



PORT METRO
vancouver

Vessel Emissions





PROGRAMS AND STANDARDS

Port Metro Vancouver is committed to reducing port-related air emissions that contribute to air quality and climate change, including those from ocean going vessels (OGVs).

The Port takes a multi-pronged approach to reducing OGV emissions:

- Prohibition of excessive exhaust opacity of any colour with the exception of steam (water vapour)
- Recognition for vessels that implement eligible emission reduction measures through:
 - reduced harbour due rates
 - public relations and communications

Vessel Opacity Program

Port Metro Vancouver responds to excessive exhaust opacity from OGVs by contacting and/or boarding the vessel to inform the operators of the problem and to discuss resolutions.

Harbour Dues Air Emission Standards

1. Harbour dues cover costs related to general security, harbour safety and cleanliness, as well as maintenance of common user infrastructure.
2. Additional information on Port Metro Vancouver harbour dues air emission standards (gold, silver, bronze) can be found in the Fee Document at: portmetrovancover.com/users/fees.aspx
3. Air emission standard applications (“Applications”) must be submitted online through: www.pacificgatewayportal.com
4. Port Metro Vancouver harbour due rates, effective January 1, 2010 per gross registered tonne or GRT in Canadian funds are as follows:
 - a. Gold \$0.050/GRT
 - b. Silver \$0.061/GRT
 - c. Bronze \$0.072/GRT
 - d. Basic \$0.094/GRT

5. Harbour dues are payable no more than five times for the same vessel in any calendar year.
6. Harbour dues air emission standards are not intended to cover all of the costs associated with implementing eligible emission reduction measures.
7. An Application must be submitted for every vessel call eligible to pay harbour dues, for which an air emission standard is being sought.
8. A vessel is eligible to qualify for an air emission standard if it meets any one of the criteria for that standard.
9. Applications will be verified at the discretion of Port Metro Vancouver, using supporting documentation that may be required to be submitted with the online application, and/or presented on-board. The Port may access additional information to verify an Application.
10. Applications, including any amendments or cancellations submitted less than four days prior to a vessel's date of arrival are considered outside of the requirement under Schedule B, Section SB10 (a) of the Fee Document. Port Metro Vancouver will use its best efforts to process the Application but may, at its sole discretion, charge the vessel the basic harbour due rate.
11. No Applications, including any amendments or cancellations will be allowed through the Pacific Gateway Portal's Harbour Dues Air Emission Standard Application after midnight on the vessel's date of arrival.
12. Information on appeals related to vessel Applications is available through: www.pacificgatewayportal.com



Gold Air Emission Standard Eligible Options

1. Shore power

- a. Ship-side infrastructure in place to connect to electricity grid and shut engines down, applies at dock

2. Fuel quality

- a. Use of distillate fuel with $\leq 0.5\%$ sulphur content which applies at anchor and at dock, and with auxiliary engines

3. Ship classification society environment designation

- a. Lloyd's Register (LR)
 - i. EP – S, N
 - ii. EP – S, V (tankers)
 - iii. EP – N, V (tankers)
- b. Nippon Kaiji Kyokai (Class NK)
 - i. EA + SO_x +NO_x
 - ii. EA + SO_x +VOC (tankers)
 - iii. EA + NO_x + VOC (tankers)
- c. Det Norske Veritas (DNV)
 - i. Clean (tankers)
 - ii. Clean Design
- d. Bureau Veritas (BV)
 - i. Cleanship + VCS + Certificate of Compliance with NO_x requirements of Cleanship Super (tankers)

4. Emission reduction technology which applies at anchor and at dock, and with auxiliary engines

- a. Direct water injection
- b. Combustion air humidification
- c. Seawater scrubbing
- d. Fuel/water emulsion
- e. Selective catalytic reduction
- f. Exhaust gas recirculation

5. Alternative fuels which applies at anchor and at dock, and with auxiliary engines

- a. Natural gas
- b. Biodiesel (B21 – B100)

6. Fuel additives which applies at anchor and at dock, and with auxiliary engines

- a. Fuel-borne catalysts

Silver Air Emission Standard Eligible Options

1. Fuel quality

- a. Use of fuel with $\leq 1.0\%$ sulphur content which applies at anchor and at dock, and with auxiliary engines

2. Ship classification society environment designation

- a. Lloyd's Register (LR)
 - i. EP – S
 - ii. EP – N
 - iii. EP – V (tankers)
- b. Nippon Kaiji Kyokai (Class NK)
 - i. EA + SO_x
 - ii. EA + NO_x
 - iii. EA + VOC (tankers)
- c. Det Norske Veritas (DNV)
 - i. Clean
- d. American Bureau of Shipping (ABS)
 - i. ES
- e. Bureau Veritas (BV)
 - i. Cleanship Super
 - ii. Cleanship + VCS (tankers)
 - iii. Cleanship + Certificate of Compliance with NO_x requirements of Cleanship Super
 - iv. Cleanship + Certificate of Compliance with NO_x and SO_x requirements of Cleanship Super
 - v. Cleanship + VCS + Certificate of Compliance with SO_x requirements of Cleanship Super (tankers)
- f. Registro Italiano Navale (RINA)
 - i. Green Star (tankers)
 - ii. Green Star Design (tankers)

3. Alternative fuels which apply at anchor and at dock, and with auxiliary engines

- a. Biodiesel (B6 – B20)



Bronze Air Emission Standard Eligible Options

1. Fuel quality

- a. Use of fuel with $\leq 2.0\%$ sulphur content which applies at anchor and at dock, and with auxiliary engines

2. Ship classification society environment designation

- a. Lloyd's Register (LR)
 - i. EP
- b. Nippon Kaiji Kyokai (Class NK)
 - i. EA
- c. Bureau Veritas (BV)
 - i. Cleanship
 - ii. Cleanship + Certificate of Compliance with SOx requirements of Cleanship Super
- d. Registro Italiano Navale (RINA)
 - i. Green Star
 - ii. Green Star Design

3. Other environmental designation

- a. Bureau Green Award
 - i. Green Award Certificate

4. Vapour reduction

- a. Vapour control or recovery system
 - i. Certificate or Statement of Vapour Control or Recovery System (tankers)

5. Alternative fuels which applies at anchor and at dock, and with auxiliary engines

- a. Biodiesel (B1 – B5)

For details on required supporting documentation and explanation of acronyms, please refer to the Fee Document at: portmetrovanancouver.com/users/fees.aspx





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