



# San Pedro Bay Ports Clean Air Action Plan

## Low-Sulfur Vessel Main Engine Fuel Incentive Program

### Terms and Conditions

On March 24, 2008 the Board of Harbor Commissioners for the Port of Los Angeles (POLA) and the Board of Harbor Commissioners for the Port of Long Beach (POLB) authorized the Low-Sulfur Vessel Main Engine Fuel Incentive Program (Program). As described in POLA Tariff No. 4, Section 20, Items 2045, 2050 and 2055 and POLB Tariff No. 4, Section 10, Items 1050 and 1055, the POLA and POLB (Ports) have made available financial incentives to encourage vessel operators to use  $\leq 0.2\%$  Marine Gas Oil (MGO) or  $\leq 0.2\%$  Marine Diesel Oil (MDO) instead of the IFO 380 typically used. The Program will pay vessel operators 100% of the estimated cost difference between using  $\leq 0.2\%$  MGO or  $\leq 0.2\%$  MDO (collectively referred to as Low Sulfur Marine Fuel) and IFO 380 within 40 nautical miles (nm) or 20 nm from Point Fermin Light, based on published fuel cost averages. In addition to the requirements of these Tariffs the following terms and conditions apply to the Program.

#### Definitions

The following definitions apply to the Program:

**VESSEL TRIP** is any one-way voyage into or out of the Port of Long Beach or Port of Los Angeles to the arc of a circle having its center at Point Fermin Light with a radius of 20 nm or 40 nm.

**PARTICIPATION ZONE** is the region from berth at the Port of Los Angeles or Port of Long Beach to the arc of a circle with radius 40nm and centered at Point Fermin Light. The latitude and longitude for the intersections of each of the three vessel traffic lanes (North, South, and West) with the seaward edge of the Participation Zone are given in the following table. The latitude and longitude for intersections with the arc of a circle with radius 20 nm and centered at Point Fermin Light are also shown.

**PRECAUTIONARY ZONE** is the region shown as “Precautionary Zone” on harbor area navigation charts.

**LOW SULFUR MARINE FUEL** means either of the following grades of fuel, as defined in Table 1 of International Standard ISO 8217, as revised in 2005, with a sulfur content of no more than 0.2 percent by weight:

- (1) Marine Gas Oil (MGO), that meets all the specifications for DMX or DMA grades; or
- (2) Marine Diesel Oil (MDO), that meets all the specifications for DMB grades.

Other key definitions are contained in the referenced Tariffs. A representation of the traffic lanes, Participation Zone, 20 nm Arc, and Precautionary Zone is show in Figure 1.

	Participation Zone (40 nm Arc)	20 nm Arc
Northern Traffic Lane - Inbound	33°54'57" N 119°3'18" W	33°44'54" N 118°41'24" W
Northern Traffic Lane - Outbound	33°57'48" N 119°1'59" W	33°47'56" N 118°40'39" W
Southern Traffic Lane - Inbound	33°6'6" N 117°57'4" W	33°25'9" N 118°5'18" W
Southern Traffic Lane - Outbound	33°5'18" N 117°59'13" W	33°23'43" N 118°8'29" W
Western Traffic Lane- Inbound/Outbound	33°22'40" N 118°59'17" W	33°32'50" N 118°38'42" W



**Figure 1:** Map showing the three traffic lanes (Northern, Southern, and Western), the Participation Zone/40 nm Arc, the 20 nm Arc, and the Precautionary Zone.

**Enrollments**

The Program is open to all vessel operators who call at the Port of Long Beach and/or the Port of Los Angeles. To be eligible for the Program, participants must enroll in the Program by submitting the following information to the Ports:

1. Signed Terms and Conditions
2. Operator Enrollment Form
3. Vessel Enrollment Form, with information on each vessel to be enrolled

#### 4. Tax ID Forms

- W-9 (US entities)
- W-8BEN (Non-US entities)
- Business Tax Registration Certificate (POLA vessel operators only)
- any necessary licenses and permits required under Title 3 and Title 5 of the Long Beach Municipal Code (POLB vessel operators only)

The company representative that signs these Terms and Conditions must have the authority to authorize the Operator's participation in the Program and agreement to these Terms and Conditions. The Operator designated will be the entity to which the incentive payment will be sent, at the mailing address provided on the Operator Enrollment Form. Information on the Operator Enrollment Form must be consistent with the Tax ID forms.

Enrollments will be accepted at any time while the Program is in effect. For a vessel trip to be eligible for reimbursement, all forms must be submitted to the Ports and deemed complete, prior to the vessel trip. All forms should be submitted to the Ports electronically, at [shipfuel@cleanairactionplan.org](mailto:shipfuel@cleanairactionplan.org). Vessel Operators will be notified when they have been enrolled in the Program.

#### **Conditions of Eligibility**

Operators may choose to participate at either the 40 nm or 20 nm level for each individual vessel trip. To qualify for reimbursement the operator must:

- Use Low Sulfur Marine Fuel in their main engine within 40 nm or 20 nm from Point Fermin Light
- Be compliant with the Ports' vessel speed reduction (VSR) program speed limit of 12 knots over the same distance for which they wish to receive a fuel incentive (i.e. within 40 nm or 20 nm of Point Fermin Light).
- Use Low Sulfur Marine Fuel fuel in their auxiliary engines while at berth
- Maintain fuel use records, which include the date, time and location of the use of Low Sulfur Marine Fuel fuel in main and auxiliary engines

#### **Calculation of Cost Differential Between IFO 380 and Low Sulfur Marine Fuel**

Each quarter, the Ports will calculate the cost differential between the IFO 380 and  $\leq 0.2\%$  MGO. Costs for each fuel type will be determined as the average of the price listed on Bunkerworld for Los Angeles over the calendar quarter. The cost differential will be the arithmetic difference between the quarterly average posted price for IFO 380 and  $\leq 0.2\%$  MGO. The cost for  $\leq 0.2\%$  MGO will be used to represent both  $\leq 0.2\%$  MGO and  $\leq 0.2\%$  MDO. The quarterly cost differential observed during the period of participation will be applied when calculating the incentive amount (i.e. the fuel cost applied to participation in the Program during July, August or September 2008, will be based on the third quarter 2008 average cost differential). This cost differential information will be made available to all enrollees and the general public via the Ports' Clean Air Action Plan website ([www.cleanairactionplan.org](http://www.cleanairactionplan.org)).

#### **Fuel Reimbursement Calculation**

The Ports will calculate a reimbursement amount for each eligible vessel trip based on the product of the cost differential, as determined above, and the estimated volume of fuel consumed during that vessel trip within the Participation Zone, from either 40 nm or 20nm, based upon the level of participation. Fuel consumption calculations will be based on vessel movement data as

recorded by the Marine Exchange of Southern California and vessel engine data as listed on Lloyd's Register. The Marine Exchange movement data and Lloyd's engine data will be used to calculate the energy usage for each trip. This energy usage will then be converted into a volume of fuel consumed. Upon enrollment each operator will be given an estimated consumption rate and reimbursement estimate (based on the current cost differential) for clean fuel use for 20 nm or 40 nm for each enrolled vessel. Additional details on the fuel consumption calculation are available upon request.

### **Determination of Vessel Speed Reduction Compliance**

To be eligible for reimbursement a vessel trip must be compliant with the Ports' Vessel Speed Reduction (VSR) Program speed limit of 12 knots over the same distance for which they wish to receive a fuel incentive. To be compliant with the VSR speed limit, the vessel's weighted average speed must be 12 knots or less from the 20 nm or 40 nm latitude and longitude positions shown in the Definitions section to the seaward edge of the Precautionary Zone. Vessel speed will be determined by the Marine Exchange at 10, 15, 20, 25, 30, 35, and 40 nm from Point Fermin Light. A weighted average based on measured speed and distance traveled within each five-nautical mile segment will be used to determine the average trip speed.

For participation in this fuel incentive program at the 20 nm level, Weighted Average Speed shall be determined as described in the Vessel Speed Reduction Programs (POLB Tariff No. 4, Section 2, Item 262 and POLA Tariff No. 4, Section 20, Item 2045)

For participation at the 40 nm level, the same methodology will be used to determine the Weighted Average Speed, except that speeds at 25, 30, 35 and 40 nm will also be used. The detailed formula is contained in Attachment A.

### **Record keeping**

Participants are required to maintain records of the date, time and location of all fuel use subject to the Program. Fuel records similar to those required by the California Air Resources Board (CARB) for its previously implemented but currently retracted Auxiliary Engine Rule (13 CCR §2299.1, and 17 CCR §93118) are adequate for this purpose. To be eligible for reimbursement, enrollees must maintain records in English for all reimbursable trips that contain the following information for at least three years following the date of the original record:

1. The date, local time, and position (longitude and latitude) of the vessel for each entry into and departure from the Participation Zone;
2. The date, local time, and position (longitude and latitude) of the vessel at the initiation and completion of any fuel switching activities prior to entry into the Participation Zone; completion of fuel switching activities occurs the moment all engines subject to the Program have completely transitioned from operation on one fuel to another fuel;
3. The date, local time, and position (longitude and latitude) of the vessel at the initiation and completion of any fuel switching activities within the Participation Zone; completion of fuel switching activities occurs the moment all engines subject to the Program have completely transitioned from operation on one fuel to another fuel;
4. The type of each fuel used (e.g. MGO or MDO) in each main and auxiliary engine operated in the Participation Zone; and
5. The types, amounts, and the actual percent by weight sulfur content of all fuels purchased for use on the vessel, as reported by the fuel supplier or a fuel testing firm.

Fuel use records for reimbursable trips must be made available to the Ports or their contractors within five (5) business days upon request.

**Reimbursement Process**

Each quarter, the Ports will provide to the enrollee’s designated contact a list of the vessel trips for all enrolled vessels that called during the quarter and an indication of whether or not they were VSR compliant to 20 nm or 40 nm. Enrollees shall return the list to the Ports indicating during which trips the vessels participated in the fuel switch program including:

- Using Low Sulfur Marine Fuel in the auxiliary engines while at berth
- Level of participation (i.e. using Low Sulfur Marine Fuel in the main engines within 20 nm or 40 nm from Point Fermin Light).

Based on the indicated participation, the Ports will calculate the incentive for all compliant vessels. The calculated incentive will be sent to the enrollee’s designated contact with instructions to submit an invoice to the Ports for the calculated incentive amount. The Ports will then issue payment based on the submitted invoice.

**Program Resources**

The Ports have created a web page to provide information and resources pertaining to the Program. The web page can be found at <http://www.cleanairactionplan.org/>. Included on the site are:

- Current fuel rates for reimbursement
- Enrollment Forms
- Information on fuel switching from leading engine manufacturers and industry groups

For additional information, please contact the Program Administrator at [shipfuel@cleanairactionplan.org](mailto:shipfuel@cleanairactionplan.org).

**Certification and Disclaimer**

I certify that the information in the Operator Enrollment Form, the Vessel Enrollment Form, and any other information submitted to the Ports is true and correct. By submission of this application, I acknowledge that my firm is solely responsible for the operation of all vessels participating in this program. I further acknowledge that this program will be governed by the terms of the Tariff for the Vessel Main Engine Incentive Program (Long Beach Board of Harbor Commissioners Ordinance No. HD-2020 adopted March 31, 2008; Los Angeles Board of Harbor Commissioners Order No. 5837, Los Angeles City Council Ordinance No. 180007, Tariff 4, as amended July 2, 2008 and program guidance or rules adopted there under. It is acknowledged that the only obligation of the Port of Long Beach or the Port of Los Angeles under this program is to make vessel main engine incentive payments after verification of compliance in accordance with the terms of the incentive tariff and rules.

Name of Operator: \_\_\_\_\_

By: \_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

Attachment A

The Weighted Average Speed for participation at the 40 nm level shall be determined by the following formula:

$$\frac{\text{Segment a Average} + \text{Segment b Average} + \dots + \text{Segment g Average}}{\text{Distance a} + \text{Distance b} + \dots + \text{Distance g}}$$

Where:

Segment a Average = [Distance a] x the lesser of:

$$\text{Speed at 10nm or } \frac{[\text{Speed at 10nm} + 12 \text{ knots}]}{2}$$

$$\text{Segment b Average} = [\text{Distance b}] \times \frac{[\text{Speed at 15nm} + \text{Speed at 10nm}]}{2}$$

$$\text{Segment c Average} = [\text{Distance c}] \times \frac{[\text{Speed at 20nm} + \text{Speed at 15nm}]}{2}$$

$$\text{Segment d Average} = [\text{Distance d}] \times \frac{[\text{Speed at 25nm} + \text{Speed at 20nm}]}{2}$$

$$\text{Segment e Average} = [\text{Distance e}] \times \frac{[\text{Speed at 30nm} + \text{Speed at 25nm}]}{2}$$

$$\text{Segment f Average} = [\text{Distance f}] \times \frac{[\text{Speed at 35nm} + \text{Speed at 30nm}]}{2}$$

$$\text{Segment g Average} = [\text{Distance g}] \times \frac{[\text{Speed at 40nm} + \text{Speed at 35nm}]}{2}$$

All speeds are measured by the Marine Exchange at the points indicated above (10nm, 15nm, 20nm, 25nm, 30nm, 35nm, and 40nm from Point Fermin Light).

Distances a, b, c, d, e, f, and g (in nautical miles) are as follows:

	Distance a	Distance b	Distance c	Distance d	Distance e	Distance f	Distance g
Description	PZ – 10	10-15	15-20	20-25	25-30	30-35	35-40
Northern Traffic Lanes							
Inbound	9.75	15.75	21.75	27.07	32.24	37.37	42.40
Outbound	11.00	16.00	21.50	26.63	31.69	36.75	41.76
Southern Traffic Lanes							
Inbound	0.75	5.50	11.00	16.09	21.15	26.19	31.19
Outbound	2.25	7.25	11.50	16.52	21.53	26.53	31.51
Western Traffic Lanes							
Inbound	7.00	12.00	16.50	21.52	26.53	31.57	36.49
Outbound	8.00	12.50	17.00	22.02	27.03	32.07	36.99