

PANYNJ – Ocean-Going Vessel Low-Sulfur Fuel Program Terms and Conditions

On September 24, 2009, the Board of Commissioners of the Port Authority of New York and New Jersey (PANYNJ) authorized the Ocean-Going Vessel Low-Sulfur Fuel Program (the “Program”), which is an action element of the Clean Air Strategy for the Port of New York and New Jersey (the “Port”), adopted by PANYNJ in November 2008. Through the Program, the PANYNJ has made available financial incentives to encourage operators of ocean-going vessels (OGVs) calling at qualifying PANYNJ Marine Terminal Facilities to utilize low-sulfur fuel ($\leq 0.2\%$ Marine Gas Oil (MGO) or $\leq 0.2\%$ Marine Diesel Oil (MDO), as defined herein, and collectively referred to as “Low Sulfur Marine Fuel”) in their main (propulsion) and auxiliary engines instead of the Intermediate Fuel Oil (IFO) 380 typically used. The Program will reimburse vessel operators fifty percent (50%) of the cost differential between using Low Sulfur Marine Fuel and IFO 380 in the main and auxiliary engines while transiting within 20 nautical miles of the PANYNJ, in the auxiliary engines while at a qualifying PANYNJ Marine Terminal Facility berth, and while at anchorage on the way to/from a qualifying PANYNJ Marine Terminal Facility. The cost differential that will be reimbursed will be based upon the published fuel cost quarterly averages between the two fuels (Low Sulfur Marine Fuel and IFO 380) as listed on Bunkerworld for New York. Reimbursements will be on a first come/first serve basis with annual funding caps for 2010, 2011, and 2012. The following terms and conditions apply to the Program.

1. Definitions: The following definitions apply to the Program:

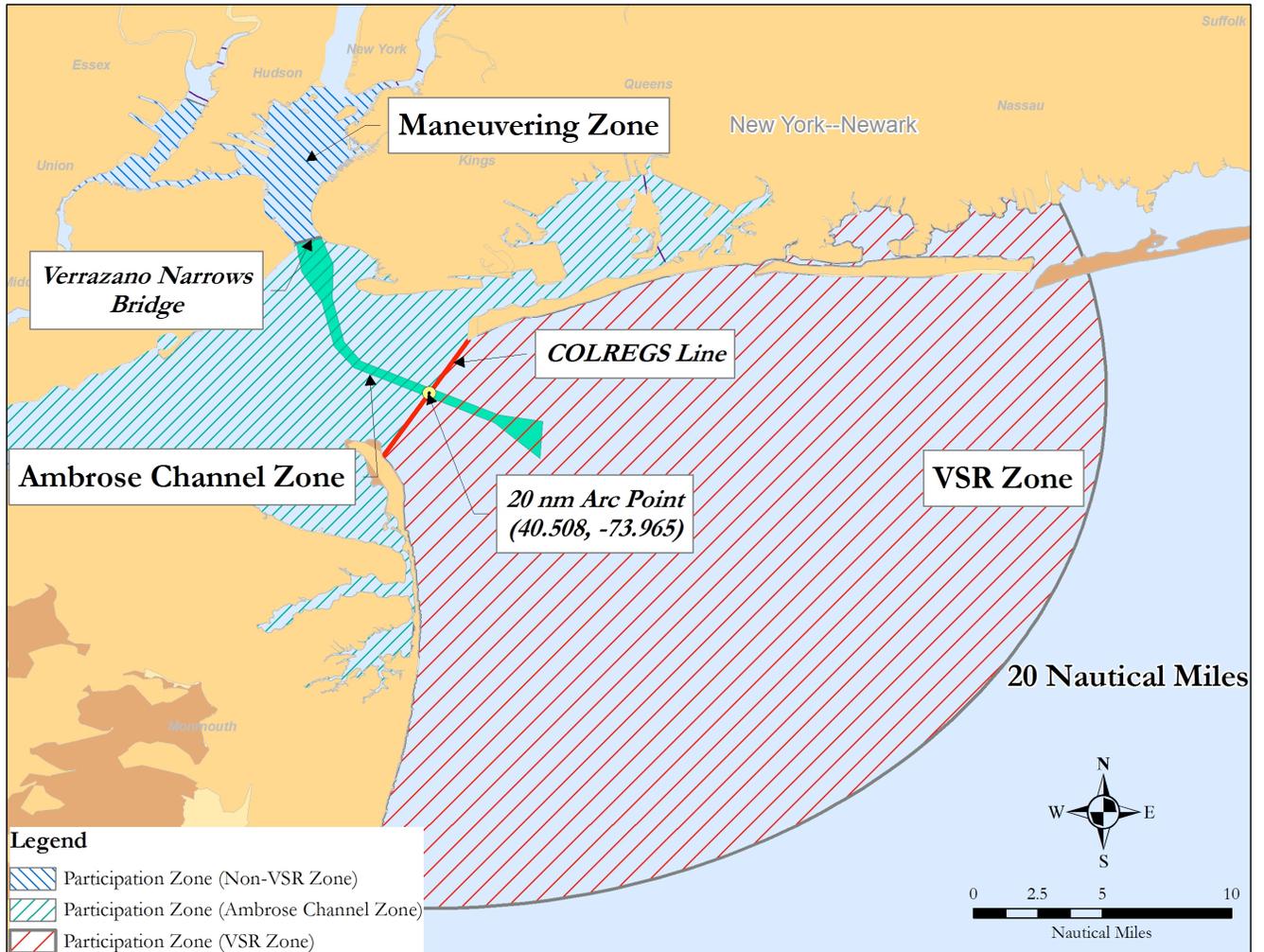
“Enrolled Operator” is a vessel operating company that owns, charters and operates ocean-going vessels for the transportation of marine cargo that has submitted a completed Operator Enrollment Package, and has been approved by PANYNJ to participate in this Program.

“Enrolled OGV” is a self propelled ocean-going vessel that is owned or under charter to an Enrolled Operator for the purpose of transporting on board marine cargo and that has been entered into the Program by an Enrolled Operator pursuant to Section 2 of these Terms and Conditions.

“Qualifying Vessel Arrival/Departure” is either an arrival or departure to or from a Qualifying PANYNJ Marine Terminal Facility by an Enrolled OGV which meets the Conditions of Eligibility for reimbursement as set forth in Section 3.

“Participation Zone” is the area measured from a Qualifying PANYNJ Marine Terminal Facility berth, and out to an arc of 20 nautical miles (nm) from the intersection of the Ambrose Channel Centerline and the COLREGS Demarcation line (as defined as Lat: 40.508N/Long: -73.965W) for the NY/NJ Harbor. The area/region of the Participation Zone is depicted in Figure 1 below.

Figure 1:



“Low Sulfur Marine Fuel” means either of the following grades of fuel, as defined in Table 1 of International Standard ISO 8217, (and as revised in 2005), with a sulfur content of no more than 0.2 percent by weight:

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

“Qualifying PANYNJ Marine Terminal Facility” means one of the following facilities:

- Howland Hook Marine Terminal
- Port Newark/Elizabeth Port Authority Marine Terminal
- Port Jersey Marine Terminal (also known as the Port Authority Auto Marine Terminal)
- Brooklyn-Port Authority Terminal, which includes
 - ✓ Brooklyn Cruise Terminal
 - ✓ Red Hook Container Terminal
- Global Marine Terminal

“Reimbursable Activity” means any one of the activities as described below:

- An Enrolled OGV uses low sulfur marine fuel in its main/propulsion engine and auxiliary engines while transiting in-bound through the Participation Zone to a Qualifying PANYNJ Marine Terminal Facility and complies with the Vessel Speed Reduction Requirement.
- An Enrolled OGV uses low sulfur marine fuel in its main/propulsion engine and auxiliary engines while transiting out-bound from a Qualifying PANYNJ Marine Terminal Facility through the Participation Zone and complies with the Vessel Speed Reduction Requirement.
- An Enrolled OGV uses low sulfur marine fuel in its auxiliary engines while berthed at a Qualifying PANYNJ Marine Terminal Facility.

“Vessel Speed Reduction Requirement” or “VSR” shall have the meaning set forth in Section 6 of these Terms and Conditions.

2. **Enrollment Requirements.** The Program is open to all vessel-operating companies whose OGVs call at Qualifying PANYNJ Marine Terminal Facilities. Each vessel operating company must enroll itself and each of its OGVs that it anticipates will participate in the Program, in accordance with these Terms and Conditions, prior to undertaking reimbursable activities. Visit the Program website at <http://cleanfuelincentive.org>. To enroll in the Program, the vessel operating company must do the following:

- a) Submit the following documents or information provided in the Enrollment Package to the PANYNJ at the address in Section 2.d):
 - Signed Terms and Conditions
 - Operating Company Enrollment Form
 - OGV Enrollment Form, with information on each OGV to be enrolled (all vessels can be listed on one form. Also, the vessel operating company can enroll additional vessels at any time during the Program)
 - Requested Tax ID Forms
 - W-9 (US entities) or
 - W-8BEN (Non-US entities)
- b) Duration of the program extends until December 31, 2012. Enrollments will be accepted at any time while the Program is in effect from July 1, 2010 thru December 31, 2012.
- c) Once the completed enrollment package has been submitted, reviewed and approved by the PANYNJ, the PANYNJ will issue a vendor identification number to the Enrolled Operator. The Enrolled Operator will be notified when it is enrolled in the program.
- d) All enrollment forms and documents must be sent to PANYNJ at the following address:

Port Authority of New York & New Jersey
Ocean-Going Vessel Low Sulfur Fuel Program
Port Commerce Department
225 Park Avenue South- 11th Floor
New York, New York 10003
Attn: Ms. Sharon Heller
Email: lawsulfurincentive@panynj.gov

3. Conditions of Eligibility for Reimbursement. The following conditions must be met in order to be eligible to receive reimbursement for the use of Low Sulfur Marine Fuel:

- a) The vessel operating company must be an Enrolled Operator pursuant to Section 2, above;
- b) The ocean going vessel for which reimbursement is sought must be an Enrolled OGV, pursuant to Section 2, above;
- c) The Reimbursable Activity must have taken place after enrollment of the OGV;
- d) The reimbursement shall occur only for the use of Low Sulfur Marine Fuel during a Reimbursable Activity, as defined herein. If, during a call, an Enrolled OGV shifts to a facility other than a Qualifying PANYNJ Marine Terminal Facility, then use of Low Sulfur Marine Fuel will not be reimbursed while the Enrolled OGV is at that facility.

e) The Enrolled OGV must maintain fuel use records and average auxiliary engine load while at berth, which include the date, time and location of the use of Low Sulfur Marine Fuel in main and auxiliary engines, in accordance with Section 7, “Recordkeeping”.

4. Calculation of Cost Differential Between IFO 380 and Low Sulfur Marine Fuel

At the end of each quarterly period, the PANYNJ will calculate the cost differential between the IFO 380 and <0.2% MGO for that quarter. This cost differential will be used in calculating the incentive amount for Reimbursable Activity undertaken during that quarter. Costs for each fuel type will be determined as the average of the price listed on Bunkerworld for New York over the calendar quarter. The cost differential will be the arithmetic difference between the quarterly average posted price for IFO 380 and <0.2% MGO. The cost for ≤0.2% MGO will be used to represent both ≤0.2% MGO and ≤0.2% MDO. This cost differential information will be made available to all enrollees and the general public via the PANYNJ’s program website – <http://cleanfuelincentive.org>.

5. Fuel Reimbursement Calculation

The PANYNJ will calculate a reimbursement amount for the Reimbursable Activity based on the product of the cost differential, as determined above, and the estimated volume of fuel consumed in the main/propulsion and auxiliary engine(s) during transits, and auxiliary engine(s) at berth, during that vessel’s call within the Participation Zone. Energy and fuel consumption calculations will be based on Enrolled OGV movement data as recorded by the United States Coast Guard (USCG) Automated Identification System (AIS) data, and vessel main engine rating and auxiliary engine load at various segments, as reported in the Vessel Enrollment Form. Calculated energy consumption will then be converted into an estimated volume of fuel consumed using an appropriate average Brake Specific Fuel Consumption (BSFC) factor. Upon enrollment each Enrolled Operator will be given an example of estimated consumption rates and reimbursement estimates, based on the current cost differential for clean fuel use in the Participation Zone and at berth for each Enrolled OGV. Enrolled Operators are encouraged to review these estimates against actual ship data if available and if there are issues or questions, then inquires should be directed to Ms. Sharon Heller, Project Manager, PANYNJ at low sulfurincentive@panynj.gov. Additional details on the fuel consumption calculation will be made available upon request.

6. Determination of Vessel Speed Reduction Compliance

To be eligible for reimbursement a Enrolled OGV call must be compliant with the Program’s Vessel Speed Reduction Requirement of an average weighted speed of 10.9 knots or less from the boundary of the seaward edge of the Participation Zone to the Verrazano Bridge for arrival and/or departure, as shown in the Definitions section of these Terms and Conditions. Vessel speeds will be determined by the AIS speed data at five nautical mile intervals starting at the intersection of the Ambrose Channel centerline and the COLREGS Demarcation line and moving eastward and, in the other direction, by two intervals equidistant to the Verrazano Bridge. A weighted average based on measured speed and distance traveled within each interval will be used to determine the average speed of the arrival and/or departure for each call. To be considered a Reimbursable Activity, the enrolled OGV must comply with the VSR requirement on arrivals and/or departures. The weighted average speed shall be determined using the method provided in Attachment A.

7. Recordkeeping

To be eligible for reimbursement, enrolled OGVs must agree to maintain records in English for all Reimbursable Activity that contain the following information, for at least three years following the date of the original record:

- a) The date, local time, and position (longitude and latitude) of the Enrolled OGV for each entry into and departure from the Participation Zone;
- b) The date, local time, and position (longitude and latitude) of the Enrolled OGV 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;
- c) The date, local time, and position (longitude and latitude) of the Enrolled OGV 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;
- d) The type of each fuel used (e.g. MGO or MDO) in each main (propulsion) and auxiliary engine(s) operated in the Participation Zone;
- e) The types, amounts, and the actual percent by weight sulfur content of all fuels purchased for use on the Enrolled OGV , as reported by the fuel supplier or a fuel testing firm;
- f) The date, local time, terminal & berth number when the Enrolled OGV arrives at and departs from a Qualifying PANYNJ Marine Terminal Facility; and
- g) The load of the auxiliary engines (in kilowatts (kW)) once the Enrolled OGV has been secured to the dock at a Qualifying PANYNJ Marine Terminal Facility, and the load on 6-hour increments until the Enrolled OGV has been released from the dock.

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

8. Reimbursement Process

Within ten (10) days after the end of each quarter, the PANYNJ will provide to the Enrolled Operator a list of the vessel trips for all Enrolled OGVs for that Enrolled Operator that called during the quarter and an indication of whether or not they were VSR compliant on arrivals and/or departures. The Enrolled Operator shall return the list to the PANYNJ indicating during which trips the Enrolled OGVs participated in the fuel switch program including:

- Used Low Sulfur Marine Fuel in main (propulsion) engine(s). If more than one, specify number for the arrival and/or departure

- Used Low Sulfur Marine Fuel in the auxiliary engines while at a Qualifying PANYNJ Marine Terminal Facility berth

Based on the indicated participation, the PANYNJ will calculate the incentive for all compliant Enrolled OGVs. The calculated incentive will be sent to the Enrolled Operator's designated contact with instructions to submit an invoice to the PANYNJ for the calculated incentive amount. The PANYNJ will then issue payment based on the submitted invoice.

Reimbursements will be on a first come/first serve basis with funding caps of \$5.8 million through 2012 and if the funding cap has been reached, the Port Authority shall not have any obligation to the Enrolled Operator.

9. Program Resources

The PANYNJ has created a web page to provide information and resources pertaining to the Program. The web page can be found at <http://cleanfuelincentive.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 Ms. Sharon Heller, Program Manager, sheller@panynj.gov

10. No Commissioner Liability.

Neither the Commissioners of the Port Authority, nor any of them, nor any officer, agent or employee thereof, shall be charged personally by an Enrolled Operator with any liability, or held liable to the Enrolled Operator under any term or provision of these Terms and Conditions.

Attachment A

The Weighted Average Speed for participation at the 20 nm level shall be determined by the following formula:

$$\frac{\text{Segment A Average} + \text{Segment B Average} + \dots + \text{Segment E Average}}{\text{Distance A} + \text{Distance B} + \dots + \text{Distance E}}$$

Where:

Segment A Average = Average Speed over distance traveled between Verrazano Narrows Bridge and Berth from AIS feed

Segment B Average = Average Speed over distance traveled between COLEREGS Line and Verrazano Narrows Bridge from AIS feed

$$\text{Segment C Average} = [\text{Distance C}] \times$$

$$\frac{[\text{Speed at COLEREGS Line \& Ambrose Channel} + \text{Speed at 5 nm}]}{2}$$

$$\text{Segment D Average} = [\text{Distance D}] \times \frac{[\text{Speed at 5 nm} + \text{Speed at 10 nm}]}{2}$$

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

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

All speeds (in knots) are measured by United States Coast Guard Automated Identification System (AIS) at the points indicated above (Verrazano Narrows Bridge, Intersection of COLEREGS Line and Ambrose Channel [40.508, -73.965], and then arcs at 5 nautical mile intervals from the intersection: 5 nm, 10 nm, 15 nm, 20 nm). The distances (in nautical miles) for each segment are defined as:

Distance A	Distance E
Measured from AIS	Inbound: 5 nm
Distance B	Outbound: 5 nm
Measured from AIS	Distance F
Distance C	Inbound: 5 nm
Inbound: 5 nm	Outbound: 5 nm
Outbound: 5 nm	
Distance D	
Outbound: 5 nm	
Inbound: 5 nm	