	15 Years	6/30/2015	Not in 5 yr period
Break Bulk	Fremont	40 Years	4/30/2036	Not in 5 yr period
Break Bulk	Catalyst Paper (USA) Inc.	3 Years	8/31/2008	3 rd Quarter 2008
Break Bulk	Pacific Coast Recycling	25 Years	11/13/2019	Not in 5 yr period
Break Bulk	Weyerhaeuser	36 Years	1/31/2011	1 st Quarter 20011
Dry Bulk	BP West Coast Products	40 Years	12/31/2009	4 th Quarter 2009

Land Use	Grantee	Terms of Agreement	Date Expires	Anticipated Board Action
Dry Bulk	CEMEX Pacific Coast Cement	40 Years	8/31/2021	Not in 5 yr period
Dry Bulk	Koch Carbon	40 Years	12/31/2027	Not in 5 yr period
Dry Bulk	Marsulex	20 Years	5/31/2005	4 th Quarter 2006
Dry Bulk	MMC (Mitsubishi)	33 Years	6/13/2022	Not in 5 yr period
Dry Bulk	Metropolitan Stevedore	35 Years	3/31/2016	Not in 5 yr period
Dry Bulk	Morton	15 Years	7/31/2005	1 st Quarter 2007
Dry Bulk	NGC	60 Years	11/30/2024	Not in 5 yr period
Dry Bulk	G-P Gypsum	N/A (private)	N/A (private)	N/A (private)
Dry Bulk	Oxbow (East)	20 Years	11/3/2019	Not in 5 yr period
Dry Bulk	Oxbow (Pad 14)	31 Years	6/30/2021	Not in 5 yr period
Dry Bulk	Oxbow (South)	32 Years	6/30/2021	Not in 5 yr period
Dry Bulk	Oxbow (West)	41 Years	12/31/2027	Not in 5 yr period
Other	Sea-launch	10 Years	1/14/2013	Not in 5 yr period
Liquid Bulk	BP/ARCO	40 Years	5/30/2023	3 rd Quarter 2007
Liquid Bulk	ATSC	20 Years	12/31/2014	Not in 5 yr period
Liquid Bulk	BP Terminal 3	N/A (private)	N/A (private)	N/A (private)
Liquid Bulk	World Oil	N/A (private)	N/A (private)	N/A (private)
Liquid Bulk	Baker Commodities	month-to-month 90 day notice	N/A	Not in 5 yr period
Liquid Bulk	Chemoil	36 Years	6/30/2010	4 th Quarter 2007
Liquid Bulk	Equilon (Shell)	40 Years	10/31/2006	1 st Quarter 2007
Liquid Bulk	Petro-Diamon	20 Years	9/30/2022	Not in 5 yr period
Liquid Bulk	VOPAK	N/A (private)	N/A (private)	N/A (private)

New Technology Integration

New emissions reduction technologies are constantly emerging. The Technology Advancement Program seeks to support development of these new technologies in the port environment. Technologies available today can be incorporated into terminal leases as they are renegotiated. However, most facility leases are issued for long periods (e.g., 20 to 30 years). Once a lease is issued, there may be limited opportunity for the Ports

to require tenants to adopt new technologies. However, there may be an opportunity to require or incentivize tenants to adopt these technologies through tariffs (i.e., requirements and/or fees), lease amendments, incentives, agency regulation, voluntary adoption, or other mechanisms. Ports will form a working group to identify and evaluate these and other options and report to each Port's Board.

THE CONTROL MEASURES AND INITIATIVES

Specific source category control measures were developed from both existing Port air programs and the work completed by the City of Los Angeles' No Net Increase (NNI) Task Force report and the Port of Long Beach's Green Port Policy. The table below illustrates how both Ports are considering initial implementation strategies at this time for the various measures proposed in the Clean Air Action Plan. The recognition program and voluntary measures will be implemented across all measures. These initial implementation strategies identified in the table are thought by the Ports to be ready for use to initiate the control measures. Depending on the performance of these initial strategies, they will be adjusted, removed, enhanced, or other additional strategies will be utilized in order to maximize timely emissions reductions. In addition, the Ports are looking to what extent strategies like tariff changes can be effectively utilized to expedite emissions reductions.

Details of the individual control measures and initiatives, including implementation milestones, are provided in the Final 2006 San Pedro Bay Ports Clean Air Action Plan Technical Report. However, further explanation on the measures is provided below.



SPBP Measure Number	Control Measure	Initial Implementation Strategies
SPBP-HDV1	Performance Standards for On-road Heavy-Duty Vehicles	Incentive/Lease Req/ Tariff/Impact fees/CEQA
SPBP-HDV2	Alternate Fuel Infrastructure for Heavy Duty Natural Gas Vehicles	Incentives (Ports & SCAQMD Funding)
SPBP-OGV1	OGV Vessel Speed Reduction (VSR)	Tariff /Incentives Lease Requirements/ CEQA
SPBP-OGV2	Reduction of At-Berth OGV Emissions	Lease Requirements CEQA
SPBP-OGV3	OGV Auxiliary Engine Fuel Standards	Lease Requirements Tariff (if applicable)/ CEQA
SPBP-OGV4	OGV Main Engine Fuel Standards	Lease Requirements Tariff (if applicable)/ CEQA
SPBP-OGV5	OGV Main and Auxiliary Engine Emissions Improvements	Lease Requirements Incentives/CEQA
SPBP-CHE1	Performance Standards for CHE	Lease Requirements CEQA
SPBP-HC1	Performance Standards for Harbor Craft	Incentives Lease Requirements/ CEQA
SPBP-RL1	PHL Rail Switch Engine Modernization	Second Amendment to Operating Agreement
SPBP-RL2	Existing Class 1 Railroad operations	MOU/Lease Req CEQA
SPBP-RL3	New and Redeveloped Rail Yards	MOU/Lease Req CEQA
	Construction Standards	CEQA
	Technology Advancement Program	Incentives
	Infrastructure & Operational Efficiency Incentive	Incentives
	POLA China Shipping Settlement	Settlement Agreement (Port of Los Angeles Only)

Control Measures for Heavy Duty Vehicles (Trucks)

By far the single most challenging component of the Clean Air Action Plan will be the implementation and funding associated with the mass turnover of frequent caller trucks (and ultimately all trucks) calling at both Ports in order to meet the proposed "clean truck" standards. This is not to say that implementing the rest of the standards will be easy. On-road heavy-duty diesel vehicle (truck) travel is an integral part of port operations, moving containers from the Ports into the SoCAB and beyond. The primary goals of the two measures addressing HDVs are: 1) the replacement or upgrade of all frequent and semi-frequent caller trucks, and all older (MY 1993 and older) trucks that call at both Ports by the end of 2011, and 2) developing alternative fuel infrastructure to provide additional options for cleaner trucks (request for proposal to be released no later than 1st quarter 2007).

To accelerate the emission reductions from the heavy duty truck sector, the Ports are proposing an extensive fleet modernization program currently focused on two paths: alternative fuels and cleaner diesel. To highlight the importance of this strategy in achieving near-term emission reductions, the Ports and SCAQMD are proposing to commit over \$200 million over the next five years to replace and retrofit heavy-duty trucks. The current cost projections (detailed in the San Pedro Bay Ports Clean Air Action Plan Technical Report) call for a total investment from all funding sources of more than \$1.8 billion dollars on HDV replacements or upgrades (installation of emission controls) over the five-year period covered by the Plan.

This measure focuses on making significant emissions reductions related improvements to the approximately 16,800 individual frequent and semi-frequent caller trucks that account for around 80% of all truck visits at the Ports (averaging 7.7 visits per week per truck). Several scenarios were developed (and further detailed in the Technical Report and its appendices) and the current favorite scenario (Budget Scenario 7) calls for all frequent caller trucks and semi-frequent trucks MY1992 and older to be replaced and semi-frequent caller trucks MY1993 to 2003 to be retrofitted with DPM and NO_x reduction equipment. The Ports envision tackling this measure

using several potential approaches, including: incentives with an impact fee component (targeted as close to the beneficial cargo owner as possible) to replace trucks, lease requirements to require the use of "clean trucks", and an emblem program to phase out "dirty trucks."

Control Measures for Ocean-Going Vessels

Another primary focus of the Plan is reducing the emissions from ocean-going vessels (OGV) during transit (arriving and departing the San Pedro Bay Ports) and hotelling (tied up at berth transferring cargo) at terminals. To reduce transit emissions, the Ports will utilize a combination of operational and technology strategies targeted at: 1) vessel speed reduction (VSR), 2) at-berth emissions reductions, 3) cleaner fuels in auxiliary and main engines, and 4) integrating emission reduction technologies into OGV applications. The successful VSR program will be continued with compliance targets of 95% or better and enhanced by 1st quarter 2008 to extend to 40 nautical miles from Point Fermin. The Port of Los Angeles will adopt a similar program to the Port of Long Beach's successful Green Flag Program (compliance rate 87% as of August 2006) which provides recognition for participating vessels and dockage rebates for carriers that meet defined VSR goals.

Both Ports currently have separate and distinct programs, however, they share a common ultimate goal of moving all container berths, cruise ship operations, and other frequent visitors calling in San Pedro Bay to shore-power, and to move other vessel types towards alternative hotelling emissions reduction technologies. The Clean Air Action Plan focuses on two primary approaches for reducing at-berth emissions: (1) shore-power (transferring the electrical generation needs for OGVs while at berth from onboard diesel-electric generators to the cleaner shore-side power grid, which generates power through regulated/controlled stationary sources) and (2) hotelling emissions reduction requirements through alternative technologies, for ships that do not fit the shore-power model. Finally, both Ports will also build plugs-ins such that all port dredging can be accomplished using electric dredges.

The Port of Long Beach's program is referred to as shore-side power or cold ironing, while the Port of Los Angeles' program for shore-power is called Alternative

Maritime Power (AMP™). With regard to shore-power, the Ports are in significantly different positions from an infrastructure standpoint. Generally, the Port of Los Angeles has the main electrical trunk lines in place from which to "step-down" and condition power for ships. The Port of Long Beach, on the other hand, needs to bring new electrical service lines from Interstate 405 into the Harbor District to supply the appropriate power, which will require significant infrastructure improvements and

thus delay implementation timelines compared with the Port of Los Angeles.

Over the next five years, the Port of Los Angeles will conduct a massive infrastructure improvement program to equip a number of berths at container and cruise terminals with AMP™ infrastructure. The following draft table presents the berths at the Port of Los Angeles that are currently planned to be improved and operational by the end of the fifth year of the Clean Air Action Plan.

POLA AMP™ Infrastructure by Berth Over the Next 5 Years

Note: LTT – Long Term Tenant

Site	Number of Berths	Date Operational
B90-93 (Cruise Terminal)	2 Berths (2 Vessels)	2008
B100-102 (CS)	1 Completed, 1 To Go	2005 / 2009
B121-131 (WBCT)	2 Berths	2011
B136-147 (TraPac)	2 Berths	2009
B175-181(Pasha)	1 Berth	2011
B206-209 (LTT)	1 Berth	2011
B212-218 (YTI)	1 Completed	2006
B224-236 (Evergreen)	1 Berth	2008
Pier 300 (APL)	1 Berth	2011
Pier 400 (APM)	1 Berth	2011
Pier 400 (Liquid Bulk)	1 Berth	2011
Total AMP'd Berths	15 Berths	

Over the next five years, the Port of Long Beach currently plans to have crude oil Berth T121 and nine container berths operational with shore-power. In addition, the Port will be undergoing a massive electrical infrastructure improvement program to construct an additional 6.6 kV sub-transmission line to serve the Harbor District, and complete infrastructure improvements for the remaining container terminals, electric dredge plug-ins, and additional infrastructure for electrification of certain types of yard equipment.

POLB Shore-power Infrastructure by Berth Over the Next 5 Years

Site	Number of Berths	Date Operational
Pier C (Matson)	2 Berth	2011
Piers D, E, F (Middle Harbor)	1 Berth	2011
Pier G (ITS)	3 Berths	2011
Pier S	3 Berths	2011
Pier T, berth T 121 (BP)	1 Berth	4 th Quarter 2007
Total Shore Power Power Berths	10 Berths	

In addition to the ten berths shown in the preceding table, the Port of Long Beach is committed to provide cold ironing infrastructure at all container and one crude oil terminal within the next ten years. The Port is also committed to work to incorporate cold ironing at terminals within the next five years where no lease renewal opportunity exists to mandate cold ironing. The Port will collaborate with the leaseholders and City of Long Beach to implement cold ironing at the additional berths shown in the following table.

POLB Potential Additional Shore-Power Berths Over the Next 5 Years

Site	Number of Berths	Date Operational
Pier A (SSA)	1 Berth	2011 – 2016
Piers H (Carnival)	1 Berth	2011 – 2016
Pier J (SSA)	1 Berth	2011 – 2016
Navy Mole (Sea-Launch)	2 Berths	2011 – 2016
Pier T (TTI)	1 Berth	2011 – 2016
Total Shore Power Berths	6 Berths	

Finally, both Ports are exploring the purchase of "green-power" for their respective shore-power programs.

For vessels that do not fit the shore-power model, hotelling emission reductions will be required through alternative technologies that achieve equivalent emissions reductions. These alternative technologies are in various states of development from design to operational. Some examples of these alternative technologies include: exhaust gas scrubbing technologies (capture vessel stack emissions while at berth and remove pollutants from exhaust streams either on-shore or on a barge), emerging emissions reduction technologies (such as sea water scrubbers, selective catalytic reduction, etc.), and shore-powered dockside electrical pumps for tankers which reduce onboard pumping loads (generally these pumps are driven by steam power).

Some of these technologies can potentially achieve equivalent emissions reductions of shore power, while others have the potential for significant reduction of hotelling emissions.

The third goal is to integrate cleaner fuels into OGV auxiliaries and main engines, such as marine gas oils ≤0.2% sulfur content. Initially, the Ports would work with fuel suppliers, shipping lines, and other ports to accelerate the introduction of these lower sulfur fuels abroad so that ships calling San Pedro Bay Ports would have the fuel readily available prior to arrival. As proposed, these measures would phase in the use of ≤0.2% S MGO fuels in auxiliary and main engines with initial implementation driven by lease requirements and potentially with tariffs.

The final goal of the Clean Air Action Plan with respect to OGVs is to incorporate emission reduction technologies into OGVs to get further emissions reductions from the largest port-related source category

(by mass emissions). These technologies would target all modes of operations and would be validated through the Technology Advancement Program.

Control Measures for Cargo Handling Equipment

The Clean Air Action Plan's CHE control measure sets performance standards for equipment and accelerated fleet turnover beyond the CARB's rule.

Control Measures for Harbor Craft

The Clean Air Action Plan's harbor craft control measure focuses on identifying candidate vessels for repowering under the Carl Moyer Program, utilization of shore power for assist tugs while fleeting (at their home-port location), and the accelerated engine turnover to Tier III standards, once the engines become available.

Control Measures for Railroad Locomotives

The Clean Air Action Plan includes a three prong approach to rail locomotive emissions. First, all existing PHL switch engines will be upgraded to Tier II engine standards by end of 2007, emission reduction technologies will be demonstrated, and evaluation of alternative-powered switch locomotives. Second, existing Class 1 switcher, helper, and long haul locomotives operating on Port property will be aggressively reduced through idle restrictions, use of Tier III equivalent locomotives, cleaner fuels, and retrofit controls. Finally, stringent standards for new or modified rail yards will be incorporated via the CEQA process to ensure significant reductions from locomotives, CHE, and truck operations at rail yards on Port property.