

OBJECTS AND REASONS

This Bill would provide for

- (a) the implementation of the 1997 Protocol to the International Convention for the Prevention of Pollution from Ships (MARPOL) 1973, as modified by the Protocol of 1978 relating thereto and by the Protocol of 1997;
- (b) the implementation of Article 212 of the United Nations Convention on the Law of the Sea, 1982;
- (c) the implementation of the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by the International Maritime Organization;
- (d) the control of emissions from ships that exceed 150 gross tons;
- (e) the promotion of energy efficiency in shipping; and
- (f) related matters.

Arrangement of Sections

PART I

PRELIMINARY

1. Short title
2. Interpretation
3. Ambulatory reference
4. Act to bind State
5. Objects of Act
6. Application of Act
7. Act not to apply to certain fuel oil and emissions
8. Exempted emissions

PART II

ADMINISTRATION

9. Administration of Act
10. Duty of Administration in relation to shipping and climate change

PART III

PREVENTION OF AIR POLLUTION FROM SHIPPING ACTIVITIES

11. Equivalents: vessels 400 gross tons and above and platforms
12. Equivalents: ships less than 400 gross tons
13. Annex VI approved equivalents
14. Issue of Annex VI approved equivalent certificates
15. General obligation to prevent pollution from or through the atmosphere
16. Ozone-depleting substances
17. Ozone-depleting substances record book
18. False or misleading entries in ozone-depleting substances record book
19. Prohibition on the carriage of non-compliant fuel for combustion purposes for propulsion or operation on board a vessel or platform
20. Using fuel oil or carrying fuel oil for use: offences
21. Using fuel oil or carrying fuel oil for use: exceptions
22. Barbados vessel in emission control area: offences
23. Barbados vessel in emissions control area
24. Flushing fuel oil service system
25. Record of prescribed fuel

- 26. Flag state inspections: air pollution from ships
- 27. Port state inspections: air pollution from ships
- 28. Requirement for issue of IAPP certificates
- 29. Requirement for issue of NAPP Certificates
- 30. Port State Control, violations and enforcement

PART IV

ENERGY EFFICIENCY FOR SHIPS

- 31. Energy efficiency measures for vessels
- 32. Attained EEDI
- 33. Required EEDI
- 34. Ship energy efficiency management plan
- 35. EEXI Compliance
- 36. Attained EEXI
- 37. Required EEXI
- 38. Requirement for ships 400 gross tons and above
- 39. Fuel consumption data and reporting
- 40. Collection and reporting of vessel fuel oil consumption data
- 41. Surveys and certification: IEE certificate

- 42. Surveys and certification: NEE certificate

PART V

NOMINATION OF SURVEYORS AND CERTIFYING OF CERTIFICATES

- 43. Nomination of surveyors: air pollution prevention compliance verification
- 44. Certifying of certificates

PART VI

EMISSIONS REDUCTION MEASURES FOR VESSELS

- 45. Emissions reduction measures for vessels
- 46. Nitrogen oxides emissions
- 47. Volatile organic compounds
- 48. Shipboard incineration
- 49. Carbon intensity requirements
- 50. Consistent implementation of sulphur limit
- 51. Flag state ship-specific approval
- 52. Just-in-time and virtual arrival
- 53. Submission of EIAPP, IAPP and IEE certificates through Maritime Single Window
- 54. Submission of other documents through the Barbados Maritime Single Window

- 55.** Air pollution prevention requirements: maritime autonomous surface ships

PART VII

FUEL OPTIONS AND FUEL COMPLIANCE

- 56.** Marine fuels
- 57.** Register of regulated marine fuels
- 58.** Selection of compliant marine fuels by local fuel suppliers to vessel
- 59.** Obligations of local fuel suppliers
- 60.** Register of Local Suppliers of Fuel Oil to Ships
- 61.** Using fuel oil that does not meet fuel oil quality requirements
- 62.** Fuel oil supplied must be in accordance with the declaration
- 63.** Obligations of masters and operators of vessels
- 64.** Obligations of local fuel supplier's representative
- 65.** Offence of not retaining bunker delivery note
- 66.** Fuel oil sampling
- 67.** Offence of not retaining fuel oil sample
- 68.** Offence: notification of sulphur content of gas fuel

PART VIII

NATIONAL LEVEL MARITIME ENERGY GOVERNANCE

69. Development of a marine emissions permitting scheme: regional arrangements
70. Duties of the port
71. Reports on reception facilities
72. Adequate waste reception facilities for MARPOL Annex VI waste
73. Port air quality strategies and management systems
74. Port energy audits and port energy efficiency certification
75. Applicable ISO standards for port energy: environment compliance
76. Port carbon footprint reporting
77. Responsibilities of Technical Manager
78. Senior Port Management Responsibilities
79. Port energy manager's responsibilities
80. Port energy management team's responsibilities
81. Climate change coordinator
82. Climate change adaptation plan and ship emissions reduction strategy

PART IX

VERIFIED CONTROL EMISSION IN-USE STRATEGY: MARINE DIESEL
ENGINES

- 83.** Administration of this Part
- 84.** Application of this Part
- 85.** Application process: initiating process
- 86.** Application process: preliminary verification application
- 87.** Marine diesel engine emission control strategy
- 88.** Durability testing requirements
- 89.** Verification of emission reductions for alternative marine diesel fuels and fuel additives

PART X

ENGINE INTERNATIONAL AIR POLLUTION PREVENTION
CERTIFICATES

- 90.** EIAPP Certificate to be on board
- 91.** Engines requiring an EIAPP Certificate
- 92.** Engines not required to have an EIAPP Certificate
- 93.** Matters to be certified by the EIAPP Certificate
- 94.** Validity of EIAPP Certificate

- 95. Information to be contained in EIAPP Certificate
- 96. Documentary evidence to be presented

PART XI

EXHAUST GAS CLEANING SYSTEMS OPERATIONS

- 97. Interpretation
- 98. Application of this Part
- 99. Duty to protect the marine environment from EGCS discharges
- 100. Prohibition on discharge of EGCS wash-water in port or in the territorial sea
- 101. EGCS wash-water discharge in the EEZ
- 102. EGCS wash-water discharge for transiting vessels
- 103. EGCS wash-water discharge options
- 104. Wash-water testing
- 105. EGCS residue discharge
- 106. EGCS residue discharge options
- 107. Notification of EGCS operation via Barbados Maritime Single Window
- 108. Merchant shipping notices may be issued for EGCS
- 109. Penalties

PART XII

MISCELLANEOUS

- 110.** Sustainable economic development initiatives
- 111.** Agreement for green shipping corridors
- 112.** Establishment of green shipping corridors
- 113.** Components of green shipping corridors
- 114.** Factors relevant to establishment of green shipping corridors
- 115.** Amendment of green shipping corridors order
- 116.** Market-based measures for emission reduction in the marine transport sector
- 117.** Designation of emissions control areas
- 118.** Administrative penalties
- 119.** Administrative penalty notice
- 120.** Procedure for challenging an alleged administrative contravention
- 121.** Administrative penalty to constitute a debt to the State
- 122.** Offence relating to fraudulent surveys
- 123.** General penalty
- 124.** Enforcement

- 125.** Privileges and immunities of Coast Guard
- 126.** Protection from personal liability
- 127.** Regulations
- 128.** Marine fuels safety regulatory framework
- 129.** Merchant shipping notice
- 130.** Marine guidance note and marine information note
- 131.** Emissions reductions standards and measures established after the commencement of this Act
- 132.** Amendment of Schedules
- 133.** Transitional

FIRST SCHEDULE

International Air Pollution Prevention Certificate

SECOND SCHEDULE

International Energy Efficiency (IEE) Certificate

THIRD SCHEDULE

National Air Pollution Prevention (NAPP) Certificate

FOURTH SCHEDULE

Statement of Compliance (SOC)

FIFTH SCHEDULE

National Energy Efficiency (NEE) Certificate

SIXTH SCHEDULE

Specific Approval for Exhaust Gas Cleaning Systems

SEVENTH SCHEDULE

Specific Approval for Exhaust Gas Treatment Systems

EIGHTH SCHEDULE

Information to be included in the Bunker Delivery Note

NINTH SCHEDULE

Local Fuel Supplier's Initial Declaration Form

TENTH SCHEDULE

Local Fuel Supplier's Annual Declaration

ELEVENTH SCHEDULE

Port Air Quality Management and Monitoring

TWELFTH SCHEDULE

EGCS Operations Notifications Form

THIRTEENTH SCHEDULE

Administrative Penalties

BARBADOS

A Bill entitled

An Act to

- (a) implement the 1997 Protocol to the International Convention on the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 and the Protocol of 1997;
- (b) implement Article 212 of the United Nations Convention on the Law of the Sea, 1982;

- (c) implement the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by the International Maritime Organization;
- (d) control of emissions from ships that exceed 150 gross tons;
- (e) promote energy efficiency in shipping; and
- (f) provide for related matters.

ENACTED by the Parliament of Barbados as follows:

PART I

PRELIMINARY

Short title

1. This Act may be cited as the *Marine Transport (Emissions Control) Act, 2024*.

Interpretation

2. In this Act,

“air pollution” means contamination of the indoor or outdoor environment by any chemical, physical or biological agent that modifies the natural characteristics of the atmosphere;

“Administration” means the Barbados Maritime Transport Administration established by section 7 of the *Shipping (Domestic Vessels) Act, 2024* (Act 2024-) and having regulatory responsibility under this Act for MARPOL Annex VI;

“Barbados Maritime Single Window” has the meaning assigned to it by section 2(1) of the *Facilitation of International Maritime Traffic Act, 2024* (Act 2024-2);

“Barbados ship” means a ship registered in Barbados;

“Barbados waters” include

- (a) the territorial sea;
- (b) the contiguous zone;
- (c) the exclusive economic zone; and
- (d) the continental shelf;

“bunker delivery note” means the standard document containing information on fuel oil delivery required by section 59;

“Caribbean Trading Area” means an area bounded by a line from a point on the east coast of the United States of America in latitude 35° 00' north, to a point 50° 00' south, 330° 00' west, then to a point 100° 00' south, 330° 00' west; then to a point on the coast of Brazil in latitude 10° 00' south; then northward along the coast of Continental America to a point in latitude 35° 00' north, on the east coast of the United States of America;

“classification society” means a recognized institution which specializes in ship classification, nominated by the Minister, after consultation with the Director to classify the condition of Barbados’ vessels, in accordance with rules developed by the International Association of Classification Societies, and to conduct audits as the Director considers necessary for the purposes of this Act and any enactment made under this Act;

“Coast Guard” means the Barbados Coast Guard set out in Part X of the *Defence Act*, Cap. 159;

“company” means the owner of the ship or any other organization or person such as the manager, or the bareboat charterer, who has assumed the responsibility for operation of the ship from the owner of the ship and who, on assuming such responsibility, has agreed to take over all the duties and responsibilities imposed by the International Safety Management Code for the Safe Operation of Ships and for Pollution Prevention adopted by the IMO;

“contiguous zone” means that area of Barbados’ waters that has as its inner limit the outer limit of the territorial sea and as its outer limit the line every point of which is a distance of 24 nautical miles from the nearest points of the baselines from which the breadth of the territorial sea is measured;

“Contracting Government” means the Government of a State for which the Protocol of 1997 is in force;

“Convention” means the International Convention for the Prevention of Pollution from Ships 1973 to which Barbados is a party, including its protocols, annexes and appendices, as amended by the protocols of 1978 and 1997, and includes

(a) all amendments adopted by the Marine Environment Protection Committee of the IMO on or before the commencement of this Act; and

(b) any subsequent amendment to that Convention, which is considered by the Minister to be relevant and is specified in a merchant shipping notice;

“deliberate emission” includes an emission occurring in the course of maintaining, servicing, repairing, or disposing of systems or equipment, but does not include minimal releases associated with the recapture of recycling of an ozone-depleting substance;

“Director” means the Director of Ocean Affairs in the Barbados Maritime Transport Administration;

“Designated Lead Port State Control Officer” means the officer designated by the Administration to lead on matters in respect of port state control;

“domestic vessel” has the meaning assigned to it by section 2 of the *Shipping (Domestic Vessels) Act, 2024* (Act 2024-);

“emissions” means any release of a substance subject to control by this Act from a vessel into the atmosphere or sea;

“EIAPP Certificate” means the Engine International Air Pollution Prevention Certificate issued in respect of a marine diesel engine of

- (a) a Barbados registered vessel; or
- (b) a foreign-registered vessel when in Barbados waters;

“EEDI” means the energy efficiency design index and represents the equivalent amount of carbon dioxide that a ship as a whole emits in relation to the amount of cargo carried per mile sailed;

“EEXI” means the energy efficiency existing ship index and is a measure of a ship’s energy efficiency, expressed in grams of carbon dioxide per amount of cargo carried per mile sailed;

“exclusive economic zone” means the zone established by section 3(1) of the *Marine Boundaries and Jurisdiction Act, Cap. 387*;

“exhaust gas cleaning system” or “EGCS” means systems on board ships that are used to remove particulate matter, sulphur oxides, nitrogen oxides and other harmful substances from the exhaust gases generated as a result of combustion processes in marine engines;

“exhaust gas treatment systems” or “EGTS” means shipboard devices that treat exhaust gases to a level that reduces emissions of sulphur oxides, nitrogen oxides, particulate matter and other ship-generated emissions;

“foreign-registered vessel” means a vessel flying the flag of a country other than Barbados;

“green shipping corridor” means a shipping route between Barbados and a port where zero-emission shipping solutions are implemented using commercial, sustainable, technological or regulatory initiatives along the shipping route;

“gross tons” means gross tonnage or the measurement of vessels in respect of tonnage;

“IACS” means the International Association of Classification Societies;

“IAPP Certificate” means the International Air Pollution Prevention Certificate issued under section 28;

“IEE Certificate” means the International Energy Efficiency Certificate issued under section 41;

“IMO” means the International Maritime Organization;

“ISO” means the International Organization for Standardization;

“MARPOL Annex I” means the annex to the International Convention for Prevention of Pollution from Ships, concerned with the regulation of oil, which entered into force on the 2nd day of October, 1983;

“MARPOL Annex VI”

(a) means the Protocol of 1997 to the International Convention on the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto and the Protocol of 1997 dated the 26th day of September, 1997; and

(b) includes all amendments to MARPOL Annex VI adopted by the Marine Environment Protection Committee (MEPC) of the IMO on or before the commencement of this Act any subsequent amendment to MARPOL Annex VI, which is considered by the Minister to be relevant and is specified in a merchant shipping notice;

“m/m” means mass by mass;

“maritime autonomous surface ship” means a seaborne vessel that transports either containers or bulk cargo over navigable waters with little or no human interaction;

“maritime law enforcement officer” means

(a) members of the Marine Police Unit of the Barbados Police Service; and

(b) officers and soldiers of the Barbados Defence Force serving as members of the Barbados Coast Guard;

- “marine notice” means a notice made under section 129;
- “master” means the person having command of a ship;
- “MEPC” means the Marine Environment Protection Committee of the IMO;
- “Minister” means Minister responsible for Shipping;
- “NAPP Certificate” means a National Air Pollution Prevention Certificate issued under section 29;
- “NEE Certificate” means a National Energy Efficiency Certificate issued under section 42;
- “NO_x” means nitrogen oxides;
- “NO_x Technical Code” means the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines adopted by the IMO;
- “non-Barbados vessel” means a foreign-registered vessel;
- “offshore terminal” means an installation situated away from the shore, where bulk, fluid or gas cargo is
- (a) transferred between vessels;
 - (b) loaded onto a vessel after having been transported from the shoreline;
or
 - (c) unloaded from a vessel for transport to the shoreline;
- “ozone-depleting substance” means a controlled substance defined in paragraph 4 of Article 1 of the Montreal Protocol on Substances that Deplete the Ozone Layer, 1987;
- “PAPEC Department” means the Port Air Pollution and Emissions Control Department within the Barbados Port Inc. which is responsible for the management of ship and port generated emissions and air pollution control at the Port of Bridgetown and any other port under the authority and management of the Barbados Port Inc;

“port” includes any port, terminal, offshore terminal, ship yard, repair yard or roadstead which is normally used for the loading, unloading, repair and anchoring of ships or any other place at which a ship can call;

“Port CEO” means the Chief Executive Officer of the Port of Bridgetown defined in the *First Schedule* to the *Barbados Port Inc (Transfer of Management and Vesting of Assets) Act*, Cap. 285B;

“platform” includes fixed and floating platforms and drilling rigs;

“recognized organization” means an organization recognized by the Director in accordance with

- (a) guidelines for the authorization of organizations acting on behalf of the Administration; and
- (b) specifications on the survey and certification functions of recognized organizations acting on behalf of the administration, adopted by the IMO;

“SEEMP” means Ship Energy Efficiency Management Plan;

“SO_x” means sulphur oxides;

“statement of compliance” means a statement of compliance issued in accordance with section 40(10);

“sulphur oxide emission control area” includes

- (a) the Baltic Sea area;
- (b) the North Sea area; or
- (c) any other area, including port areas, designated by the IMO;

“territorial sea” means the waters of Barbados up to a limit not exceeding 12 nautical miles, measured from the baseline determined in accordance with UNCLOS 1982;

“Technical Manager” means the Technical Manager (Maritime Sector Emissions Control and Maritime Energy Management);

“UNCLOS 1982” means the United Nations Convention on the Law of the Sea, 1982 signed by Barbados on 10th December, 1982 and ratified on 12th October, 1993;

“upset conditions” means conditions which lead to emissions being generated as a result of vessel equipment breakdown or malfunction or from an accident in respect of a vessel;

“vessel” includes every description of ship, watercraft or other man made contrivance used or capable of being used, as a means of transportation on water;

“volatile organic compound” or “VOC” means

- (a) any compound of carbon;
- (b) but does not include carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates and ammonium carbonate which participates in atmospheric photochemical reactions;

“warship” means a ship belonging to the armed forces of a state bearing the external marks distinguishing such ship of its nationality, under the command of an officer commissioned by the Government of the State and whose name appears in the appropriate service list or its equivalent, and the crew of which is under regular armed forces discipline;

“World Health Organization” means the World Health Organization established by the International Health Conference held in New York from 19th June to 22nd July, 1946 and governed by the Constitution signed on 22nd July, 1946.

Ambulatory reference

3.(1) In this Act, a reference to MARPOL Annex VI shall be construed

- (a) as a reference to that Annex as modified from time to time; or

- (b) if that Annex is replaced by another instrument, as a reference to that instrument.
- (2) For the purposes of subsection (1), MARPOL Annex VI is modified if
 - (a) omissions, additions or other alterations to the text take effect in accordance with Article 16 of the Convention; or
 - (b) supplementary provision made under Article 16 of the Convention takes effect.

Act to bind State

4. This Act binds the State.

Objects of Act

- 5.(1) The objects of this Act are
- (a) to give effect to the MARPOL Annex VI in order to prevent and mitigate air pollution from vessels and promote energy efficiency in shipping;
 - (b) to give effect to applicable provisions in the UNCLOS 1982, to prevent, reduce and control air and marine pollution from offshore energy development and shipping activities;
 - (c) to give effect to the NO_x Technical Code; and
 - (d) to implement international obligations in respect of ships and ports to control and reduce emissions from maritime transport activities.

Application of Act

- 6.(1) Except where otherwise specified, this Act applies to
- (a) all Barbados ships above 150 gross tons;
 - (b) all vessels, other than Barbados vessels, above 150 gross tons when in the waters of Barbados;

- (c) platforms registered in, or entitled to fly the flag of a country whose Government is a Contracting Government to MARPOL Annex VI, which are or will be engaged in voyages to waters under the sovereignty or jurisdiction of that Contracting Government, other than Barbados;
 - (d) platforms registered in, or entitled to fly the flag of a country whose Government is a Contracting Government to MARPOL Annex VI, which are not or will not be engaged in voyages to waters under the sovereignty or jurisdiction of that Contracting Government, other than Barbados; and
 - (e) platforms registered in, or entitled to fly the flag of Barbados, which are not or will not be engaged in voyages to waters under the sovereignty or jurisdiction of a Contracting Government to MARPOL Annex VI, other than Barbados.
- (2) This Act does not apply to
- (a) any warship, naval auxiliary or other vessel owned or operated by Barbados or any other state and used for government non-commercial service; or
 - (b) domestic vessels.

Act not to apply to certain fuel oil and emissions

7. This Act shall not apply to
- (a) fuel oil
 - (i) intended for the purpose of research and testing;
 - (ii) intended for processing prior to final combustion; or
 - (iii) to be processed for the refining industry;
 - (b) any emission necessary for the purpose of securing the safety of a vessel or saving life at sea;

- (c) any emission resulting from damage to a vessel or her equipment, except to the extent that the emission is due to
 - (i) a failure to take all reasonable precautions after the occurrence of the damage or discovery of the emission, for the purpose of preventing or minimizing the emission; or
 - (ii) damage caused in consequence of the company or master either intending to cause damage, or recklessly not caring whether damage would result; and
- (d) any emission resulting from the incineration of substances that are solely and directly the result of exploration, exploitation and associated offshore processing of seabed mineral resources, including
 - (i) the flaring of hydrocarbons and the burning of cuttings, muds and stimulation fluids during well completion and testing operations;
 - (ii) flaring arising from upset conditions;
 - (iii) the release of gases and volatile compounds entrained in drilling fluids and cuttings;
 - (iv) emissions associated solely and directly with the treatment, handling, or storage of seabed minerals; and
 - (v) emissions from marine diesel engines that are solely dedicated to the exploration, mining and associated offshore processing of seabed mineral resources.

Exempted emissions

8.(1) The Administration shall, in cooperation with other Maritime Administrations, consider applications for exemption from provisions of MARPOL Annex VI and may issue permits to ships to conduct trials for the development of vessel emission reduction and control technologies, and engine design programmes including engine control systems.

- (2) Permits referred to in subsection (1) shall be provided only
 - (a) to the minimum number of vessels necessary for the conduct of trials required for the development of ship emission reduction and control technologies, and engine design programmes including engine control systems; and
 - (b) for the maximum periods specified in the permits issued under subsection (1).

PART II

ADMINISTRATION

Administration of Act

9.(1) The Director is responsible for the general management and administration of this Act.

(2) The Director shall administer this Act in consultation with the Technical Manager (Maritime Sector Emissions Control and Maritime Energy Management) and the PAPEC Department.

(3) The Director may, by instrument in writing, delegate any of the functions specified in this Act and any enactment made under this Act to the Technical Manager, except the function to delegate.

Duty of Administration in relation to shipping and climate change

10. It shall be the duty of the Administration to keep abreast of activities of the IMO on shipping and climate change and adopt appropriate programmes, strategies and initiatives to promote IMO led activities at the national level.

PART III

PREVENTION OF AIR POLLUTION FROM SHIPPING ACTIVITIES

Equivalents: vessels 400 gross tons and above and platforms

11.(1) The Director may permit the affixing of any fitting, material, appliance or apparatus to a Barbados vessel of 400 gross tons and above or to a platform as an alternative to that required under MARPOL Annex VI if that fitting, material, appliance or apparatus is at least as effective as that required under MARPOL Annex VI.

(2) The Director shall inform the IMO of action undertaken by the Director under subsection (1) for circulation to Contracting Governments to MARPOL Annex VI for their information and appropriate action.

Equivalents: ships less than 400 gross tons

12.(1) The Director may, after consultation with the Technical Manager, permit the affixing of any fitting, material, appliance or apparatus to a Barbados ship of less than 400 gross tons as an alternative to that required under the regulations or specified in a Merchant Shipping Notice if such fitting, material, appliance or apparatus is at least as effective as that required under MARPOL Annex VI.

(2) In the case of foreign-going vessels of at least 150 gross tons but less than 400 gross tons, the Director shall inform the IMO of action undertaken by the Director under subsection (1) for circulation to parties to MARPOL Annex VI for their information and appropriate action.

Annex VI approved equivalents

13.(1) An Annex VI approved equivalent in relation to a vessel is

- (a) an exhaust gas cleaning system;

- (b) another technological method for reducing SO_x emissions that is approved for use on board the vessel; or
 - (c) any other appliance, apparatus, fitting or material used on the vessel as an alternative to that required by this Act.
- (2) The Administration may approve the use of alternative compliance methods being at least as effective in terms of emission reductions as that required by this Act or any other enactment made under this Act.
- (3) The methods referred to in subsection (2) may include the use of SO_x emission reduction system (exhaust gas scrubbing, de-sulphuring of fuel or others), NO_x reduction apparatus, if not installed as part of the engine, or any other technology that is verifiable and enforceable to limit
 - (a) NO_x emissions to a level equivalent to that stipulated in the Technical Code on Control of Emission of Nitrogen Oxides from Marine Diesel Engines (NO_x Technical Code); or
 - (b) SO_x emissions to a level not exceeding 0.5 percent m/m and where inside an emissions control area, to a level not exceeding 0.10 percent m/m.
- (4) The equivalent arrangements to the specific provisions of MARPOL Annex VI and alternative compliance methods shall be considered on a case-by-case basis by the Administration.
- (5) All applications for acceptance of equivalents and alternative compliance methods shall be sent to the Administration.
- (6) Upon satisfactory review of the application, the Administration shall notify the IMO of the acceptance of the equivalent or alternative compliance by making an entry in the IMO Global Integrated Shipping Information System.

Issue of Annex VI approved equivalent certificates

14.(1) Where the Director approves an equivalent in respect of a Barbados vessel, under this Part, the Director shall issue a MARPOL Annex VI Approved

Equivalent Certificate to the owner of the vessel, to verify that the equivalent is acceptable.

(2) The fee for a MARPOL Annex VI Approved Equivalent Certificate is such as may be prescribed.

General obligation to prevent pollution from or through the atmosphere

15.(1) The owners and operators of vessels shall

- (a) reduce and control pollution of the marine environment from or through the atmosphere in accordance with Article 212 of the UNCLOS 1982 and pollution of the atmosphere in accordance with MARPOL Annex VI in respect of
 - (i) ozone-depleting substances;
 - (ii) NO_x;
 - (iii) SO_x;
 - (iv) carbon dioxide;
 - (v) volatile organic compounds; and
 - (vi) particulate matter;
- (b) prohibit the deliberate emission of an ozone-depleting substance from a vessel or platform; and
- (c) maintain a list of equipment containing ozone-depleting substances.

(2) The owners or operators of vessels that have rechargeable systems which contain ozone-depleting substances shall maintain an ozone-depleting substances record book which shall be in accordance with section 17.

(3) Ozone-depleting substances carried on board vessels or platforms shall be discharged in appropriate reception facilities in accordance with Chapter III of MARPOL Annex VI.

(4) The masters and owners of foreign-registered vessels and foreign platforms transiting through Barbados' territorial sea which cause wilful and serious air and marine pollution to the local environment as a result of deliberate discharges of ozone depleting substances or other ship-source air pollutants shall be stopped by a maritime law enforcement officer, accompanied by a scientist or technical expert in the field of environmental science or air quality science, for inspection in accordance with Chapter II of MARPOL Annex VI and pursuant to paragraph (h) of Article 19 of UNCLOS 1982.

(5) A maritime law enforcement officer may stop and inspect any vessel transiting through Barbados' territorial sea which causes serious and wilful pollution during its passage contrary to this Act.

(6) In making a determination as to whether pollution is serious and wilful for the purposes of subsection (7), maritime law enforcement officers should be guided by the Environmental Protection Department and shall be accompanied by officers of that department when making a decision to stop and detain vessels.

(7) A maritime law enforcement officer may only detain foreign-registered vessels which wilfully and seriously commit air pollution, where such pollution significantly impacts the air and marine environment of Barbados, including causing ecosystem damage, death to marine life or other living creatures or harm to human health.

Ozone-depleting substances

16.(1) Deliberate emission of ozone-depleting substances inclusive of emissions occurring in the course of

- (a) maintaining;
- (b) servicing;
- (c) repairing; or
- (d) disposing,

of systems or equipment is prohibited.

(2) For the purposes of subsection (1), deliberate emissions do not include minimal releases associated with the recapture or recycling of ozone-depleting substances.

(3) Ozone-depleting substances and equipment containing such substances shall be delivered up to appropriate reception facilities when removed from a vessel.

(4) Nothing contained in this Act which regulates ozone-depleting substances applies to permanently sealed equipment where there are no refrigerant charging connections or potentially removable components containing ozone-depleting substances.

Ozone-depleting substances record book

17.(1) An ozone-depleting substances record book referred to in section 15(2) may form part of an existing log-book or electronic recording system as approved by the Director.

(2) An ozone-depleting substances record book shall be in the prescribed form.

(3) An entry in a vessel's ozone-depleting substances record book

(a) shall be made in the English language;

(b) if made in relation to a prescribed operation, shall be signed by the person in charge of the operation.

(4) An entry in the ozone-depleting substances record book shall be recorded in terms of mass of substance and shall be completed without delay on each occasion, in respect of the following:

(a) recharge, full or partial, of equipment containing ozone-depleting substances;

- (b) repair or maintenance of equipment containing ozone-depleting substances;
 - (c) deliberate and non-deliberate discharge of ozone-depleting substances into the atmosphere;
 - (d) discharge of ozone-depleting substances into land-based reception facilities;
 - (e) supply of ozone-depleting substances to the vessel or platform; and
 - (f) supply, charge and discharge of system, repair and maintenance.
- (5) The information recorded in accordance with subsection (4) shall be reported to the Director.
- (6) Where a vessel does not have on board an ozone-depleting substances record book, the master and owner of the vessel shall be subject to the payment of an administrative penalty imposed under section 118.
- (7) Where
- (a) a specified operation or specified event is carried out or occurs in, or in relation to a vessel;
 - (b) the master of the vessel does not without delay, make appropriate entries in the ozone-depleting substances record book in accordance with subsection (4) as soon as may be practicable in the circumstances;
 - (c) a page of the vessel's ozone-depleting substances record book is completed; and
 - (d) the person in charge of the operation does not, as soon as may be practicable in the circumstances, sign the page in accordance with subsection (3),

the master is subject to the payment of an administrative penalty imposed under section 118.

(8) For the purposes of subsection (1), all Barbados ships, irrespective of gross tons, that have rechargeable systems containing ozone-depleting substances shall have an ozone-depleting substances record book.

False or misleading entries in ozone-depleting substances record book

18.(1) A person who makes a false or misleading entry in an ozone-depleting substances record book to which section 17 applies is guilty of an offence and is liable on conviction on indictment to a fine of \$100 000 or to imprisonment for 5 years or to both.

(2) The master or owner of a vessel to which section 17 applies is subject to the payment of an administrative penalty imposed under section 118 if

- (a) the vessel's ozone-depleting substances record book is not retained in the vessel until the end of one year beginning on the day after the day on which the last entry is made in the book; or
- (b) the vessel's ozone-depleting substances record book is not readily available for inspection by an authorized officer at all reasonable times during that period.

(3) The owner of a vessel to which section 17 applies is subject to the payment of an administrative penalty imposed under section 118 if the vessel's ozone depleting substances record book

- (a) is not retained in the vessel until the end of 2 years beginning on the day after the end of the period referred to in subsection (2)(a);
- (b) is not retained at the owner's registered office, or at a place or office whose address is notified under subsection (4), until the end of 2 years beginning on the day after the end of the period referred to in subsection (2)(a);
- (c) is not deposited in accordance with subsection (5) until the end of 2 years beginning on the day after the end of the period referred to in paragraph (a); or

- (d) is not readily available for inspection by an inspector at all reasonable times during the 2 year period referred to in paragraph (a).
- (4) The owner of a vessel, to which section 17 applies, who resides in Barbados or has an office or agent in Barbados, may give to a duly authorized officer notice in writing of
- (a) the owner's address;
 - (b) the address of the owner's office in Barbados or, if the owner has more than one office in Barbados, the owner's principal office in Barbados; or
 - (c) the address of the office or place of residence of the owner's agent or, if the owner's agent has more than one office in Barbados, the principal office in Barbados of the owner's agent.
- (5) If the owner of a vessel to which section 17 applies does not reside in Barbados and does not have an office or agent in Barbados, the owner may deposit the vessel's ozone-depleting substances record book with a duly authorized officer.

Prohibition on the carriage of non-compliant fuel for combustion purposes for propulsion or operation on board a vessel or platform

19. No master or owner of a vessel to which this Act applies shall carry on board that vessel any fuel for use, the sulphur content of which exceeds 0.5 per cent m/m.

Using fuel oil or carrying fuel oil for use: offences

20.(1) No person shall engage in conduct that results in fuel oil with a sulphur content of more than the limit set out in section 19 being used on board a vessel as fuel or carried on board a vessel for use as fuel if

- (a) the vessel is in Barbados' territorial sea;

- (b) the vessel is in the contiguous zone of Barbados, the offence was committed in Barbados' territorial sea and the vessel is trying to escape;
 - (c) the vessel is in the exclusive economic zone of Barbados; or
 - (d) the vessel is a Barbados vessel that is beyond the exclusive economic zone of Barbados but not within an emission control area.
- (2) A person to whom subsection (1) applies is subject to the payment of an administrative penalty imposed under section 118.
- (3) The master and the owner of a vessel are each guilty of an offence if fuel oil with a sulphur content of more than the limit prescribed is used on board the vessel as fuel or carried on board the vessel for use as fuel and
 - (a) the vessel is in Barbados' territorial sea;
 - (b) the vessel is in the contiguous zone of Barbados, the offence was committed in Barbados' territorial sea and the vessel is trying to escape;
 - (c) the vessel is in the exclusive economic zone of Barbados; or
 - (d) the vessel is a Barbados vessel that is beyond the exclusive economic zone of Barbados but not within an emission control area.
- (4) A person guilty of an offence under subsection (3) is liable on conviction on indictment to a fine of \$250 000 or to imprisonment for 10 years or to both.
- (5) For the purposes of this section, fuel oil carried on board a vessel is presumed to be carried for use on board the vessel as fuel unless the contrary is proved.
- (6) For the purposes of subsection (1), the result referred to in that subsection is presumed to have occurred in one of the circumstances referred to in paragraph (a) or (b) of that subsection unless it is proved that the result did not occur in any of those circumstances.
- (7) For the purposes of subsection (3), paragraphs (a) to (d) are presumed to apply unless the contrary is proved.

Using fuel oil or carrying fuel oil for use: exceptions

21.(1) Section 22(1) and (3) do not apply to the use of fuel oil on board a vessel as fuel if the following requirements are satisfied:

- (a) the fuel oil is used while a MARPOL Annex VI approved equivalent is operating on the vessel;
- (b) any enactment made under this Act prescribes requirements in relation to the operation of the MARPOL Annex VI approved equivalent and the vessel is operating in accordance with the requirement;
- (c) any enactment made under this Act prescribes requirements in relation to the discharge of waste streams arising from the operation of a MARPOL Annex VI approved equivalent and the waste streams are operating in accordance with this requirement.

(2) Section 22(1) and (2) do not apply to carrying fuel oil on board a vessel if a MARPOL Annex VI approved equivalent is installed on the vessel.

(3) Section 20(3) does not apply if

- (a) the matters mentioned in that subsection occur as a result of securing the safety of a vessel or saving life at sea; or
- (b) the requirements of subsection (1), (2) or (7) are not satisfied, but it is likely that those requirements would have been satisfied were it not for conduct engaged in for the purpose of securing the safety of a vessel or saving life at sea.

(4) Subsection (2) does not apply in relation to a vessel if

- (a) either
 - (i) the matters referred to in that subsection occur as a result of unintentional damage to the vessel or her equipment; or

- (ii) the requirements of subsection (1) or (2) are not satisfied, but it is likely that those requirements would have been satisfied were it not for unintentional damage to the vessel or her equipment; and
 - (b) an enactment made under this Act prescribes a level of total emission of SO_x
 - (i) after the occurrence of the unintentional damage, the total emission of SO_x from the vessel does not exceed that level;
 - (ii) after the occurrence of the unintentional damage, all reasonable precautions are taken to prevent the total emission of SO_x from exceeding that level, or to minimise the total emission of SO_x; or
 - (iii) if the discovery that the total emission exceeds that limit occurs before the discovery of the unintentional damage after the discovery of that total emission, all reasonable precautions are taken to prevent the total emission of sulphur oxides from exceeding that level, or to minimise the total emission of SO_x.
- (5) For the purposes of subsection (4), damage to a vessel or to its equipment is not unintentional if the damage arose
- (a) in circumstances where the master or owner of the vessel
 - (i) acted with intent to cause the damage; or
 - (ii) was reckless as to whether damage would be caused; or
 - (b) as a result of the negligence of the master or owner of the vessel.
- (6) For the purposes of this section, damage to a vessel or to her equipment does not include
- (a) deterioration resulting from failure to maintain the vessel or equipment; or
 - (b) defects that develop during the normal operation of the vessel or equipment.

(7) Section 23(1) and (2) do not apply to using or carrying fuel oil on board a vessel if the following requirements are satisfied:

- (a) the person responsible for obtaining fuel oil for use on board the vessel took all reasonable precautions to obtain fuel oil with a sulphur content of not more than the limit prescribed for the purposes of section 22(1) (b);
- (b) a duly authorized officer is notified, in accordance with any requirements prescribed by any enactment made under this Act, that fuel oil with a sulphur content of not more than that limit could not be obtained for the vessel; or
- (c) if the vessel's next port of destination after the high sulphur fuel oil was supplied to the vessel is a port in a foreign country, the government of that foreign country is notified, in accordance with any requirements prescribed by any enactment made under this Act, that fuel oil with a sulphur content of not more than that limit could not be obtained for the vessel.

Barbados vessel in emission control area: offences

22.(1) The owner or master of a vessel who, knowing that damage may be caused or is reckless as to whether damage is caused, takes a Barbados vessel into or permits it to enter an emission control area when the vessel does not meet the requirements of subsection (2) is guilty of an offence and is liable on conviction on indictment to a fine of \$250 000 or to imprisonment for 10 years or to both.

(2) A vessel meets the requirements of this subsection while the vessel is in an emission control area if

- (a) the sulphur content of the fuel oil used on board the vessel as fuel does not exceed MARPOL Annex VI limits;
- (b) a MARPOL Annex VI approved equivalent is operating on the vessel;

- (c) any enactment made under this Act prescribes requirements in relation to the operation of the MARPOL Annex VI approved equivalent and the vessel is operating in accordance with those requirements;
 - (d) any enactment made under this act prescribes requirements in relation to discharging waste streams arising from the operation of the MARPOL Annex VI approved equivalent, and the waste streams are discharged in accordance with those requirements; or
 - (e) the sulphur content of the fuel oil carried on board the vessel for use on board the vessel as fuel does not exceed MARPOL Annex VI limits.
- (3) For the purposes of this section, fuel oil carried on board a vessel is presumed to be carried for use on board the vessel as fuel unless the contrary is proved.

Barbados vessel in emissions control area

23.(1) Section 22(1) does not apply

- (a) if the matters referred to in that subsection occur as a result of securing the safety of a vessel or saving life at sea;
- (b) to the use of fuel oil on board a vessel as fuel if
 - (i) the requirements of subsection (5) are not satisfied; and
 - (ii) it is likely that those requirements would have been satisfied were it not for conduct engaged in for the purpose of securing the safety of a vessel or saving life at sea; or
- (c) to carrying fuel oil on board a vessel if
 - (i) the requirements of subsection (6) are not satisfied; and
 - (ii) it is likely that those requirements would have been satisfied were it not for conduct engaged in for the purpose of securing the safety of a vessel or saving life at sea.

- (2) Section 22(1) does not apply in relation to a vessel if
- (a) the matters referred to in that subsection occur as a result of unintentional damage to a vessel or her equipment;
 - (b) any enactment made under this Act prescribes a level of total emission of SO_x
 - (i) after the occurrence of the unintentional damage, the total emission of SO_x from the vessel does not exceed that level; or
 - (ii) after the occurrence of the unintentional damage, all reasonable precautions are taken to prevent the total emission of SO_x from exceeding that level, or to minimise the total emission of SO_x.
- (3) For the purposes of this section, damage to a vessel or to her equipment is intentional if the damage arose
- (a) in circumstances where the master or owner of the vessel
 - (i) acted with intent to cause the damage; or
 - (ii) acted recklessly with knowledge that the damage would result or not caring whether damage resulted; or
 - (b) as a result of the negligence of the master or owner of the vessel.
- (4) For the purposes of this section, damage to a vessel or to her equipment does not include
- (a) deterioration resulting from failure to maintain the vessel or equipment;
or
 - (b) defects that develop during the normal operation of the vessel or equipment.
- (5) Section 22(1) does not apply to the use of fuel oil on board a vessel as fuel if
- (a) the person responsible for obtaining fuel oil for use on board the vessel took all reasonable precautions to obtain fuel oil with a sulphur content

- of not more than the limit prescribed for the purposes of section 20(3)
(a);
- (b) a duly authorized officer is notified in accordance with any requirements prescribed by any enactment made under this Act that fuel oil with a sulphur content of not more than that limit could not be obtained for the vessel;
 - (c) if the vessel's next port of destination after the high-sulphur fuel oil was supplied to the vessel is a port in a foreign country, the government of that foreign country is notified that fuel oil with a sulphur content of not more than that limit could not be obtained for the vessel;
 - (d) if any enactment made under this Act prescribes a level of total emission of SO_x
 - (i) after the occurrence of the unintentional damage, the total emission of SO_x from the vessel does not exceed that level;
 - (ii) after the occurrence of the unintentional damage, all reasonable precautions are taken to prevent the total emission of SO_x; or
 - (iii) if the discovery that the total emission exceeding that limit occurs before the discovery of the unintentional damage, after the discovery of that total emission, all reasonable precautions are taken to prevent the total emission of SO_x from exceeding that level, or to minimise the total emission of SO_x.
- (6) For the purposes of section 22(1), damage to a vessel or to her equipment is intentional if the damage arose
- (a) in circumstances where the master or owner of the vessel
 - (i) acted with intent to cause the damage; or
 - (ii) acted recklessly not caring whether damage was caused; or
 - (b) as a result of the negligence of the master or owner of the vessel.

(7) Section 20(1) does not apply to carrying fuel oil (the high sulphur fuel oil) on board a vessel for use on board the vessel as fuel if the following requirements are satisfied

- (a) the person responsible for obtaining fuel oil for use on board the vessel took all reasonable precautions to obtain fuel oil with a sulphur content of not more than the limit prescribed for the purposes of section 20(1) (a);
- (b) a duly authorized officer is notified that fuel oil with a sulphur content of not more than that limit could not be obtained for the vessel; and
- (c) if the vessel's next port of destination after the high-sulphur fuel oil was supplied to the vessel is a port in a foreign country and the government of that foreign country is notified that fuel oil with a sulphur content of not more than that limit was not obtained by the vessel.

Flushing fuel oil service system

24.(1) The master of a Barbados vessel shall be liable on summary conviction to a fine of \$100 000 or to imprisonment for 3 years or to both where

- (a) the vessel enters an emission control area;
 - (b) separate fuel oils are used on board the vessel;
 - (c) at least one of the fuel oils has a sulphur content of more than the prescribed limit; and
 - (d) insufficient time is allowed for the vessel's fuel oil service system to be fully flushed of fuel oil with a sulphur content of more than the limit in paragraph (c) before the vessel enters the emission control area.
- (2) The master of a Barbados vessel shall be liable on summary conviction to a fine of \$100 000 or to imprisonment for 3 years or to both where
- (a) the vessel enters an emission control area;

- (b) more than one type of fuel oil is used on board the vessel;
- (c) at least one of the fuel oils has a sulphur content of more than the prescribed limit; and
- (d) when the vessel enters the emission control area, the vessel does not carry a written procedure showing how the vessel's fuel oil service system is to be fully flushed of fuel oil with a sulphur content of more than the limit prescribed before the vessel enters the emission control area.

Record of prescribed fuel

25.(1) The master and the owner of a Barbados vessel shall be subject to the payment of an administrative penalty imposed under section 118 where

- (a) an entry in a prescribed record book is not made as soon as practicable after
 - (i) the completion of the last prescribed fuel-changeover operation on the vessel before the vessel enters an emission control area; or
 - (ii) the completion of the first prescribed fuel-changeover operation on the vessel after the vessel leaves an emission control area; or
- (b) the record book is not
 - (i) retained on board the vessel for the prescribed period; or
 - (ii) readily available for inspection at all reasonable times.

(2) A person who makes an entry that is false or misleading in a prescribed record book is liable on summary conviction to a fine \$100 000 or to imprisonment for 3 years.

Flag state inspections: air pollution from ships

26.(1) Barbados ships of 400 gross tons and above and platforms shall be subject to flag State inspections in order to verify that the fuel used or carried for use on board the vessel is compliant with MARPOL Annex VI.

- (2) Subject to any enactment made under this Act and in accordance with MARPOL Annex VI, Barbados ships of 400 gross tons and above and platforms shall carry at all times a valid IAPP Certificate and IEE Certificate.
- (3) Ship owners having more than one vessel sailing under the Barbados flag shall obtain an IAPP Certificate and an IEE Certificate for each vessel.
- (4) The IAPP and IEE Certificates shall be in the form set out in the *First Schedule* and the *Second Schedule*, respectively.

Port state inspections: air pollution from ships

27. Ships, other than Barbados ships of 400 gross tons and above, calling at ports, and foreign platforms operating in maritime areas are subject to port state inspections to verify that fuel used or carried for use on board the vessel is compliant with MARPOL Annex VI and are required to produce their IAPP Certificate for inspection by authorized officers, in accordance with MARPOL Annex VI, and any enactment made under this Act.

Requirement for issue of IAPP certificates

- 28.** The following ships and platforms shall be inspected and surveyed:
- (a) Barbados ships of 400 gross tons and above which are or will be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government to MARPOL Annex VI; and
 - (b) platforms registered in Barbados, which are or will be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados,

in order that IAPP Certificates may be issued in respect of vessels and platforms.

Requirement for issue of NAPP Certificates

- 29.(1)** The following ships and platforms shall be surveyed and inspected:
- (a) Barbados ships of 400 gross tons and above which are not or will not be engaged in voyages to a port or offshore terminal under the

jurisdiction of a Contracting Government to MARPOL Annex VI, other than Barbados; and

- (b) platforms registered in Barbados, which are not or will not be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados,

in order that NAPP Certificates may be issued in respect of those vessels.

(2) A shipowner having more than one vessel of 400 gross tons and above or platform sailing under the Barbados flag, which is not or will not be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI other than Barbados, shall obtain a NAPP Certificate for each vessel.

(3) A NAPP Certificate shall be in the form set out in the *Third Schedule*.

Port State Control, violations and enforcement

30.(1) In addition to any certificate issued under this Act, the following shall be made available to the officials:

- (a) bunker delivery notes and samples including collection and analysis records, issued Fuel Oil Non-Availability Reports and related communications;
- (b) the technical file for each applicable engine, including the record book of engine parameters, and EIAPP Certificate;
- (c) documented procedures and records to ensure compliance while in a Sulphur Emissions Control Area;
- (d) documented procedure for oily garbage screening and segregation;
- (e) MARPOL Annex VI Record Book;
- (f) the control and monitoring system data where EGCS is installed on board;

- (g) an exemption permit referred to in section 8(1), where the Administration has agreed to allow the vessel to conduct EGCS on-board commissioning and trials.
- (2) In exceptional circumstances when original records or documents or associated samples are removed by a duly authorized officer, the master or crew shall document the removal in the official logbook and appropriate section of the MARPOL Annex VI Record Book and obtain contact information of the port or coastal state authority that removed the original records or documents or associated samples.

PART IV

ENERGY EFFICIENCY FOR SHIPS

Energy efficiency measures for vessels

31.(1) Barbados ships of 5000 gross tons and above shall calculate their ship-specific EEDI and indicate the estimated performance of the vessel in terms of energy efficiency, in accordance with MARPOL Annex VI; and shall take into account the IMO Guidelines on the Method of Calculation of the attained EEDI for new ships.

- (2) For the purposes of subsection (1), the following shall be classified as a new vessel:
 - (a) a new vessel;
 - (b) a new vessel that has undergone a major conversion;
 - (c) a new or existing vessel which has undergone a major conversion so extensive that the vessel is regarded by the Director as a newly constructed vessel; and

(d) a vessel which falls into one or more of the categories in Regulations 2.25 to 2.35 of the Annex to the 2011 Amendments to MARPOL Annex VI.

(3) The master of a vessel shall maintain and verify the energy efficiency of the vessel throughout her operational cycle in accordance with the vessel's energy efficiency management plan.

(4) The master of a vessel shall employ appropriate methods throughout the operational cycle of the vessel to monitor its energy efficiency, including the energy efficiency operation index.

(5) The vessel's energy efficiency management plan shall be developed in accordance with IMO Guidelines for the development of a ship energy efficiency management plan.

Attained EEDI

32.(1) For the purposes of this Part, the attained EEDI is a calculated value that represents the actual amount of emissions.

(2) The attained EEDI should be lower than the required EEDI set out in MARPOL Annex VI.

(3) The attained EEDI shall be calculated for every new vessel, which has undergone a major conversion and a new or existing vessel which has undergone a major conversion that is so extensive that the vessel is regarded by the Administration as a newly constructed vessel.

(4) The attained EEDI shall

(a) be specific to each vessel;

(b) indicate the estimated performance of the vessel in terms of energy efficiency;

(c) be accompanied by the EEDI technical file that contained the information necessary for the calculation of the attained EEDI; and

- (d) show the process of calculation.
- (5) The attained EEDI shall be verified, based on the EEDI technical file, by the recognized organization which classified the vessel, using relevant IMO guidelines.
- (6) The attained EEDI shall be reported to the IMO in accordance with the MARPOL Annex VI requirements relating to attained EEDI.

Required EEDI

- 33.(1)** For the purposes of this Part, the required EEDI is the maximum value of the EEDI allowed for the specific vessel type and vessel size.
- (2) The required EEDI shall be calculated for each
 - (a) new vessel;
 - (b) new vessel which has undergone major conversion; and
 - (c) new or existing vessel which has undergone a major conversion that is so extensive the vessel is regarded by the Administration as a newly constructed vessel.
 - (3) For each new and existing vessel that has undergone a major conversion which is so extensive that the vessel is regarded by the Administration as a newly constructed vessel, the required EEDI shall be calculated and shall meet the requirement of subsection (2) with the reduction factor applicable corresponding to the vessel type and size of the converted vessel at the date of the contract of the conversion, or in the absence of a contract, the commencement date of the conversion.
 - (4) The required EEDI shall be reported to the IMO in accordance with the MARPOL Annex VI requirements relating to required EEDI.

Ship energy efficiency management plan

- 34.(1)** This section applies to a Barbados vessel that
- (a) is 400 gross tons or above; and

- (b) is engaged on an international sea-going voyage.
- (2) There shall be kept on board every vessel a ship energy efficiency management plan.
- (3) A SEEMP shall form part of the vessel's safety management system and shall contain the information required under MARPOL Annex VI.
- (4) Where a vessel does not have on board a SEEMP required by this section, the owner and master of the vessel are subject to the payment of an administrative penalty imposed under section 118.

EEXI Compliance

35. For the purposes of this Act,

- (a) a Barbados vessel of 400 gross tons and above shall not be put into service or, if already in service, shall not be allowed to continue in service, unless it complies with the EEXI requirements as specified in MARPOL Annex VI;
- (b) Barbados ships trading internationally to which EEXI requirements apply shall be surveyed and certified as compliant with EEXI requirements in order to be issued with an IEE Certificate;
- (c) Barbados ships of 400 gross tons and above, operating domestically, shall comply with EEXI requirements, and shall be surveyed and certified as complying with those requirements, in order to be issued a NEE Certificate; and
- (d) foreign-registered vessels of 400 gross tons and above when in a port or offshore terminal in Barbados shall comply with EEXI requirements and during port state control inspections foreign-registered vessels of 400 gross tons and above shall be inspected to verify compliance with EEXI requirements.

Attained EEXI

36.(1) The attained EEXI shall be calculated for every vessel of 400 gross tons and above, falling into one or more categories specified in MARPOL Annex VI, including ships which have undergone a major conversion, using Guidelines on the Method of Calculation of the Attained EEXI published by the IMO.

(2) If a vessel falls into more than one category referred to in subsection (1), the more stringent criteria in calculations shall apply.

(3) The process of calculation and the necessary information to produce the EEXI calculation shall be addressed in the vessel specific EEXI technical file.

(4) For vessels referred to in subsection (1), the verified attained EEDI may be taken as the attained EEXI if the value of the attained EEDI is equal to or less than that of the required EEXI.

(5) For the purposes of subsection (4), the attained EEXI shall be verified based on the EEDI technical file and the provisions contained within the EEDI technical file may be used in place of an EEXI technical file.

(6) For existing vessels, the International Energy Efficiency Certificate shall be re-issued at the first IAPP annual, intermediate or renewal survey, or the initial survey, in the case of existing vessels, falling under major conversion, that is so extensive that the vessels are considered by the Administration as newly constructed vessels.

Required EEXI

37. The required EEXI shall be calculated for every vessel, including ships that have undergone a major conversion, to which the provisions of MARPOL Annex VI apply and in accordance with relevant IMO Guidelines.

Requirement for ships 400 gross tons and above

38.(1) A Barbados vessel of 400 gross tons and above shall have an approved SEEMP on board.

(2) The Minister, in consultation with the Director, may by a merchant shipping notice, specify any additional SEEMP requirements as required by the IMO for ships.

Fuel consumption data and reporting

39. Barbados ships of 5 000 gross tons and above shall maintain a data collection plan on fuel consumption in accordance with Chapter IV of MARPOL Annex VI, related guidelines of MEPC and any enactment made under this Act.

Collection and reporting of vessel fuel oil consumption data

40.(1) This section applies to Barbados ships of 5 000 gross tons and above.

(2) A company shall, in respect of each vessel, collect the data specified in Appendix 9 to MARPOL Annex VI for every calendar year or part thereof as appropriate, according to the methodology included in the SEEMP.

(3) At the end of each calendar year the company shall aggregate the data collected in that calendar year or part thereof pursuant to subsection (2), as appropriate.

(4) Within 3 months after the end of each calendar year the company shall report to the Director the aggregated value for each datum specified in Appendix 9 to MARPOL Annex VI, via electronic communication using a standardized format developed by the IMO.

(5) Where a vessel is transferred from the Barbados shipping register to the register of another Contracting Government, the company shall, on the day of completion of the transfer or as soon as practicable thereafter, report to the Director the aggregated data for the period of the calendar year corresponding to the time when the ship was a Barbados ship, as specified in Appendix 9 to MARPOL Annex VI and upon prior request of the Director of the disaggregated data.

- (6) When there is a change of ownership or responsibility for the vessel, the former company shall, on the day of completion of the change or as soon as practicable thereafter, report to the Director
- (a) the aggregated data for the portion of the calendar year corresponding to the period during which the former company was responsible for the vessel, as specified in Appendix 9 to MARPOL Annex VI; and
 - (b) upon request of the Director, the disaggregated data.
- (7) Subsection (5) applies where a vessel ceases to be registered in Barbados and changes from one company to another concurrently.
- (8) The data referred to in this section shall be verified according to procedures established by the Director, taking into account guidelines developed by the IMO.
- (9) Subject to subsections (5), (6) and (7), the disaggregated data that underlies the reported data in Appendix 9 to MARPOL Annex VI for the previous calendar year shall be
- (a) readily accessible for a period of not less than 12 months from the end of that calendar year; and
 - (b) made available to the Director upon request.
- (10) The Director shall ensure that the data in Appendix 9 to MARPOL Annex VI reported by a Barbados vessel are transferred not later than one month after issuing a statement of compliance in relation to the vessel to the IMO Ship Fuel Oil Consumption Database via electronic communication and using a standardized format developed by the IMO.
- (11) The statement of compliance referred to in subsection (10) shall be
- (a) issued under this Act; and
 - (b) in the form set out in the *Fourth Schedule*.
- (12) This section does not apply to platforms.

Surveys and certification: IEE certificate

41.(1) The following vessels shall be surveyed and inspected:

- (a) Barbados ships 400 gross tons and above to which Chapter 4 of MARPOL Annex VI applies; and
- (b) platforms registered in Barbados, which are or will be engaged in voyages to waters under the jurisdiction of a Contracting Government to MARPOL Annex VI, other than Barbados,

in order that an IEE Certificate may be issued in respect of such vessels.

(2) Notwithstanding subsection (1), vessels which are not required to keep a SEEMP do not require an IEE certificate.

Surveys and certification: NEE certificate

42.(1) The following vessels shall be surveyed and inspected:

- (a) Barbados vessels 400 gross tons and above which are not or will not be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government to MARPOL Annex VI, other than Barbados; and
- (b) platforms which are not or will not be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados,

in order that a NEE certificate may be issued in respect of such vessels.

(2) Shipowners having more than one vessel of 400 gross tons and above or a platform sailing under the Barbados flag which are not or will not be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados, shall obtain a NEE certificate for such vessel.

(3) NEE certificates shall be in the form set out in the *Fifth Schedule*.

PART V

NOMINATION OF SURVEYORS AND CERTIFYING OF CERTIFICATES

Nomination of surveyors: air pollution prevention compliance verification

43.(1) The Director shall, with the written approval of the Minister, nominate a marine surveyor in respect of

- (a) a Barbados vessel of 400 gross tons and above which is or will be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados;
- (b) a platform which is or will be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados;
- (c) a vessel other than a Barbados vessel, 400 gross tons and above, belonging to another Contracting Government of MARPOL Annex VI, when the Minister is requested by that Contracting Government to issue an EIAPP certificate, IAPP certificate or IEE certificate on behalf of such ship;
- (d) a Barbados vessel of 400 gross tons and above which is not or will not be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados; and
- (e) a platform which is not or will not be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados.

- (2) The Director shall nominate a marine surveyor, in respect of
 - (a) a Barbados vessel of 150 gross tons or above but not exceeding 400 gross tons, which is or will be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados; and
 - (b) any other Barbados vessel of 150 gross tons or above but not exceeding 400 gross tons, which is not or will not be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, other than Barbados.
- (3) The marine surveyor for ships of 400 gross tons and above and platforms shall be selected from an internationally recognized classification society.
- (4) The Director shall, before recognizing a classification society referred to in subsection (3), and with the written approval of the Minister, review the competency and independence of the society concerned and determine whether the society has demonstrated, to the extent necessary for carrying out the activities covered by the authorization conferred on it, that
 - (a) it has the necessary knowledge of the requirements of MARPOL Annex VI, the law of Barbados, and relevant international instruments;
 - (b) it has an appropriate knowledge of vessel and platform operations;
 - (c) it is of the appropriate size, structure, experience and capability commensurate with the type and degree of authorization; and
 - (d) it has demonstrated the technical, administrative and managerial competence and capacity to ensure the provision of timely service of satisfactory quality.
- (5) For the purposes of subsection (4), the Director shall determine whether the society
 - (a) has adequate technical, managerial and support staff;

- (b) has sufficient qualified professional staff to provide the required service, representing an adequate geographical coverage;
 - (c) has proven ability to provide a timely service of satisfactory quality;
 - (d) is independent and accountable in its operations; and
 - (e) has the ability to maintain and update the expertise of its personnel.
- (6) The Director, with written approval of the Minister, may conclude a written agreement with any organization that the Director recognizes for the purposes of an authorization.
- (7) The agreement referred to in subsection (6) shall include the following elements:
 - (a) scope of application;
 - (b) purpose;
 - (c) general conditions;
 - (d) the execution of functions under the authorization;
 - (e) legal basis of the functions under the authorization;
 - (f) reporting to the Director;
 - (g) specification of the authorization from the Director to the recognized organization; and
 - (h) the Director's supervision of activities delegated to the recognized organization or classification society.
- (8) Any authorization granted with respect to inspections shall
 - (a) empower the organization recognized under subsection (6) to require the rectification of deficiencies that it identifies in relation to vessel-source emissions, and to carry out inspections in relation to vessel-source emissions; and

- (b) stipulate in accordance with this Act that records of services performed by it be maintained such that they are able to demonstrate achievement of the required standards in the items covered by the services.
- (9) The Director shall establish
 - (a) a system which includes information on all applicable national laws and relevant international instruments in order to ensure the adequacy of work performed by recognized organizations; and
 - (b) procedures for communication with and oversight of such organizations that take into account the Guidelines for the Authorization of Organizations Acting on Behalf of the Administration, adopted in the framework of the IMO.
- (10) A surveyor of vessels of less than 400 gross tons shall be qualified and certified as competent in marine surveying by a recognized institution.
- (11) A surveyor of vessels of more than 400 gross tons shall possess an academic qualification in marine surveying or a related discipline and have at least 5 years experience.

Certifying of certificates

- 44.** Certificates and other documentation required pursuant to this Act or any enactment made under this Act may be certified by
- (a) the Minister;
 - (b) the Director; or
 - (c) a recognized organization or classification society acting on behalf of the Administration.

PART VI

EMISSIONS REDUCTION MEASURES FOR VESSELS

Emissions reduction measures for vessels

45.(1) Barbados vessels of 400 gross tons and above and non-Barbados vessels of 400 gross tons and above calling at ports are required to reduce emissions from vessels by the following measures:

- (a) installing open-loop, closed-loop or hybrid exhaust gas cleaning systems on board the vessel, or where more suitable, installing exhaust gas treatment systems to reduce emissions of SO_x, NO_x, particulate matter and other ship-source emissions;
- (b) equipping vessels with a vapour emission control system;
- (c) using NO_x, SO_x and particulate matter abatement technologies and NO_x, SO_x and particulate matter reducing devices to effectively control emissions of NO_x, SO_x, particulate matter and other ship-source emissions;
- (d) minimizing all leakage from the vessel's refrigeration plant, using designs that are more resistant to corrosion, vibration and other stresses;
- (e) reducing the impact of leaks by decreasing the refrigerant charge by using indirect systems for refrigerant charging;
- (f) compartmentalizing the piping system to isolate leaks;
- (g) retrofitting or replacing the vessel's refrigeration plant to use refrigerants with zero ozone-depletion potential;
- (h) increasing usage of refrigerants with zero ozone-depletion potential;
and

- (i) employing any other economically feasible and environmentally safe technical or operational measure to reduce ship-source emissions.
- (2) The owner of a vessel shall, in accordance with this Act and any enactment made under this Act and MARPOL Annex VI,
 - (a) reduce emissions of air pollutants; and
 - (b) increase energy efficiency.
- (3) The owner of a vessel may decide which technologies or solutions the owner will use in order to comply with mandatory MARPOL Annex VI emissions levels.

Nitrogen oxides emissions

- 46.(1)** The provisions of MARPOL Annex VI in respect of NO_x controls apply to any diesel engine with a power output of more than 130kW that has been installed on a vessel constructed on or after the 1st day of January, 2000 or if installed on a vessel constructed earlier, has undergone a major conversion.
- (2) For the purposes of this Part, “major conversion” means a modification on or after the 1st day of January, 2000 of a marine diesel engine which has not already been certified to NO_x Technical Code Tier I, II or III standards where
 - (a) the engine is replaced by a marine diesel engine or an additional marine diesel engine is installed;
 - (b) any substantial modification, as defined in the revised NO_x Technical Code 2008, as amended, is made to the engine; and
 - (c) the maximum continuous rating of the engine is increased by more than 10 per cent compared to the maximum continuous rating of the original certification of the engine.
 - (3) Where a major conversion involves replacement of a marine diesel engine with a non-identical engine, or installation of an additional engine, the new engine

shall comply with the NO_x Technical Code Tier II or Tier III standards as applicable at the time of replacement.

(4) Where a replacement engine is fitted it shall if it is unable to demonstrate compliance with NO_x Technical Code Tier III standards, meet the applicable NO_x Technical Code Tier II standards and any additional engine shall demonstrate compliance with NO_x Technical Code Tier III emission limits.

(5) This section and any other section of this Act relating to nitrogen oxides emissions do not apply to diesel engines intended to be used solely in the case of emergency including lifeboat engines.

(6) Notwithstanding subsection (5), lifeboats used as tenders shall comply with this section and any provision in this Act relating to nitrogen oxide emissions.

(7) Emissions from engines of platforms that are solely dedicated to the exploration, exploitation and associated offshore processing of seabed mineral resources are exempt from anything contained in this Act or any other enactment made under this Act relating to nitrous oxide controls.

(8) Notwithstanding subsection (7), any emissions from engines that jointly supply power to exploration and processing machinery and the platform domestic load are not exempt from the provisions of this Act or any enactment made under this Act relating to nitrous oxide controls.

(9) Each engine on board a Barbados vessel that is subject to MARPOL Annex VI shall have an associated engine technical file.

(10) The technical file referred to in subsection (9) shall remain on board the vessel for as long as the engine remains on board and shall be available for inspection by authorized officers.

(11) The technical file referred to in subsection (9) shall include an on-board NO_x verification procedure, the parent engine's emission test report and the EIAPP Certificate.

- (12) The NO_x controls do not apply to boilers and gas engines.
- (13) The requirements of NO_x Technical Code Tier III standard shall apply where
- (a) the vessel was constructed on or after the 1st day of January, 2016 and is operating in the North America Emission Control Area or the United States Caribbean Sea Emission Control Area;
 - (b) the vessel was constructed on or after the 1st day of January, 2021 and is operating in the Baltic Sea Emission Control Area or North Sea Emission Control Area; and
 - (c) the vessel is operating in a new NO_x Emission Control Area, other than an area referred to in paragraph (a) or (b) and constructed on or after the date of designation of such an emission control area as may be specified in the designation of NO_x Technical Code Tier III emission control area.
- (14) The NO_x Technical Code Tier II standards apply where the vessel is operating outside of a NO_x Emission Control Area.
- (15) The NO_x Technical Code Tier II emission standards shall not apply to
- (a) a marine diesel engine installed on a vessel with a length of less than 24 metres when it has been specifically designed, and is used solely, for recreational purposes;
 - (b) a marine diesel engine installed on a vessel with a combined nameplate diesel engine propulsion power of less than 750 kW if it is demonstrated to the satisfaction of the Administration that the vessel cannot comply with the standards set forth in this Act or any enactment made under this Act because of design or construction limitations of the vessel; or
 - (c) a marine diesel engine installed on a vessel constructed prior to the 1st day of January, 2021 of less than 500 gross tons, with a length of 24 metres or over if it has been specifically designed, and is used solely for recreational non-commercial purposes.

(16) Marine diesel engines with a power output of more than 5 000 kW and a per cylinder displacement of 90 litres or more, installed on or after the 1st day of January, 1990 but before the 1st day of January, 2000 shall comply with the NO_x Technical Code Tier I limits, if an approved method for that engine is commercially available and has been certified by an Administration of a Party to MARPOL Annex VI and notified to the IMO.

(17) The supplement to the IAPP certificate shall indicate whether

- (a) the approved method has been applied pursuant to this Act or any enactment made under this Act;
- (b) the engine has been certified in accordance with this Act or any enactment made under this Act; or
- (c) an approved method is not yet commercially available.

Volatile organic compounds

47.(1) This section applies to

- (a) tankers in designated ports and terminals where emission of VOCs is regulated; and
- (b) gas carriers where the types of loading and containment systems allow safe retention of non-methane VOCs on board.

(2) Compliance with VOC emission control requirements may be achieved through the following:

- (a) fitting vapour emission collection systems in accordance with relevant IMO Guidelines; and
- (b) obtaining certification and class notation from a recognized organization.

(3) All tankers carrying crude oil shall have an approved VOC management plan implemented on board.

- (4) Companies shall, when developing the VOC management plan, refer to relevant MEPC Guidelines.
- (5) VOC management plans shall be approved by a recognized organization acting on behalf of Barbados.
- (6) If the emissions of VOCs from a tanker are to be regulated in a port or terminal under the jurisdiction of Barbados, they shall be regulated in accordance with this section.
- (7) The Administration, where regulating tankers for VOCs emissions, shall submit a notification to the IMO which shall contain the following:
- (a) the size of tankers to be controlled;
 - (b) the cargoes requiring vapour emission control systems; and
 - (c) the date of such control.
- (8) The notification referred to in subsection (7) shall be submitted at least 6 months before the effective date of control referred to in subsection (7)(c).
- (9) Where the Administration, in consultation with the Environmental Protection Department and PAPEC Department, designates ports or terminals at which VOC emissions from tankers are to be regulated, it shall ensure that vapour emission control systems, approved by it taking into account the safety standards for such systems developed by the IMO, are provided in any designated port and terminal and are operated safely and in a manner so as to avoid undue delay to a vessel.
- (10) A tanker to which subsection (6) applies shall be provided with a vapour emission collection system approved by the Administration taking into account the safety standards for such systems developed by the IMO and shall use this system during the loading of relevant cargo.
- (11) A port or terminal that has installed vapour emission control systems in accordance with this subsection may accept tankers that are not fitted with vapour collection systems for a period of 3 years after the effective date identified in subsection (7)(c).

- (12) A tanker carrying crude oil shall have on board and implement a VOC management plan approved by the Director.
- (13) The plan referred to in subsection (12) shall be prepared taking into account guidelines developed by the IMO.
- (14) The plan referred to in subsection (12) shall be specific to each vessel and shall
- (a) provide written procedures for minimizing VOC emissions during loading, sea passage and discharge of cargo;
 - (b) give consideration to the additional VOC generated by crude oil washing;
 - (c) identify a person responsible for implementing the plan; and
 - (d) be written in the working language of the master and officers and, if the working language of the master and officers is not English, French or Spanish, include the translation into one of those languages.
- (15) This section applies to gas carriers where cargo loading and containment systems are designed to allow retention of non-methane VOCs on board or their safe return to shore facilities.

Shipboard incineration

- 48.(1)** This section applies as follows to all incinerators installed on or after the 1st day of January, 2000:
- (a) incinerators with a capacity up to 1 500kW shall be type approved in accordance with relevant IMO Guidelines;
 - (b) incinerators with a capacity over 1 500kW and up to 4 000kW shall be approved in accordance with relevant IMO Guidelines.
- (2) Existing incinerators installed before the 1st day of January, 2000 shall be deemed acceptable by the Administration, if they are type approved in accordance with relevant IMO Guidelines.

- (3) Existing incinerators that are not type approved may be used except for the incineration of polyvinyl chlorides.
- (4) Shipboard incineration of the following substances is prohibited:
- (a) residues of cargoes subject to MARPOL Annex I, II and III or related contaminated packing materials;
 - (b) polychlorinated biphenyls;
 - (c) garbage, as defined by MARPOL Annex V, containing more than traces of heavy metals;
 - (d) refined petroleum products containing halogen compounds;
 - (e) sewage sludge and sludge oil which is not generated on the vessel; and
 - (f) exhaust gas cleaning system residues.
- (5) Shipboard incineration of sewage sludge and sludge oil generated during normal operations of a vessel may also take place in the main or auxiliary power plant or boilers, but in such cases, shall not take place inside ports, harbours and estuaries.
- (6) The operation of incinerators within the North America Emission Control Area or in the emission control area of any other coastal state shall be agreed with the individual port states and coastal states.

Carbon intensity requirements

49.(1) The Administration, in consultation with the PAPEC Department and relevant stakeholders, shall specify the carbon intensity requirements for

- (a) Barbados-registered vessels; and
- (b) foreign-registered vessels in Barbados' territorial sea,

in a Merchant Shipping Notice.

(2) The specified carbon intensity requirements shall align with relevant IMO requirements to the extent practicable.

Consistent implementation of sulphur limit

50. In accordance with the provisions of this Act relating to sulphur, Barbados vessels and foreign-registered vessels when in Barbados' waters shall consistently maintain the sulphur limit of 0.50 percent except where in an emissions control area it is specified that the sulphur limit shall not exceed 0.10 percent.

Flag state ship-specific approval

51.(1) EGCS and EGTS used on board Barbados ships require flag state ship-specific approval in the forms set out in the *Sixth* and *Seventh Schedules*, to confirm that the equipment does not present an unacceptable risk to the vessel and the essential equipment required for the vessel's continued operation.

(2) The Minister may, after consultation with the Director, nominate a classification society to class-approve EGCS and EGTS in respect of Barbados ships.

(3) For the purposes of this section, "class-approve" means approved by the vessel's Classification Society.

Just-in-time and virtual arrival

52. The management of a port shall undertake necessary measures in accordance with the *Facilitation of International Maritime Traffic Act, 2024 (Act 2024-2)* and pursuant to this Act, to reduce unnecessary waiting and idle periods of shipping operations, *en route* to port, at port and pre-departure operations, to achieve emission reduction from ships.

Submission of EIAPP, IAPP and IEE certificates through Maritime Single Window

53.(1) All ships arriving at ports from within the Caribbean Trading Area shall, where practical to do so, electronically submit their EIAPP, IAPP and IEE

certificates through the Barbados Maritime Single Window, to the Designated Lead Port State control officer, 12 hours in advance of their arrival.

(2) All ships arriving at ports from outside the Caribbean Trading Area shall, where practical to do so, electronically submit their EIAPP, IAPP and IEE certificates through the Barbados Maritime Single Window, to the Designated Lead Port State control officer, 24 hours in advance of their arrival.

(3) Where it is not practical for EIAPP, IAPP and IEE certificates to be submitted in the manner required by subsections (1) and (2), those certificates shall be produced on arrival to the authorized officer conducting port state inspections.

Submission of other documents through the Barbados Maritime Single Window

54.(1) The Administration may require the submission of other emission control related documentation through the Maritime Single Window, for port state control purposes.

(2) Where the shipowner, master or agent finds it impractical to submit any documentation requested pursuant to subsection (1) through the Maritime Single Window, the shipowner, master or agent may, on arrival, submit the requested documentation to the authorized officer conducting port state inspections.

Air pollution prevention requirements: maritime autonomous surface ships

55. Maritime autonomous surface ships shall be equal to or better than conventionally manned merchant ships, in terms of their environmental and energy efficiency performance and shall be MARPOL Annex VI compliant.

PART VII

FUEL OPTIONS AND FUEL COMPLIANCE

Marine fuels

56.(1) Marine fuel suppliers may use the fuels listed in subsection (2) for propulsive and non-propulsive energy uses for vessels, based on

- (a) vessel type;
- (b) fuel storage requirements;
- (c) purpose for use on board vessel;
- (d) market availability; and
- (e) other relevant factors peculiar to the vessel and the fuel.

(2) The fuels referred to in subsection (1) include

- (a) diesel-quality fuels, namely
 - (i) heavy fuel oil produced from sweet (low sulphur) crude oil with a low sulphur content of 0.50 per cent or lower and on vessels with exhaust abatement technologies;
 - (ii) marine gas oil, only on vessels with a selective catalytic reduction unit;
 - (iii) low sulphur distillate fuels;
 - (iv) vegetable oils, combined with exhaust abatement technologies;
 - (v) hydro-treated vegetable oil;
 - (vi) pyrolysis oil;
 - (vii) biodiesel;
 - (viii) biomass-to-liquid or synthetic biodiesel;

- (ix) gas-to-liquid or synthetic diesel;
 - (x) liquefied natural gas; and
 - (xi) liquefied biogas;
- (b) gases, namely
- (i) liquefied natural gas;
 - (ii) liquefied biogas;
 - (iii) dimethyl ether;
 - (iv) liquefied petroleum gas;
 - (v) compressed natural gas; and
 - (vi) hydrogen, produced from renewable sources or hydrogen with carbon capture and storage;
- (c) alcohols, namely
- (i) methanol;
 - (ii) ethanol;
 - (iii) butanol; and
 - (iv) OBATE fuel; and
- (d) solid fuels, namely
- (i) uranium;
 - (ii) coal; and
 - (iii) biofuels derived from wood or wood residues.
- (3) Marine fuel suppliers shall select the best alternative to high sulphur fuel oils and provide fuels to vessels for their propulsive and non-propulsive purposes, as the case may be.
- (4) For the purposes of this section, “OBATE fuel” means on board alcohol to ether fuel.

Register of regulated marine fuels

57.(1) The Administration shall maintain a register, in this Act referred to as the “Register of Regulated Marine Fuels”, in which shall be listed

- (a) prohibited marine fuels; and
- (b) restricted marine fuels.

(2) The Register of Regulated Marine Fuels shall be administered by the Administration, in consultation with the Ministry responsible for Energy.

(3) The *Miscellaneous Controls Act*, Cap. 329 shall apply to items listed in the Register of Regulated Marine Fuels.

(4) No Barbados vessel and no foreign-vessel when in Barbados’ waters shall use any marine fuel categorized in the Register of Regulated Marine Fuels as prohibited or restricted, except where those fuels comply with any specified requirements.

Selection of compliant marine fuels by local fuel suppliers to vessel

58.(1) Local fuel suppliers who supply marine fuels to ships shall ensure that such fuels are compliant with MARPOL Annex VI, this Act and any enactment made under this Act.

(2) Local fuel suppliers shall, when providing marine fuels to ships, take the following into account:

- (a) technical criteria in relation to the system of the particular vessel associated with the fuel including
 - (i) engines;
 - (ii) storage tanks;
 - (iii) pumps;
 - (iv) pipes;

- (v) exhaust systems;
 - (vi) bunkering of ships;
 - (vii) fuel storage terminal;
 - (viii) fuel pre-treatment requirements; and
 - (ix) any other relevant technical criteria;
- (b) the environmental standards for ships as determined by the IMO in relation to marine fuels;
 - (c) the cost of marine fuels in relation to prevailing market prices;
 - (d) logistics, safety, security and other relevant considerations when selecting marine fuels; and
 - (e) international regulatory criteria for marine fuels as established by the IMO and ISO standards.

Obligations of local fuel suppliers

59.(1) Local suppliers of fuel oil for combustion purposes delivered to, and used on board vessels shall be registered in the Register of Local Suppliers of Fuel Oil and shall

- (a) provide the master of the vessel or operator of the platform with a bunker delivery note containing the information set out in the *Eighth Schedule*;
- (b) provide a declaration in the bunker delivery note that is signed by the fuel oil supplier's representative, that the fuel oil supplied conforms to the information contained in the bunker delivery note;
- (c) retain a copy of the bunker delivery note for 3 years from the date of delivery; and
- (d) not contaminate or blend the fuel so that it no longer conforms with the declaration required by paragraph (b).

(2) In addition to the initial declaration to be submitted by local fuel suppliers in accordance with the *Ninth Schedule*, local fuel suppliers shall submit an annual declaration, in accordance with the *Tenth Schedule*.

(3) A person who is not registered on the Register of Local Suppliers of Fuel Oil is guilty of an offence and liable on summary conviction to a fine of \$7 000 where the person supplies fuel oil to a vessel

- (a) in the territorial sea of Barbados;
- (b) in the contiguous zone of Barbados; or
- (c) in the exclusive economic zone of Barbados.

Register of Local Suppliers of Fuel Oil to Ships

60.(1) The Director shall establish and maintain a register of persons who supply fuel oil to ships, in this Act, referred to as the “Register of Local Suppliers of Fuel Oil”.

(2) A marine notice may

- (a) prescribe the way in which the Register referred to in subsection (1) shall be established and maintained, including the details that the Director shall enter in the Register; and
- (b) prescribe requirements that shall be complied with by
 - (i) persons seeking registration on the Register of Local Suppliers of Fuel Oil; and
 - (ii) persons registered on the Register of Local Suppliers of Fuel Oil.

(3) The register shall be made available for physical inspection by any member of the public on appointment and upon payment of such fee as the Director determines.

(4) A virtual inspection of the electronic register shall be facilitated through the Administration’s online platform by any person who has paid such fee as the Director determines for access to the platform.

Using fuel oil that does not meet fuel oil quality requirements

61.(1) The master and the owner of a vessel are subject to the payment of an administrative penalty imposed under section 118 if

- (a) the fuel oil used on board the vessel does not comply with the requirements set out in MARPOL Annex VI; and
- (b) at least one of the following applies:
 - (i) the fuel oil is used while the vessel is in the territorial sea of Barbados;
 - (ii) the fuel oil is used while the vessel is in the contiguous zone of Barbados;
 - (iii) the fuel oil is used while the vessel is in the exclusive economic zone of Barbados; or
 - (iv) the vessel is a Barbados vessel and the fuel oil is used while the vessel is beyond the exclusive economic zone of Barbados.

Fuel oil supplied must be in accordance with the declaration

62.(1) A person who supplies fuel oil, other than gas fuel, to a vessel of 400 gross tons or above is responsible for the final blend of the components of the fuel supplied.

(2) A person referred to in subsection (1) is guilty of an offence and is liable on summary conviction to a fine of \$50 000

- (a) if the supply occurs while the vessel is
 - (i) in the territorial sea of Barbados;
 - (ii) in the contiguous zone of Barbados; or
 - (iii) in the exclusive economic zone of Barbados;

- (b) if the person delivers, with the supply, a bunker delivery note that contains a declaration signed by the person or the person's representative certifying that the fuel oil meets the requirements set out in MARPOL Annex VI; and
- (c) if the fuel oil supplied does not meet those requirements.

Obligations of masters and operators of vessels

- 63.** The master of a vessel or operator of a platform shall
- (a) ensure that the bunker delivery note is kept on board the vessel or platform in a place so as to be readily available for inspection at all reasonable times;
 - (b) certify, when requested by a duly authorized officer, that a copy of the bunker delivery note is a true copy of the original; and
 - (c) ensure that the bunker delivery note is retained for a period of 3 years from the date on which the fuel oil was delivered on board.

Obligations of local fuel supplier's representative

64.(1) The representative of a local supplier of fuel oil shall provide a sample of the fuel oil delivered with the bunker delivery note.

- (2) On completion of the bunkering operations
 - (a) the representative of a local supplier and the master; or
 - (b) the representative of a local supplier and the officer in charge of the bunkering operation,

shall sign and seal the bunker delivery note.

- (3) The master of the vessel, operator of the platform, or the company, shall retain control of the sample referred to in subsection (1), for not less than 12 months, commencing on the day of delivery or, until the fuel oil is substantially consumed, if the fuel oil is not consumed in less than 12 months.

(4) The bunker delivery note and the sample of fuel oil referred to in subsection (1) shall be available for inspection and verification at all reasonable times.

(5) The bunker delivery note referred to in subsection (1) shall be available at all reasonable times for copies to be made and as set out in the *Eighth Schedule*.

(6) A person who produces a false bunker delivery note to a maritime law enforcement officer, a port state control inspection officer or an officer designated by the Director to inspect ships and verify IMO compliance, other than, authorized officers of Customs, Immigration and Port Health, is guilty of an offence and is liable on conviction on indictment to a fine of \$200 000 or to imprisonment for a term of 7 years or to both.

Offence of not retaining bunker delivery note

65.(1) Where a local supplier supplies fuel oil, other than gas fuel, to a Barbados vessel of 400 gross tons or above and

- (a) a bunker delivery note for the supply of fuel oil to the vessel is provided to the master of the vessel;
- (b) the bunker delivery note is not retained for 3 years after the supply; and
- (c) the bunker delivery note is not readily available for inspection at all reasonable times,

the local supplier is subject to the payment of an administrative penalty imposed under section 118.

(2) Where fuel oil, other than gas fuel, is supplied to a Barbados vessel of 400 gross tons or above and

- (a) a bunker delivery note for the supply of fuel oil to the vessel is provided to the master of the vessel;
- (b) the bunker delivery note is not retained for 3 years after the supply; and

- (c) the bunker delivery note is not readily available for inspection at all reasonable times,

the master and owner of the vessel are each subject to the payment of an administrative penalty imposed under section 118.

- (3) Where fuel oil, other than gas fuel, is supplied to a foreign-registered vessel of 400 gross tons or above and

- (a) a bunker delivery note for the supply of fuel oil to the vessel is provided to the master of the vessel;
- (b) the bunker delivery note is not retained in the vessel for 3 years after the supply; and
- (c) the bunker delivery note is not readily available for inspection at all reasonable times while the vessel is in a Barbados port or Barbados offshore terminal,

the owner and master of the vessel are each subject to the payment of an administrative penalty imposed under section 118.

- (4) For the purposes of subsection (2), a bunker delivery note shall be retained

- (a) on board the vessel; or
- (b) at a place approved under subsection (6).

- (5) The owner of a Barbados vessel that engages in scheduled services may apply in writing to the Director for approval to retain bunker delivery notes at a particular place.

- (6) Where an application is made to the Director, the Director shall

- (a) approve, or refuse to approve, the place referred to in subsection (5); and
- (b) give the owner of the vessel a written notice of the decision, and, if the Director refuses to approve the place, give reasons for refusal.

Fuel oil sampling

66.(1) Every bunker delivery note shall be accompanied by a sample of the fuel supplied.

(2) The sample referred to in subsection (1) shall be 400 millilitres and shall be provided with a label with information stating the following:

- (a) the place where the sample was taken;
- (b) the sampling method;
- (c) the bunker date;
- (d) the name of the bunker, barge or pier;
- (e) the receiving vessel's name and IMO number;
- (f) the sample seal number; and
- (g) the bunker grade.

(3) A sample referred to in subsection (1) shall be sealed by the supplier and the label shall be signed by the officer in charge of the bunkering and the representative of the supplier.

(4) Where the supplier referred to in subsection (1) does not provide a MARPOL Annex VI compliant sample or the bunker delivery note does not contain all the required information, a notification shall be issued to the vessel's flag State, if the vessel is not a Barbados vessel, and to the bunker port State, if the vessel was not bunkered in Barbados.

(5) Where a vessel was bunkered in Barbados, a notification shall be issued to the Director.

Offence of not retaining fuel oil sample

67. Where fuel oil, other than gas fuel, is supplied to a vessel of 400 gross tons and above and a representative sample of the fuel oil supplied is provided to the master of the vessel and the sample is not retained until

- (a) the time at which the fuel oil supplied is substantially consumed; or
- (b) for a period of 12 months commencing on the day on which the fuel oil is supplied,

whichever period is later, the master and the owner of the vessel are each guilty of an offence and liable on summary conviction to a fine of \$75 000.

Offence: notification of sulphur content of gas fuel

68.(1) A person who

- (a) supplies gas fuel to a vessel of 400 gross tons or above whilst the vessel is
 - (i) in the territorial sea of Barbados;
 - (ii) in the contiguous zone of Barbados; or
 - (iii) in the exclusive economic zone of Barbados; and
- (b) does not provide documentation specifying the sulphur content of the gas supplied to the master of the vessel in connection with the supply,

is subject to the payment of an administrative penalty imposed under section 118.

(2) For the purposes of this Part,

“fuel oil supplier” means a person who is responsible for the final blend of fuel oil supplied to a local supplier of fuel oil;

“fuel oil supplier’s representative” means a person appointed by a fuel oil supplier to provide a declaration on the bunker delivery note, that the fuel supplied complies with the provisions of MARPOL Annex VI; and

“local supplier of fuel oil ” means a person who receives fuel oil from the fuel oil supplier with a view to its delivery to and use on board a vessel.

PART VIII

NATIONAL LEVEL MARITIME ENERGY GOVERNANCE

Development of a marine emissions permitting scheme: regional arrangements

69. Barbados may enter into regional arrangements for the development of a marine emissions permitting scheme to

- (a) set a cap on air emissions from ships navigating in Barbados and the wider Caribbean;
- (b) set a cap on air emissions from platforms operating in Barbados and the wider Caribbean;
- (c) create permits up to the level of the cap;
- (d) set costs of emissions per permit;
- (e) create flexibility as to how and where ship-source pollution is reduced;
- (f) set affordable emissions cuts; and
- (g) manage the annual lowering of the cap.

Duties of the port

70.(1) All ports have a duty, in accordance with this Act or any enactment made under this Act to ensure the provision of adequate facilities for

- (a) vessels using repair facilities of such ports for the reception of ozone-depleting substances and equipment containing such substances when the equipment is removed from the vessels; and
- (b) vessels using its ports, terminals or report facilities for the reception of wash-water and residue from an exhaust gas cleaning system,

without causing undue delay to vessels.

(2) Where facilities referred to in subsection (1)(a) are not available in Barbados to manage and process the substances referred to in that subsection, the Director shall notify the IMO.

(3) Where any national port, at any time after the commencement of this Act, acquires adequate infrastructure to process and manage ozone-depleting substances and equipment containing such substances, the Director shall notify the IMO, in order that the IMO can notify other Member States of Barbados' capacity to deal with such substances at its ports.

Reports on reception facilities

71. Reports on unavailability or inadequacy of reception facilities shall be sent to the Technical Manager (Maritime Sector Emissions Control and Maritime Energy Management).

Adequate waste reception facilities for MARPOL Annex VI waste

72.(1) Waste reception facilities must be adequate to meet the needs of vessels carrying MARPOL Annex VI waste, namely, exhaust gas cleaning residues and ozone-depleting substances removed from vessels.

(2) Exhaust gas cleaning residues are ship-generated waste and shall be appropriately disposed of into land-based reception facilities.

- (3) Ozone-depleting substances when removed from vessels and delivered to reception facilities are operational waste, and therefore, ship-generated waste, and shall be appropriately disposed of into land-based reception facilities.
- (4) Ports are prohibited from disposing of waste referred to in subsection (3) unless they have adequate waste reception facilities for MARPOL Annex VI categories of waste.
- (5) For the purposes of this section, “adequate waste reception facilities” mean facilities that are capable of receiving the types and quantities of waste falling under MARPOL Annex VI from vessels, taking into account the
- (a) operational needs of users of the port or terminal;
 - (b) size and geographical location of the port or terminal; and
 - (c) types of vessels calling at the port or terminal.

Port air quality strategies and management systems

- 73.(1)** The Manager of the PAPEC Department shall develop a port air quality strategy and management system for
- (a) the Port of Bridgetown;
 - (b) any other port under the authority and management of the Barbados Port Inc.; and
 - (c) a place designated as a port by the Minister responsible for Shipping.
- (2) The management of a privately owned port in Barbados shall develop a port air quality strategy and management system in respect of that port.
- (3) The port air quality strategy must take into account the specific nature of the port and must
- (a) contain a statement of intent covering the overarching goals and commitment in relation to air quality and demonstrate that there is a contingency in place to deliver a port air quality strategy;

- (b) contain a statement that includes a clear commitment from the port in respect of promoting and maintaining clean air quality in the port and immediate areas surrounding the port;
- (c) establish baselines within the strategy to provide an insight of current impacts on air quality in the port and allow for monitoring of improvements;
- (d) contain significant sources from emissions to air from port and port-related activities and any relevant actions to reduce them must be identified;
- (e) define the geographical area relevant to the port's air quality strategy;
- (f) set out actions to be delivered by associated third parties and tenants of the port, if relevant to the affected area as far as practicable to do so;
- (g) set out actions with the greatest likelihood to produce improvements during and after the baseline year, whether or not they are already planned or implemented;
- (h) co-operate with port tenants, users and other relevant stakeholders, in securing support from persons who may have the ability to contribute to the port's emissions reduction efforts;
- (i) provide some detail on specific port air quality management system and monitoring programme, in order to prevent, reduce and control pollution of the atmosphere from port and port-related activities, as identified in the explanatory table set out in the *Eleventh Schedule*;
- (j) identify performance indicators;
- (k) indicate a time frame for implementation of other elements within the strategy;

- (l) identify a monitoring and reporting mechanism in relation to the strategy itself, namely, a monitoring and action plan cycle, based on the following:
 - (i) cost-benefit assessment and action planning;
 - (ii) establishment of baseline;
 - (iii) action implementation;
 - (iv) monitoring and assessment; and
 - (v) review emissions reductions for further recommended actions; and
 - (m) contain a baseline inventory in order to give an understanding of current air quality impacts of port operations, including an identification of emission's sources beyond the port's influence, and provide a baseline against which future changes can be assessed.
- (4) In addition to the matters referred to in subsection (3), in improving its port air quality standards, the port must take into account the World Health Organization guidelines for ambient air quality.
- (5) The port air quality strategy and management system shall be submitted to the Environmental Protection Department for review and consideration.
- (6) Where the Environmental Protection Department makes recommendations in respect of the port air quality strategy and management system, the relevant port shall implement the said recommendations and re-submit the revised port air quality strategy and management system to the Environmental Protection Department for approval.

Port energy audits and port energy efficiency certification

74.(1) Within 6 months after the commencement of this Act, ports shall conduct an initial internal energy audit, the findings of which shall be reported to the Technical Manager or officer designated by the Minister.

- (2) The Technical Manager or other person or officer designated by the Minister shall produce a report and recommendations for improvement in respect of the port's internal energy audit and the report shall be sent to the Director.
- (3) Internal energy audits shall be carried out after the audit mentioned in subsection (1).
- (4) One year after the commencement of this Act, the port shall be externally audited for its energy and environmental performance by an independent auditor nominated by the Minister, after consultation with the Director, Technical Manager or officer designated under subsection (1) and the PAPEC Department.
- (5) The port shall, within 3 years after the commencement of this Act, become ISO certified in relation to its energy and environmental performance in order to verify that its energy management system meets international standards.
- (6) External port energy audits shall be conducted every 3 years.

Applicable ISO standards for port energy: environment compliance

75. Ports shall, in becoming energy efficient and environmentally compliant adhere to standards set by the ISO, in respect of the following:

- (a) ISO 9001: Quality Management Systems;
- (b) ISO 14001: Environmental Management Systems; and
- (c) ISO 50001: Energy Management Systems.

Port carbon footprint reporting

76.(1) The port's carbon footprint reporting system shall be in use within 24 months after the commencement of this Act.

- (2) The Port CEO or his designee shall make port carbon footprint reports available to the Administration at the end of every carbon footprint reporting period, that is to say, annually.
- (3) The Technical Manager shall advise the Director of any necessary actions to be taken based on the carbon footprint report.

Responsibilities of Technical Manager

- 77.** The Technical Manager shall be responsible for the following:
- (a) climate change coordination for the maritime sector;
 - (b) conducting a rapid assessment of ship emissions in the national context, in accordance with the IMO's Guidance for Conducting a Rapid Assessment on Ship Emissions, so as to generate quantitative and qualitative information about Barbados' maritime emissions status at the time of analysis;
 - (c) conducting energy audits for the maritime sector, in consultation with port management;
 - (d) developing, in consultation with relevant stakeholders, a climate change adaptation plan and ship emissions reduction strategy for the national maritime sector, namely, ports, shipping and other emitting maritime development activities, such as offshore energy development;
 - (e) developing and implementing energy sustainability strategies for the maritime sector;
 - (f) developing, in accordance with IMO's Guidance on the Development of a National Ship Emissions Reduction Strategy, a national emissions reduction strategy for the shipping sector, namely
 - (i) a Barbados registered fleet;
 - (ii) a domestic fleet;
 - (iii) a fleet servicing Barbados' international transport demand;
 - (iv) a fleet passing through Barbados' territorial seas;
 - (v) a fleet owned by national shipowners; or
 - (vi) a hybrid fleet comprising fleets listed at subparagraphs (i) to (v);

- (g) assisting in the
 - (i) continuous implementation of MARPOL Annex VI;
 - (ii) designation and monitoring of clean air spaces, coastal air quality zones and emissions control areas;
 - (iii) the development of emissions trading schemes for the maritime sector;
 - (iv) development of a green port concept, in consultation with port management;
- (h) consulting with
 - (i) the Ministry responsible for the Environment;
 - (ii) the Ministry responsible for Energy; and
- (i) generally performing any other task or function, in furtherance of the objectives of this Act and any enactment made under this Act, and in support of MARPOL Annex VI.

Senior Port Management Responsibilities

78. The PAPEC Department shall, in respect of energy efficiency at the ship-to-port interface

- (a) direct and advise on internal port energy management regime;
- (b) establish a port energy management system, in this Act referred to as “ENMS”;
- (c) provide resources to develop the ENMS;
- (d) provide technical, financial and training resources to the energy management team, and other necessary resources for implementing the ENMS;
- (e) define the scope and boundaries of the ENMS;

- (f) communicate with employees and third parties affiliated with the port about matters relating to the ENMS;
- (g) appoint a representative or port energy manager to allow for the establishment of an energy team;
- (h) incorporate energy considerations in long term planning;
- (i) promote greater usage of alternative energy sources in the port;
- (j) ensure that the port attains ISO standard certification in relation to its energy efficiency and environmental performance; and
- (k) perform any other function to support MARPOL Annex VI.

Port energy manager's responsibilities

79. The Port Energy Manager, shall

- (a) develop and monitor ENMS, as directed by senior port management;
- (b) review and approve relevant reports made by the port energy team;
- (c) communicate periodically with senior port management;
- (d) provide technical, financial and training resources to the Energy Management Team, and other necessary resources for implementing the ENMS;
- (e) purchase energy products and services, as authorized by senior port management;
- (f) conduct periodical internal energy audits;
- (g) ensure that energy performance indicators are in place and in line with selected targets;
- (h) monitor activities of the energy team and provide assistance and training activities;
- (i) collect records including minutes of meetings and review management documents;

- (j) facilitate the transition from convention to renewable energy sources in the port, generally and at the ship-to-port interface;
- (k) increase awareness about energy efficiency in the port and shipping sector, and increase participatory involvement among employees; and
- (l) do any other thing that is necessary to support MARPOL Annex VI and promote sustainability at the ship-to-port interface.

Port energy management team's responsibilities

80. The manager of the Port shall establish a port energy management team which shall

- (a) implement and maintain the ENMS as directed by the Port Energy Manager;
- (b) review and improve the essential documents, issues highlighted and decisions made by the team;
- (c) conduct management reviews;
- (d) communicate the importance of emissions reduction and promote port energy conservation and sustainability efforts;
- (e) ensure appropriate energy performance indicators are in place;
- (f) integrate energy efficiency into the long-term planning of the port; and
- (g) do any other thing that is necessary to support MARPOL Annex VI.

Climate change coordinator

81.(1) For the purposes of this Act, "Climate Change Coordinator" means the public officer appointed in the Ministry responsible for Maritime Affairs, or any other public officer designated by the Minister, to manage climate change and marine environment matters.

- (2) The Climate Change Coordinator shall be responsible for the following:
- (a) conducting a rapid assessment of ship emissions in the national context, in accordance with the IMO's Guidance for Conducting a Rapid Assessment on Ship Emissions, so as to generate quantitative and qualitative information about Barbados' maritime emissions status at the time of analysis;
 - (b) developing, in consultation with relevant stakeholders, a climate change adaptation plan and ship emissions reduction strategy for the national maritime sector, namely ports, shipping and other emitting maritime development activities, such as offshore energy development;
 - (c) developing, in accordance with IMO's Guidance on the Development of a National Ship Emissions Reduction Strategy, a national emissions reduction strategy for the shipping sector, namely
 - (i) a Barbados registered fleet;
 - (ii) a domestic fleet;
 - (iii) a fleet servicing Barbados' international transport demand;
 - (iv) a fleet passing through Barbados' territorial seas;
 - (v) a fleet owned by national shipowners; or
 - (vi) a hybrid fleet comprising fleets listed at subparagraphs (i) to (v);
 - (e) consulting with
 - (i) the Ministry responsible for the Environment;
 - (ii) the Ministry responsible for Energy; and
 - (f) generally performing any other task or function, in furtherance of the objectives of this Act and any enactment made under this Act and in support of MARPOL Annex VI.

Climate change adaptation plan and ship emissions reduction strategy

82.(1) The climate change adaptation plan and ship emissions reduction strategy shall

- (a)* align to the extent practicable with the IMO Strategy on Reduction of GHG Emissions from Ships or such strategy as may be amended by the IMO; and
 - (b)* take into account local circumstances.
- (2) The measures to be undertaken in fulfilment of implementing
- (a)* mandatory elements of the climate change adaptation plan and ship emissions reduction strategy shall be published in a merchant shipping notice; and
 - (b)* recommendatory elements of the climate change adaptation plan and ship emissions reduction strategy shall be published in a marine guidance note.

PART IX

VERIFIED CONTROL EMISSION IN-USE STRATEGY: MARINE DIESEL
ENGINES

Administration of this Part

83. This Part shall be administered by the PAPEC Department, in consultation with the Chief Executive Officer of the Port of Bridgetown and the Environmental Protection Department of the Ministry responsible for the Environment.

Application of this Part

84. This Part applies to persons applying to have a marine diesel engine emission control strategy verified by the PAPEC Department.

Application process: initiating process

85.(1) A person who applies for the verification of a marine diesel engine emission control strategy for use with an emission control group, shall submit a preliminary verification application in such form as the PAPEC Department determines.

(2) The applicant referred to in subsection (1) shall, in order to obtain verification, conduct

- (a) emission reduction tests;
- (b) durability tests; and
- (c) field demonstration,

and submit the results together with comments and other information in a final verification application to the PAPEC Department, in such form as the PAPEC Department determines.

(3) If the PAPEC Department grants verification of a marine diesel engine emission control strategy, the Port CEO shall issue an order to the applicant identifying the verified emission reduction and any conditions that must be met for the diesel emission control strategy to function effectively.

(4) Upon the grant of verification of a diesel emission control strategy, the applicant shall provide a warranty to the PAPEC Department.

(5) A marine diesel engine emission control strategy that employs 2 or more individual systems or components shall be tested and submitted for evaluation as one system.

(6) A verified marine diesel engine emission control strategy shall not be installed on an engine with another diesel emission control strategy that is not included in the order referred to in subsection (3).

(7) An applicant who seeks verification of an alternative diesel fuel shall follow any specifications provided by the PAPEC Department.

Application process: preliminary verification application

86.(1) The applicant shall submit a preliminary verification application in such form as the PAPEC Department determines for a marine diesel engine emission strategy to the PAPEC Department before submitting a final application for such a strategy.

(2) The PAPEC Department shall use the information in the preliminary verification application referred to in subsection (1) in order to determine

- (a) whether the strategy relies on sound principles of science and engineering to control emissions;
- (b) whether there is a need for additional analysis; and
- (c) the appropriateness of allowing alternatives to the prescribed requirements.

(3) The preliminary verification application shall be in such form as the PAPEC Department determines and shall include:

- (a) evidence of the identity, name, address and the phone number of the person submitting the preliminary verification application; and
- (b) a description of the marine diesel engine emission control strategy's principles of operation and a schematic depicting the operation.

(4) If after reviewing the preliminary verification application, the PAPEC Department determines that the applicant has not made a satisfactory demonstration that the diesel emission control strategy relies on sound principles of science and engineering to achieve emission reductions, the Port CEO shall

notify the applicant of the determination in writing within 30 days of receiving the preliminary verification application.

(5) Where the PAPEC Department notifies the applicant that the applicant has not made a satisfactory demonstration, the applicant may

- (a) withdraw from the verification process; or
- (b) submit additional written material in support of the application within 60 days from the date of the notification letter from the Port CEO.

(6) Where

- (a) after reviewing the additional materials referred to in subsection (5); or
- (b) if the applicant fails to submit additional materials in the time mentioned in that subsection,

the PAPEC Department determines that the applicant has not yet made a satisfactory demonstration that its product relies on sound principles of science and engineering to achieve emission reductions, the preliminary verification application shall be suspended.

(7) The PAPEC Department shall review the additional materials mentioned in subsection (5) when deciding whether to suspend a preliminary or final application or revoke an existing verification.

(8) Where the PAPEC Department has reason to doubt the scientific or engineering soundness of the diesel emission control strategy, the PAPEC Department shall notify the applicant in writing and may require the applicant to submit additional supporting materials and clarifications no later than 60 days from the date of the notification letter.

(9) Where the additional materials are not received by the PAPEC Department within the period specified in the letter of notification, the preliminary or final application may be suspended or the existing verification may be revoked.

- (10) A preliminary verification application that has been suspended, may be recommenced at the discretion of the PAPEC Department.
- (11) The PAPEC Department shall work with the applicant to determine appropriate emission control group parameters for defining emission control groups that are appropriate for the marine diesel strategy.
- (12) The applicant shall submit his proposed test plan for meeting the requirements of the NO_x Technical Code and the existing data for consideration by the PAPEC Department.
- (13) The preliminary verification application must focus on verification of the diesel emission control strategy for use with a single emission control group.
- (14) The Manager of the PAPEC Department may, where deemed necessary, request the applicant to send a brief statement to the PAPEC Department, that the applicant acknowledges and agrees to do the following:
- (a) provide a warranty, that within the warranty period, the verified marine diesel engine emission control strategy is free from defects in design, materials, workmanship, or operation of the marine diesel engine emission control strategy which may cause marine diesel engine emission control strategy to fail to conform to the emission control performance level to which it was verified, or to the other requirements of the NO_x Technical Code;
 - (b) submit any relevant information generated pursuant to this Part;
 - (c) keep records containing all relevant information; and
 - (d) provide all maintenance information for the marine diesel engine emission control strategy.
- (15) When an applicant submits a preliminary verification application, the PAPEC Department,
- (a) shall within 30 days of its receipt, determine whether the applicant has identified the information necessary to support an application for verification; and

- (b) shall notify the applicant in writing that the applicant may submit an application for verification.
- (16) Where an applicant for verification has submitted inadequate information, the PAPEC Department may suggest modifications to the proposed preliminary verification application to facilitate verification of the diesel emission control strategy.
- (17) All applications, correspondence, and reports, with the exception of applications based on the use of fuel additives or alternative diesel fuels, locomotive applications, transport refrigeration units and marine applications, shall be submitted in writing.
- (18) The following shall also be submitted to the PAPEC Department:
 - (a) all applications, correspondence, and reports for systems utilizing any form of fuel additive or alternative diesel fuel intended for locomotives; and
 - (b) all applications, correspondence, and reports for systems intended for transport refrigeration units or marine applications.
- (19) The PAPEC Department may accept supporting data in electronic form as part of the application.
- (20) The preliminary and final verification applications for a diesel emission control strategy shall be in accordance with section 87.
- (21) Where requested information is not applicable to the diesel emission control strategy, the applicant must indicate and if the PAPEC Department concurs with the applicant's judgment that information is not applicable, the Port CEO may waive the requirement to provide the information requested.
- (22) Final verification application including any additional information, updates, or changes, and all additional information required shall be submitted to the PAPEC Department.

Marine diesel engine emission control strategy

87.(1) The applicant shall test the marine diesel engine emission control strategy on an emission control group basis and identify the emission control group.

(2) The applicant shall identify the test marine diesel engines and, if applicable, by providing the engine family name, make, model, model year, and PM and NO_x certification levels.

(3) The applicant shall also describe the applications for which the marine diesel engine emission control strategy is intended to be used by giving examples of in-use vessels or equipment, characterizing typical duty cycles, indicating any fuel requirements, and providing any other related information.

Durability testing requirements

88.(1) The applicant must demonstrate, to the satisfaction of the Port CEO, the durability of the applicant's marine diesel engine emission control strategy through an actual field or laboratory based demonstration combined with engine dynamometer-based emission tests.

(2) If the applicant chooses a laboratory based durability demonstration, an additional field demonstration will be required to demonstrate field compatibility.

(3) Where the applicant has demonstrated the durability of the identical strategy in a prior verification or has demonstrated durability through field experience, the applicant may request that the PAPEC Department accept the previous demonstration in fulfillment of the requirement under subsection (1).

(4) In evaluating a request referred to in subsection (3), the PAPEC Department may consider all relevant information including the following:

(a) the similarity of baseline emissions and application duty cycles;

- (b) the relationship between the emission control group used in previous testing and the current emission control group;
- (c) the number of engines tested;
- (d) evidence of successful operation and user acceptance; and
- (e) published reports.

Verification of emission reductions for alternative marine diesel fuels and fuel additives

89.(1) This section applies to in-use strategies that include emission reductions from the use of alternative marine diesel fuels or fuel additives.

(2) For the purposes of subsection (1), the applicant for the verification of emissions reductions for alternative marine diesel fuels or fuel additives shall submit a proposed test protocol which includes

- (a) references to criteria pollutant and toxic emissions sampling and analyses that are consistent with the requirements of subsection (3); and
- (b) a description and parameters of alternative marine diesel fuels and fuel additives.

(3) Where operation or performance of a marine diesel engine emission control strategy is affected by fuel sulphur content, the sulphur content of the test fuel shall be no less than 66 per cent of the stated maximum sulphur content for the marine diesel engine emission control strategy, unless

- (a) the testing is performed with fuel containing 15 parts per million weight or less sulphur for verification on 15 parts per million weight or less sulphur diesel fuel; or
- (b) the testing is performed with diesel fuel commercially available in Barbados for verification.

- (4) The applicant referred to in subsection (2) shall
 - (a) describe the applicability of the alternative marine diesel fuel or fuel additive to diesel engines;
 - (b) identify any requirements for engine or fuel system modification; and
 - (c) provide a general description of the alternative marine diesel fuel or fuel additive that includes the fuel type, fuel characteristics, fuel properties, fuel formulation and chemical compound.
- (5) The applicant for the candidate alternative marine diesel fuel or fuel additive shall
 - (a) identify the chemical composition and concentration of fuel additives; and
 - (b) specify
 - (i) the sulphur content;
 - (ii) total aromatic content;
 - (iii) total polycyclic aromatic hydrocarbon content;
 - (iv) nitrogen content;
 - (v) API gravity (density);
 - (vi) distillation temperature distribution information, initial boiling point;
 - (vii) 10 percent recovered, 50 percent recovered, 90 percent recovered and end point;
 - (viii) viscosity (engine performance);
 - (ix) fuel volatility (engine performance);
 - (x) ignition quality (engine performance);
 - (xi) fuel operating temperatures (engine performance);

- (xii) engine wear tendencies (engine wear);
 - (xiii) corrosion (engine wear);
 - (xiv) lubricity (engine wear); and
 - (xv) fuel flash point (safety).
- (6) In addition to the matters required by subsection (5), the applicant shall
- (a) provide information on the candidate alternative marine diesel fuel or fuel additive to determine if there are chemicals in the fuel additive that may increase levels of toxic compounds or form potentially toxic compounds in the fuel or fuel additive; and
 - (b) conduct an analysis for the following metals and elements by the a method specified by the applicant:
 - (i) copper;
 - (ii) iron;
 - (iii) cerium;
 - (iv) lead;
 - (v) cadmium;
 - (vi) chromium; and
 - (vii) phosphorus.
- (7) The PAPEC Department may, after reviewing the chemical composition of the candidate alternative diesel fuel and its additives or fuel additive require additional analysis for other toxic compounds.
- (8) With the approval of the PAPEC Department or a designated officer, an applicant may also specify different fuel parameters and tests methods that are appropriate to better characterize the candidate alternative diesel fuel or fuel additive.

(9) Upon review of the proposed test protocol, the PAPEC Department or a designated officer may require additional fuel components, parameters and specifications to be determined.

PART X

ENGINE INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATES

EIAPP Certificate to be on board

90. An EIAPP certificate shall accompany an engine referred to in section 91 throughout its lifetime and shall be available on board the vessel at all times.

Engines requiring an EIAPP Certificate

91.(1) Subject to subsection (2) and section 92, each marine diesel engine with a power output of more than 130kW installed on a vessel or an engine which undergoes a major conversion shall have an EIAPP certificate.

(2) Subsection (1) does not apply where the Director is satisfied that such an engine which has undergone a major conversion is an identical replacement to the previous engine.

Engines not required to have an EIAPP Certificate

92. The following engines do not require an EIAPP Certificate:

- (a) a marine diesel engine intended to be used solely for emergencies or solely to power any device or equipment intended to be used solely for emergencies on the vessel on which it is installed;
- (b) a marine diesel engine installed in lifeboats intended to be used solely for emergencies; and
- (c) a marine diesel engine installed on a vessel solely engaged in voyages within waters subject to the jurisdiction of Barbados if that engine is

subject to an alternative NO_x control measure established by the Director.

Matters to be certified by the EIAPP Certificate

- 93.** The EIAPP Certificate shall certify that
- (a) a marine diesel engine has been surveyed for pre-certification in accordance with the requirements of the NO_x Technical Code; and
 - (b) the pre-certification survey shows that the engine and its technical file, prior to the engine's installation and service on board a vessel, fully comply with the requirements of the NO_x Technical Code, this Act and any enactment made under this Act.

Validity of EIAPP Certificate

- 94.** An EIAPP Certificate issued in respect of a Barbados vessel is valid for the life of the engine subject to surveys in accordance with this Act and any enactment made under this Act.

Information to be contained in EIAPP Certificate

- 95.(1)** The EIAPP Certificate in respect of a Barbados vessel shall contain a table with the following headings:
- (a) engine;
 - (b) manufacturer;
 - (c) model number;
 - (d) serial number;
 - (e) test cycle;
 - (f) rated power stated in kW and speed stated in RPM values and ranges; and
 - (g) engine approval number.

- (2) A supplement to the EIAPP Certificate, namely, a record of construction, and its attachments shall be permanently attached to the EIAPP Certificate.
- (3) The supplement referred to in subsection (2) shall contain
 - (a) particulars of the technical file;
 - (b) particulars of the engine; and
 - (c) specifications for the on-board NO_x verification procedures for the engine parameter survey.
- (4) The following particulars of the technical file shall be recorded:
 - (a) the technical file identification or approval number; and
 - (b) the technical file approval date.
- (5) The following particulars of the engine shall be recorded:
 - (a) the name and address of manufacturer;
 - (b) the place where the engine was built;
 - (c) the date when the engine was built;
 - (d) the place of pre-certification survey;
 - (e) the date of pre-certification survey;
 - (f) the engine type and model number;
 - (g) the engine serial number;
 - (h) the engine group details, if applicable;
 - (i) the approval reference;
 - (j) the rated power stated in kW and rated speed stated in RPM values or ranges;
 - (k) the test cycle;
 - (l) the parent engine test fuel oil specification;

- (m) the applicable NO_x emission limit stated in g/kWh; and
 - (n) the parent engine emission value stated in g/kWh.
- (6) The technical file required by Chapter 2 of the NO_x Technical Code and the technical file which forms an integral part of the EIAPP Certificate shall accompany an engine throughout its life and be available on board the vessel.

Documentary evidence to be presented

96. The owner, master or agent of a vessel shall present to the Director the following documents as evidence that a marine diesel engine has been certified and tested in accordance with the NO_x Technical Code:

- (a) the EIAPP Certificate issued by a recognized classification society, recognized organization or a foreign authority recognized by the Director;
- (b) the IMO NO_x Technical File from the engine manufacturer; and
- (c) the record book of engine parameters, where component replacements which may influence NO_x emissions shall be recorded in accordance with the IMO NO_x Technical File.

PART XI

EXHAUST GAS CLEANING SYSTEMS OPERATIONS

Interpretation

97. For the purposes of this Part,

“bleed-off water” means the cleaning medium brought into contact with the exhaust gas stream for the reduction of SO_x and particulate matter;

“closed-loop EGCS” means cleaning systems that use alkaline-dosed seawater to scrub the exhaust gas from vessels;

“discharge water” means any water from an EGCS to be discharged overboard;

“EGCS residue” means material removed from the wash-water or bleed-off water by a treatment system or discharge water that does not meet the discharge criterion, or other residue material removed from the EGCS;

“EGCS wash-water” means the discharge water generated from a vessel’s exhaust gas cleaning system;

“hybrid EGCS” means a system that uses both freshwater and seawater to scrub the exhaust gas from vessels;

“open-loop EGCS” means a cleaning system that uses seawater to scrub the exhaust gas from vessels;

“wash-water” means the cleaning medium brought into contact with the exhaust gas stream for the reduction of SO_x and particulate matter.

Application of this Part

98. This Part applies to

- (a) Barbados registered vessels; and
- (b) foreign-registered vessels when in Barbados waters.

Duty to protect the marine environment from EGCS discharges

99.(1) Ships in Barbados waters shall make every effort to prevent, reduce and control pollution of the marine environment from wash-water, bleed-off water, residue and other by-products generated from EGCS operations.

(2) Open-loop, closed-loop and hybrid EGCS operations shall be conducted in accordance with Guidelines for Exhaust Gas Cleaning Systems adopted by the MEPC of the IMO.

- (3) For the purposes of this Part,
- (a) the PAPEC Department shall consult the Environmental Protection Department and shall verify that EGCS wash-water approved for discharge into the marine environment is
 - (i) treated; and
 - (ii) compliant with EGCS discharge criteria specified in the relevant guidelines adopted by the MEPC of the IMO; and
 - (b) a vessel owner, vessel agent or master shall comply with any directions given in relation to the discharge of EGCS wash-water.

Prohibition on discharge of EGCS wash-water in port or in the territorial sea

100.(1) Subject to section 103, no EGCS wash-water shall be discharged in any waters within any port in Barbados or in Barbados' territorial sea.

(2) Any person who contravenes subsection (1) is guilty of an offence and is liable on conviction on indictment to a fine of \$100 000 or to imprisonment for 5 years.

EGCS wash-water discharge in the EEZ

101.(1) Subject to the requirements set out in subsection (2), vessels arriving at a port, offshore terminal or any other place in Barbados may discharge EGCS wash-water into the exclusive economic zone.

(2) The requirements referred to in subsection (1) are as follows:

- (a) the vessel owner, vessel agent or master shall notify the PAPEC Department prior to discharge through the EGCS Operations Notification Form;
- (b) EGCS wash-water shall be treated before it is discharged;
- (c) EGCS wash-water discharge shall be compliant with the EGCS discharge criteria specified in the relevant IMO MEPC guidelines; and

- (d) the discharge shall take place in accordance with such directions as may be specified by the Environmental Protection Department.

EGCS wash-water discharge for transiting vessels

102.(1) Subject to the requirements set out in subsection (2), vessels transiting through Barbados waters but not calling at a port, terminal or any other place in Barbados may request to stop in Barbados for the purpose of discharging EGCS wash-water.

- (2) The requirements referred to in subsection (1) are as follows:
 - (a) the vessel owner, vessel agent or master shall notify the PAPEC Department prior to discharge through the EGCS Operations Notification Form;
 - (b) EGCS wash-water shall be treated before it is discharged;
 - (c) EGCS wash-water discharge shall be compliant with the EGCS discharge criteria specified in the relevant IMO MEPC guidelines; and
 - (d) the discharge shall take place in accordance with such directions as may be specified by the Environmental Protection Department.

EGCS wash-water discharge options

103.(1) Notwithstanding section 100, EGCS wash-water may be discharged as follows:

- (a) in a port waste reception facility;
- (b) by a waste handling operator contracted by the port;
- (c) in the marine environment where EGCS wash-water has been treated on board or in port to remove pollutants from EGCS wash-water prior to discharge;
- (d) in the marine environment where the EGCS wash-water meets the discharge criteria established in guidelines on EGCS discharge concentration limits adopted by the MEPC of the IMO; or

- (e) in accordance with alternative discharge arrangements
 - (i) specified in a merchant shipping notice; or
 - (ii) proposed by the vessel owner, vessel agent or master as specified on the EGCS Operations Notification Form and agreed to by the PAPEC Department, after consultation with the Environmental Protection Department.

(2) Where EGCS wash-water is discharged in a port waste reception facility or by a waste handling operator contracted by the port, MEPC guidelines regarding the management of EGCS wash-water by port reception facilities shall be followed.

Wash-water testing

104.(1) Wash-water testing in respect of Barbados registered vessels shall be conducted in respect of exhaust gas cleaning systems and repeated every 12 months.

(2) Foreign-registered vessels in Barbados waters shall provide data or evidence of samples that have been taken for analysis in relation to EGCS wash-water testing and shall provide such information as part of the vessel's evaluation during port State control inspection.

EGCS residue discharge

105.(1) Residue generated by EGCS shall be appropriately managed on board the vessel and delivered ashore to adequate reception facilities according to the relevant reception facilities guidelines adopted by the MEPC of the IMO.

(2) EGCS residue shall not be discharged anywhere in Barbados waters.

(3) EGCS residue shall not be mixed with other waste streams and shall not be burnt in the vessel's incinerators.

- (4) Vessels shall have on board
- (a) where applicable, evidence of a contract to prove that arrangements are in place to deliver the waste in the region where the ship is operating;
 - (b) waste receipts from the use of that contract to prove previous deliveries of such waste; and
 - (c) an estimation of the amount of EGCS residue produced on a daily basis, with records of the volume of solids and sludge produced,

to allow the master of the vessel to prove that there are appropriate mechanisms in place to dispose of the waste in an environmentally sound manner.

- (5) A receipt referred to in subsection (4)(b) shall be kept on board for a period of 12 months after the delivery has been made.

EGCS residue discharge options

106.(1) EGCS residue may be discharged as follows:

- (a) in a port waste reception facility;
- (b) by a waste handling operator contracted by the port;
- (c) in accordance with alternative discharge arrangements
 - (i) specified in a merchant shipping notice; or
 - (ii) proposed by the vessel owner, vessel agent or master as specified on the EGCS Operations Notification Form and agreed to by the PAPEC Department, after consultation with the Environmental Protection Department.

(2) Where EGCS residue is discharged in a port waste reception facility or by a waste handling operator contracted by the port, MEPC guidelines regarding the delivery of EGCS residue to port reception facilities shall be followed.

Notification of EGCS operation via Barbados Maritime Single Window

107.(1) The owner, agent or master of a vessel arriving at a port, offshore terminal or any other place in Barbados which needs shore-side support to dispose of EGCS wash-water or EGCS residue shall submit through the Barbados Maritime Single Window an EGCS Operations Notification Form for Ships to the PAPEC Department 48 hours in advance of the arrival of the vessel.

(2) The PAPEC Department shall notify the vessel owner, vessel agent or master within 12 hours in advance of the vessel's arrival to a port, terminal or any other place in Barbados waters, of the disposal options that will be available to the vessel.

(3) The EGCS Operations Notification Form shall be in the form set out in the *Twelfth Schedule*.

Merchant shipping notices may be issued for EGCS

108. The Director may, in consultation with the Minister, and after collaboration with stakeholders, provide for the following matters in respect of EGCS in a merchant shipping notice:

- (a) exemptions;
- (b) use of alternative mechanisms to prevent, reduce and control pollution from EGCS discharges; and
- (c) any other matters in respect of EGCS operations, EGCS wash-water and EGCS residue management.

Penalties

109. The owner, master or agent of a vessel who contravenes the EGCS requirements set out in this Part is guilty of an offence and liable on conviction on indictment to a fine of \$100 000 or imprisonment for 5 years or both.

PART XII

MISCELLANEOUS

Sustainable economic development initiatives

110.(1) A person from the shipping industry may formulate and submit a written proposal to the Administration for its consideration of a sustainable economic development strategy or initiative relating to

- (a) scientific, technological and other developments in the field of shipping and emissions control; and
 - (b) matters within the scope of this Act or any enactment made under this Act.
- (2) The proposed strategy or initiative shall be
- (a) in alignment with MARPOL, Annex VI and related MEPC guidelines;
 - (b) economically viable;
 - (c) environmentally sustainable; and
 - (d) beneficial to the development of Barbados' shipping sector.
- (3) The Director shall, in consultation with the PAPEC Department review a proposed strategy or initiative.
- (4) Where the Director determines that a strategy or initiative meets the requirements of subsection (2), the Director shall, after consultation with the Minister and any relevant stakeholder, approve the implementation of the proposed strategy or initiative.
- (5) Where the proposed strategy or initiative requires the imposition of regulatory measures to ensure the implementation and proper management of the strategy or initiative, the Director shall ensure the adoption of the appropriate regulatory measures.

(6) Where it is determined that the proposed strategy or initiative may have a significantly positive impact and is beneficial to the shipping industry, the Minister may provide incentives to the person for the person's innovation and implementation of the strategy or initiative.

(7) A proposed strategy or initiative may be eligible for incentives.

Agreement for green shipping corridors

111. Barbados may enter into an agreement with the government a foreign country for the purposes of establishing a green shipping corridor between Barbados and that country.

Establishment of green shipping corridors

112. The Minister may, by order, establish green shipping corridors between a port in Barbados and a port in a foreign country.

Components of green shipping corridors

113. Green shipping corridors shall have the following components:

- (a) zero emitting fuels;
- (b) port-side facilities to support fuel storage, bunkering and other fuel-handling activities;
- (c) ship-specific energy efficiency technologies and other support;
- (d) voyage optimization, including mechanisms to support just-in-time arrivals, ship-to-port interface optimization and other supporting mechanisms; and
- (e) any other relevant components guided by international standards and best practices in the realm of green shipping.

Factors relevant to establishment of green shipping corridors

114. The following factors shall be taken into account in establishing green shipping corridors:

- (a) marine geo-spatial data and other scientific data
- (b) maritime safety, maritime security and marine environmental protection;
- (c) marine spatial planning requirements; and
- (d) any other relevant considerations.

Amendment of green shipping corridors order

115. The Minister may, after consultation with stakeholders amend an order made under section 112.

Market-based measures for emission reduction in the marine transport sector

116.(1) Market-based measures for emissions reduction in the marine transport sector shall

- (a) be consistent with market-based measures
 - (i) endorsed by the IMO; or
 - (ii) generally adopted in the global shipping market;
- (b) serve the purpose of
 - (i) providing an economic incentive for the marine transport sector to reduce its fuel consumption by investing in more fuel efficient ships and technologies and to operate ships in a more energy efficient manner; and
 - (ii) offsetting the wider impact of ship-generated emissions; and

- (c) be developed in alignment with international best practice, while giving due consideration to local circumstances.
- (2) The Minister responsible for Finance shall, in consultation with the Minister responsible for Shipping and the PAPEC Department, develop and implement a market-based measures plan for marine transport sector emissions regulation.
- (3) The market-based measures plan referred to in subsection (2) shall
 - (a) be reviewed and endorsed by the Minister responsible for Shipping;
 - (b) be approved by the Minister responsible for Finance; and
 - (c) take effect upon publication of notice of the approval of the plan in the *Official Gazette*.
- (4) The market-based measures plan referred to in subsection (2) shall be reviewed no more than 3 years after notice of approval is published in the *Official Gazette*.
- (5) The market-based measures plan referred to in subsection (2) may be withdrawn if the Minister, after consultation with the PAPEC Department and the Director, considers it necessary to do so and the plan shall cease to have effect when notice of its withdrawal is published in the *Official Gazette*.
- (6) Where the market-based measures plan is withdrawn, it shall be replaced with a new plan which shall comply with the procedure set out in subsection (3).
- (7) For the purposes of this section, “market-based measures” means economic measures recognized by the IMO as part of the comprehensive package of measures for effective regulation of emission from the marine transport sector.

Designation of emissions control areas

117.(1) Where the Minister is desirous of designating an emissions control area within a national port or an offshore area, the Minister shall submit proposals to the IMO for the designation of an area.

- (2) Emissions control areas may be designated to control
 - (a) emissions of NO_x;
 - (b) emissions of SO_x; and
 - (c) emissions of particulate matter.
- (3) The Minister shall consult with the Coastal Zone Management Unit, the Port Authority and the Minister responsible for the Environment when considering the designation of an emissions control area.
- (4) Where an emissions control area is designated in Barbados, vessels operating in that area shall use fuel that has a sulphur content not exceeding 0.10 percent m/m in accordance with MARPOL Annex VI.
- (5) The Minister may make regulations to give effect to this section.

Administrative penalties

118. A person who contravenes a provision set out in Part I of the *Thirteenth Schedule* is liable to pay to the Director an administrative penalty in the amount specified.

Administrative penalty notice

119.(1) The Director shall issue an administrative penalty notice in the form set out in Part II of the *Thirteenth Schedule* to any person where the Director is satisfied that, that person has contravened a provision set out in Part I of the *Thirteenth Schedule*.

- (2) In addition to the public interest, where the Director issues a notice pursuant to subsection (1), the Director shall have due regard to the following:
 - (a) the nature, gravity and duration of the contravention, taking into account whether any damage was sustained to the marine environment;
 - (b) the intentional or negligent character of the contravention;

- (c) any action taken by the master or owner of a vessel or a fuel supplier to mitigate the damage to the marine environment;
 - (d) any relevant previous contraventions by the master or owner of a vessel or by a fuel supplier; and
 - (e) any other aggravating or mitigating factor applicable to the circumstances of the case, such as financial benefits gained, or losses avoided, directly or indirectly, from the contravention.
- (3) An administrative penalty notice issued pursuant to subsection (1) shall specify the nature of the act constituting the contravention, the penalty to be paid and shall require the person to whom it is addressed to pay the penalty within 30 days of the date of the notice
- (4) A person who is in receipt of an administrative penalty notice issued pursuant to subsection (1) shall pay the amount of the penalty set out in the notice on or before the date specified in the notice.
- (5) Notwithstanding subsection (4), where the Director is satisfied on grounds of undue hardship or for any other reason that it would be just and equitable to do so, the Director may arrange with the person who is the subject of the penalty notice to pay the penalty set out in the notice in instalments.

Procedure for challenging an alleged administrative contravention

120. Notwithstanding section 119, a person to whom an administrative penalty notice is addressed and who wishes to challenge the alleged contravention, may instead of paying the amount of the administrative penalty, appeal to a judge in Chambers who may remit or vary the amount of the penalty and the decision of the judge shall be final.

Administrative penalty to constitute a debt to the State

121. The amount of an outstanding administrative penalty constitutes a debt to the State and is recoverable in civil proceedings before a magistrate for District 'A'.

Offence relating to fraudulent surveys

122.(1) A recognized organization of the Administration or marine surveyor shall not prepare or issue

- (a) an untrue or inaccurate vessel survey conducted in relation to verifying MARPOL Annex VI compliance;
- (b) a report or record on the MARPOL Annex VI without conducting a vessel survey;
- (c) a report or record that falsely states a vessel is compliant with MARPOL Annex VI, as outlined in relation to surveys specified in this Act or any enactment made under this Act; or
- (d) a vessel survey with false or inaccurate information.

(2) A person who contravenes subsection (1) is guilty of an offence and liable on conviction on indictment to a fine of \$100 000 or 5 years imprisonment or to both.

(3) Where a recognized organization or marine surveyor contravenes subsection (1), the Director may terminate the services of the recognized organization or marine surveyor.

General penalty

123.(1) A person who commits an offence under this Act or any enactment made under this Act for which no penalty is specifically provided is guilty of an offence and liable on summary conviction to a fine of \$50 000.

(2) Where an offence under this Act or any enactment made under this Act is a continuing offence, and no penalty is otherwise provided in this Act, in respect of the continuance, every person who commits that offence, in addition to any other penalty, is liable to a fine of \$100 for every day or part thereof during which the offence continues after conviction is first obtained.

Enforcement

124.(1) Members of the Barbados Police Service and the Coast Guard may board and inspect any

- (a) vessel;
- (b) platform; or
- (c) offshore energy production facility

in Barbados' territorial sea, contiguous zone, or exclusive economic zone for the purpose of ensuring the production of any documentation required by such vessels or facilities.

(2) Members of the Barbados Police Service or the Coast Guard may require a vessel, platform or offshore energy production facility referred to in subsection (1) to comply with this Act and any enactment made under this Act.

(3) Members of the Barbados Police Service or the Coast Guard may detain any vessel for further inspection or halt production by an offshore energy production facility in accordance with this Act or any enactment made under this Act until the vessel or offshore energy production facility corrects the deficiencies in respect of which it was non-compliant .

(4) A port state control officer, in this Act referred to as "PSCO" designated by the Director, may board and inspect a vessel in Barbados' waters to ensure that the condition of the vessel and her equipment comply with international emissions control requirements stipulated under MARPOL Annex VI and as part of such compliance verification process, require the production of any documentation required under MARPOL Annex VI.

(5) For the purposes of this section, a PSCO designated by the Administration may board and inspect any vessel in Barbados' waters to which NAPP and NEE certification requirements apply to ensure that the condition of the vessel and her equipment comply with national emissions control requirements.

(6) In conducting the inspection referred to in subsections (1), (4) and (5), the PSCO may require the production of NAPP and NEE certificates or any other required documentation specific for emissions control.

(7) The flag State of any detained vessel shall be notified immediately of the detention of its vessel.

Privileges and immunities of Coast Guard

125. Members of the Coast Guard when carrying out duties conferred under this Act or any enactment made under this Act shall have the same rights, powers and duties and shall enjoy the same privileges and immunities as are had and enjoyed by a member of the Barbados Police Service acting under the *Police Act*, Cap. 167.

Protection from personal liability

126. No liability shall lie personally against any authorized public officer or authorized entity who, acting in good faith and with reasonable care, does or omits to do anything in the execution or purported execution of duties conferred on the officer by this Act or any enactment made under this Act.

Regulations

127. The Minister, after consultation with the Director, may make regulations generally for giving effect to this Act and prescribing any matter or thing required by this Act to be prescribed.

Marine fuels safety regulatory framework

128. The Administration shall, in consultation with the Minister responsible for Energy, in order to support the safe transition and operation of

ships using new technologies and alternative marine fuels aimed at reducing ship-source emissions

- (a) develop a marine fuels safety regulatory framework consistent with the safety regulatory framework of the IMO's Maritime Safety Committee; and
- (b) maintain an up-to-date marine fuels safety work plan, to ensure continuous undertaking of measures in the maritime safety domain relevant to marine energy efficient technologies and alternative marine fuels.

Merchant shipping notice

129.(1) The Minister may, after consultation with the Director, make a merchant shipping notice and may publish in such a notice any mandatory information required to be complied with under this Act or any enactment made under this Act.

(2) It is an offence to contravene any mandatory requirements contained in a merchant shipping notice referred to in subsection (1).

(3) A merchant shipping notice shall contain information from the following sources:

- (a) MARPOL Annex VI, as amended by the IMO;
- (b) MEPC resolutions on MARPOL Annex VI;
- (c) information specified in any enactment made under this Act to be contained in a merchant shipping notice;
- (d) the IACS standards; and
- (e) any source relating to emissions reduction in the marine transport sector specified by the Administration.

Marine guidance note and marine information note

- 130.**(1) The Director may, after consultation with the Minister, publish
- (a) marine guidance notes, in order to communicate significant advice and guidance relating to prevention, reduction and control of vessel emissions; and
 - (b) marine information notes, to a specific group in relation to time-limited information on climate change impacts from shipping on the marine environment and atmospheric protection from shipping and other marine development activities.
- (2) A marine guidance note is advisory in nature and may not provide for penal or other sanctions.
- (3) A marine guidance note shall contain information from the following sources:
- (a) the sources set out at paragraphs (a) to (e) of section 129(3);
 - (b) MEPC Guidelines on MARPOL Annex VI as amended by the IMO;
 - (c) applicable rules and standards of the ISO; and
 - (d) information specified in any enactment made under this Act that is to be contained in a marine guidance note.
- (4) A marine information note may contain information from the following sources:
- (a) the sources set out at paragraphs (a) to (e) of section 129(3);
 - (b) a maritime law enforcement officer; and
 - (c) a maritime industry stakeholder to whom the specific information relates.
- (5) A marine information note is valid for 12 months from the date of publication.

Emissions reductions standards and measures established after the commencement of this Act

131.(1) Emissions reductions standards and measures established by the IMO after the commencement of this Act shall supersede the emissions reductions standards and emissions reductions measures specified in this Act and any enactment made under this Act, where those standards and measures are inconsistent with the emissions reductions standards and measures adopted by the IMO after the commencement of this Act.

(2) The Administration shall publish the relevant requirements in respect of such standards and measures concerning Barbados registered vessels and visiting foreign-registered vessels, in a marine notice.

Amendment of Schedules

132. The Minister may by order amend the *Schedules*.

Transitional

133. Barbados vessels and foreign-registered ships in operation on the commencement of this Act shall within 18 months after such commencement comply with the provisions of this Act.

FIRST SCHEDULE

(Section 26(4))



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

**INTERNATIONAL AIR POLLUTION PREVENTION CERTIFICATE
(IAPP Certificate)**

Issued under the authority of the Government of Barbados

by _____
(Full designation of the competent person or organization authorized under the provisions of the convention)

Particulars of Vessel

Name of vessel: _____

Distinctive numbers or letters: _____

Port of registry: _____

Gross tonnage: _____

IMO number: _____

First Schedule - (Cont'd)

THIS IS TO CERTIFY:

1. That the vessel has been surveyed in accordance with Regulation 5 of MARPOL Annex VI; and
2. That the survey shows that the equipment, systems, fittings, arrangements and materials fully comply with the applicable requirements of MARPOL Annex VI.

Completion date of survey on which this Certificate is based: _____
(dd/mm/yyyy)

This Certificate is valid until _____ subject to such surveys in accordance with Regulation 5 of MARPOL Annex VI.

Issued at _____
(Place of issue of certificate)

(dd/mm/yyyy)

(Signature of Authorized Official Issuing Certificate)

This Certificate expires _____
(dd/mm/yyyy)

First Schedule - (Cont'd)

Endorsement for Annual Intermediate Surveys

THIS IS TO CERTIFY that on a survey required by MARPOL Annex VI the vessel was found to comply with the relevant provisions of that Annex:

Annual Survey: Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

Annual Survey: Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

Annual Survey: Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

First Schedule - (Cont'd)

Annual/Intermediate survey:

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

Annual/Intermediate Survey in accordance with Regulation 9.8.3

THIS IS TO CERTIFY that, at an annual/intermediate survey in accordance with Regulation 9.8.3 of MARPOL Annex VI, the vessel was found to comply with the relevant provisions of the Annex.

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

First Schedule - (Cont'd)

Endorsement to extend certificate is valid for less than 5 years where Regulation 9.3 applies

The vessel complies with the relevant provisions of the Annex, and this certificate shall, in accordance with Regulation 9.3 of MARPOL Annex VI, be accepted as valid until _____.
(dd/mm/yyyy)

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

Endorsement where renewal survey has been completed and Regulation 9.4 applies

The vessel complies with the relevant provisions of the Annex, and this certificate shall, in accordance with Regulation 9.4 of MARPOL Annex VI, be accepted until _____.
(dd/mm/yyyy)

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

First Schedule - (Cont'd)

Endorsement to extend the validity of the certificate until reaching the port of survey for a period of grace where Regulation 9.5 or 9.6 applies

This certificate shall, in accordance with Regulation 9.5 or 9.6 of MARPOL Annex VI, be accepted as valid until _____ .
(dd/mm/yyyy)

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

Endorsement for advancement of anniversary date where Regulation 9.8 applies

In accordance with Regulation 9.8 of MARPOL Annex VI, the new anniversary date is _____ .
(dd/mm/yyyy)

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

First Schedule - (Concl'd)

Endorsement for advancement of anniversary date where Regulation 9.8 applies

In accordance with Regulation 9.8 of MARPOL Annex VI, the new anniversary date is _____.
(dd/mm/yyyy)

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

**SUPPLEMENT TO INTERNATIONAL AIR POLLUTION PREVENTION
CERTIFICATE**

• **The IAPP Certificate is required for:**

- (a) Barbados vessels 400 GT and above which are or will be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, excluding Barbados;
- (b) fixed and floating drilling rigs and other platforms which are or will be engaged in voyages to waters under the sovereignty or jurisdiction of a Contracting Government of MARPOL Annex VI, excluding Barbados; and
- (c) Non-Barbados vessels 400 GT and above belonging to another Contracting Government of MARPOL Annex VI, when the Minister responsible for Shipping is requested by that Contracting Government to issue an IAPP Certificate on behalf of such vessels.

First Schedule - (Concl'd)

Endorsement for advancement of anniversary date where Regulation 9.8 applies

In accordance with Regulation 9.8 of MARPOL Annex VI, the new anniversary date is _____.
(dd/mm/yyyy)

Signed: _____
(Signature of authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of the authority, as appropriate)

**SUPPLEMENT TO INTERNATIONAL AIR POLLUTION PREVENTION
CERTIFICATE**

• **The IAPP Certificate is required for:**

- (a) Barbados vessels 400 GT and above which are or will be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, excluding Barbados;
- (b) fixed and floating drilling rigs and other platforms which are or will be engaged in voyages to waters under the sovereignty or jurisdiction of a Contracting Government of MARPOL Annex VI, excluding Barbados; and
- (c) Non-Barbados vessels 400 GT and above belonging to another Contracting Government of MARPOL Annex VI, when the Minister responsible for Shipping is requested by that Contracting Government to issue an IAPP Certificate on behalf of such vessels.

SECOND SCHEDULE

(Section 26(4))



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

**International Energy Efficiency Certificate
(IEE Certificate)**

Issued under the authority of the Government of Barbados

by _____
(Full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of Vessel

Name of vessel: _____

Distinctive number or letters: _____

Port of registry: _____

Gross tonnage: _____

IMO number: _____

Second Schedule - (Concl'd)

THIS IS TO CERTIFY:

1. That the vessel has been surveyed in accordance with Regulation 5.4 of MARPOL Annex VI.
2. That the survey shows that the vessel complies with the applicable requirements in Regulation 20, Regulation 21 and Regulation 22.

Completion date of survey on which this certificate is based: _____
(dd/mm/yyyy)

Issued at: _____
(Place of issue of certificate)

Date of issue: _____
(dd/mm/yyyy)

*(Signature of duly authorized official
issuing the certificate)*

(Seal or stamp of authority, as appropriate)

Supplement to the IEE Certificate

- **The IEE Certificate is required for:**
 - (a) Barbados vessels 400 GT and above which are or will be engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, excluding Barbados;
 - (b) fixed and floating drilling rigs and other platforms which are or will be engaged in voyages to waters under the sovereignty or jurisdiction of a Contracting Government of MARPOL Annex VI, excluding Barbados;
 - (c) Non-Barbados vessels 400 GT and above belonging to another Contracting Government of MARPOL Annex VI, when the Minister responsible for Shipping is requested by that Contracting Government to issue an IEE Certificate on behalf of such ships.

THIRD SCHEDULE

(Section 29(3))



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

**National Air Pollution Prevention Certificate
(NAPP) Certificate)**

Issued under the authority of the Government of Barbados:

by _____
(Full designation of the competent person or organization authorized under the provisions of the Act and the regulations made under the Act)

Name of Vessel	Distinctive Numbers or Letters	IMO Number	Port of Registry	Gross Tonnage

Third Schedule - (Cont'd)

Type of vessel: Tanker

Vessels other than a tanker

THIS IS TO CERTIFY:

1. That the vessel has been surveyed in accordance with the Act.
2. That the survey shows that the equipment, systems, fittings, arrangements and materials fully comply with the applicable requirements of MARPOL Annex VI.

Completion date of survey on which this Certificate is based: _____
(dd/mm/yyyy)

This Certificate is valid until _____ subject to surveys in
(dd/mm/yyyy)
accordance with the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-).

Issued at: _____
(Place of issue of Certificate)

Date of issue: _____
(dd/mm/yyyy)

(Signature of duly authorized
official issuing the Certificate)

(Seal or stamp of authority, as appropriate)

Third Schedule - (Cont'd)

Endorsement for Annual and Intermediate Surveys

THIS IS TO CERTIFY that at a survey, the vessel was found to comply with the relevant provisions of MARPOL Annex VI:

Annual Survey:

Signed: _____
(Signature of duly authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of authority, as appropriate)

Annual/Intermediate Survey:

Signed: _____
(Signature of duly authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of authority, as appropriate)

Annual/Intermediate Survey:

Signed: _____
(Signature of duly authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of authority, as appropriate)

Third Schedule - (Cont'd)

Annual Survey:

Signed: _____
(Signature of duly authorized official)

Place: _____

Date: _____
(dd/mm/yyyy)

(Seal or stamp of authority, as appropriate)

Third Schedule - (Cont'd)

**SUPPLEMENT TO NATIONAL AIR POLLUTION PREVENTION
CERTIFICATE**

(NAPP CERTIFICATE)

RECORDS OF CONSTRUCTION AND EQUIPMENT

In respect of the provisions of Annex VI of the International Convention for the Prevention of Marine Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as “the Convention”) as implemented in Barbados for vessels which are solely operating in Barbados’ waters by the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-) and any enactment made under the Act.

Notes:

1. This Record shall be permanently attached to the NAPP Certificate. The NAPP Certificate shall be available on board the vessel at all times.
2. Entries in boxes shall be made by inserting either a (x) for the answer “yes” and “applicable” or a dash (-) for the answers “no” and “not applicable” (N/A) as appropriate.

Third Schedule - (Cont'd)

1. Particulars of Vessel

Name of vessel: _____

Distinctive number or letters: _____

IMO number: _____

Port of registry: _____

Gross tonnage: _____

Date on which keel was laid or vessel was at a similar stage of construction: _____
(dd/mm/yyyy)

Date of commencement of major engine conversion, if applicable: _____
(dd/mm/yyyy)

2. Control of vessel-source emissions

2.1 Ozone-depleting substances (ODS)

2.1.1 The following systems containing ODS installed before 19th day of May, 2005 may not continue in service after [_____ , 20 ____].

System Equipment	Location on board

Third Schedule - (Cont'd)

2.2 Nitrogen Oxides (NOx)

2.2.1 The following diesel engines with power output greater than 130 kW, and installed on a vessel on or after 1st day of January, 2005, comply with the emission standards and in accordance with the NOx Technical Code: _____

Manufacturer and Model	Serial Number	Use	Power Output (kW)	Rated Speed (rpm)

2.2.2 The following diesel engines with power output greater than 130 kW, and which underwent major conversion on or after 1st day of January, 2005, comply with the emission standards of the NOx Technical Code: _____

Manufacturer and Model	Serial Number	Use	Power Output (kW)	Rated Speed (rpm)

Third Schedule - (Cont'd)

2.2.3 The following diesel engines with a power output greater than 130 kW installed on a vessel constructed on or after 1st day of January, 2000, with a power output greater than 130 kW, are fitted to a vessel with an exhaust gas cleaning system or other equivalent methods in accordance with the NOx Technical Code and comply with the emission standards: _____

Manufacturer and Model	Serial Number	Use	Power Output (kW)	Rated Speed (rpm)

2.2.4 The following diesel engines from 2.2.1, 2.2.2 and 2.2.3 above are fitted with NOx emission monitoring and recording devices in accordance with the NOx Technical Code: _____

Manufacturer and Model	Serial Number	Use	Power Output (kW)	Rated Speed (rpm)

*Third Schedule - (Cont'd)***2.3 Sulphur Oxides (SOx)**

2.3.1 When the vessel operates within an SOx emission control area, the vessel uses:

(a) fuel oil with a sulphur content that does not exceed 0.10% as documented by bunker delivery notes; _____

or

(b) unit approved exhaust gas cleaning installation(s) issued with an approved Shipboard SOx Emission Compliance Plan and SOx Emission Compliance Certificate (if applicable) which demonstrates SOx emission is in compliance with the regulations; _____

or

(c) other approved technology which demonstrates SOx emissions is in compliance the regulations; _____

2.4 Volatile Organic Compounds (VOCs)

2.4.1 The tanker has a vapour collection system installed and approved in accordance with MSC/Circ.585 _____

2.5 Incinerator

2.5.1 The vessel has an incinerator:

(a) which complies with IMO Resolution MEPC. 244 (66) – Standard Specification for Shipboard Incinerators;

(b) installed before 1st day of January, 2000 which does not comply with IMO Resolution MEPC. 244 (66) – Standard Specification for Shipboard Incinerators.

Note: The relevant SECA Compliance Certificate(s) and SECA Compliance Plan must be attached to this document, where applicable.

Third Schedule - (Concl'd)

THIS IS TO CERTIFY that this Record is correct in all respects.

Issued at: _____
(Place of issue of Record)

(Date of issue)

(Signature of duly authorized official issuing the Record)

(Seal or stamp of authority, as appropriate)

- **The BARBADOS NAPP Certificate is required for:**
 - (a) a Barbados vessel 400 GT and above which is **not** or will **not be** engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government to MARPOL Annex VI, except for Barbados; and
 - (b) fixed and floating drilling rigs and other platforms which are **not** or will **not be** engaged in voyages to waters under the sovereignty or jurisdiction of a Contracting Government to MARPOL Annex VI, except for Barbados.

FOURTH SCHEDULE

(Section 40(11))



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

Statement of Compliance (SOC)

Issued under the authority of the Government of Barbados:

by _____
(Full designation of the competent person or organization authorized under the provisions of the Convention)

Particulars of Vessel

Name of vessel: _____

Distinctive number or letters: _____

Port of registry: _____

Gross tonnage: _____

IMO number: _____

Fourth Schedule - (Concl'd)

THIS IS TO CERTIFY:

1. That the vessel has submitted to this Administration the data required by Regulation 22A of MARPOL Annex VI, covering vessel operations from _____ to _____
(dd/mm/yyyy) to *(dd/mm/yyyy)*.
2. The data was collected and reported in accordance with the methodology and processes set out in the vessel's SEEMP that was in effect over the period from _____ to _____
(dd/mm/yyyy) to *(dd/mm/yyyy)*.

This Statement of Compliance is valid until _____
(dd/mm/yyyy)

Issued at: _____
(Place of issue of Statement)

Date of issue: _____
(dd/mm/yyyy)

(Signature of duly authorized official issuing the certificate)

(Seal or stamp of authority, as appropriate)

FIFTH SCHEDULE

(Section 42(3))



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

**National Energy Efficiency Certificate
(NEE Certificate)**

Issued under the authority of the Government of Barbados:

by _____
(Full designation of the competent person or organization authorized under the provisions of the Act and the regulations made under the Act)

Particulars of Vessel

Name of vessel: _____

Distinctive number or letters: _____

Port of registry: _____

Gross tonnage: _____

IMO number: _____

Fifth Schedule - (Cont'd)

THIS IS TO CERTIFY:

1. That the vessel has been surveyed in accordance with the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-).
2. That the survey shows that the vessel complies with the applicable requirements of Regulations 20, 21 and 22 of MARPOL Annex VI.

Completion date of survey on which this Certificate is based: _____
(dd/mm/yyyy)

Issued at: _____
(Place of issue of Certificate)

Date of issue: _____
(dd/mm/yyyy)

(Signature of duly authorized official issuing the Certificate)

(Seal or stamp of authority, as appropriate)

Fifth Schedule - (Cont'd)

**SUPPLEMENT TO NATIONAL ENERGY
EFFICIENCY CERTIFICATE**

(NEE CERTIFICATE)

RECORDS OF CONSTRUCTION AND EQUIPMENT

In respect of the provisions of Annex VI of the International Convention for the Prevention of Marine Pollution from Ships, 1973, as modified by the Protocol of 1978 related thereto (hereinafter referred to as “the Convention”) as implemented in Barbados for vessels which are solely operating in Barbados’ waters by the regulations.

Notes:

1. This Record shall be permanently attached to the NEE Certificate. The NEE Certificate shall be available on board the vessel at all times.
2. The Record shall be in English.
3. Entries in boxes shall be made by inserting either a (x) for the answer “yes” and “applicable” or a dash (-) for the answers “no” and “not applicable” (N/A), as appropriate.
4. Unless otherwise stated, regulations mentioned in this Record refer to regulations in Annex VI of the Convention, and resolutions or circulars refer to those adopted by the International Maritime Organization.

Fifth Schedule - (Concl'd)

- **Explanatory Note 1:** The details in the Record for NEE Certificates are the same as required for IEE Certificates, as outlined at Appendix VIII of the 2011 Amendments to MARPOL Annex VI. Hence the IEE Form of Supplement must be attached to the NEE Certificate. The only variation is the language requirement. The IEE is required to be in additional languages, where applicable. The NEE is only required to be in English as it pertains to vessels solely operating in Barbados.
- **Explanatory Note 2:** The NEE Certificate is valid throughout the life of the vessel and only ceases to be valid in circumstances in the regulations.
- **The NEE Certificate is required for:**
 - (a) a Barbados vessel 400 GT and above which is **not** or will **not be** engaged in voyages to a port or offshore terminal under the jurisdiction of a Contracting Government of MARPOL Annex VI, except Barbados; and
 - (b) fixed and floating drilling rigs and other platforms which are not or will not be engaged in voyages to waters under the jurisdiction of a Contracting Government of MARPOL Annex VI, except Barbados.

SIXTH SCHEDULE*(Section 51(1))*

Marine Transport (Emissions Control) Act, 2024
 (Act 2024-)

Specific Approval for Exhaust Gas Cleaning Systems

To be delivered by: Classification Society acting as a Recognized Organization, nominated by the Minister

SOx Scrubber

Reviewed against: 1. IMO MEPC Guidelines for Exhaust Gas Cleaning Systems; and
 2. MARPOL Annex VI Sulphur requirements

Additional requirements: Scheme A: Technical and Operating Manuals, including SOx Emissions Compliance Plan (SECP)
 Initial shop or onboard test of scrubber
 Daily monitoring of SO₂/CO₂
 Continuous monitoring of key operating parameters
 Continuous monitoring of wash-water

Scheme B: Technical and Operating Manuals, including SOx Emissions Compliance Plan (SECP)
 No shop or onboard test of scrubber
 Continuous onboard monitoring of SO₂/CO₂
 Daily monitoring of key operating parameters
 Continuous monitoring of wash-water

Deliverable: Approved documentation, including Scheme A Certificate, is applicable, and post-installation initial survey

SEVENTH SCHEDULE

(Section 51(1))



*Marine Transport (Emissions Control) Act, 2024
(Act 2024-)*

Specific Approval for Exhaust Gas Treatment Systems

To be delivered by:	Classification Society acting as a Recognized Organization, nominated by the Minister
NOx reducing device	
Engine-specific	
Reviewed against:	the NOx Technical Code, 2008 The Technical File (including onboard NOx Verification Procedure) Engine group/family certification Pre-certification survey
Deliverable:	‘Engine + device’ certificate supported by approved documentation and post-installation initial survey

EIGHTH SCHEDULE

(Section 59(1) and 64(5))



*Marine Transport (Emissions Control) Act, 2024
(Act 2024-)*

Bunker Delivery Note (BDN)

INFORMATION TO BE INCLUDED IN THE BUNKER DELIVERY NOTE

1. Name and IMO number of receiving ship: _____
2. Port / Harbour where delivery takes place: _____
3. Date of commencement of delivery: _____
4. Name, address and telephone number of fuel oil supplier or local supplier of fuel oil:

5. Product name: _____
6. Quantity in metric tons: _____
7. Density at 15°C (kg/m³) where the fuel has been tested in accordance with ISO 8675:

8. Sulphur content (%m/m) where the fuel has been tested in accordance with ISO 8754:

9. Seal number of bunker sample label:

THIS IS TO DECLARE that the fuel supplied to the vessel is in conformity with the fuel oil requirements of the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-).

Name: _____

Signature: _____

Date: _____

NINTH SCHEDULE*(Section 59(2))*

Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

Local Fuel Supplier's Initial Declaration Form

1.	Name of company:	
2.	Company address:	
3.	Contact name:	
4.	Telephone number:	
5.	Fax number:	
6.	Email address:	
7.	Fuel oil supplier:	
8.	Local fuel oil supplier:	

Ninth Schedule - (Cont'd)

9.	Date registered with Ministry responsible for Shipping as local fuel oil supplier:	
10.	Date of declaration:	
11.	Ports supplied:	
12.	Delivery by bunker supply vessel:	
13.	Delivery from road tanker:	
14.	Delivery from direct shore supply:	
15.	Supplier of HFO:	
16.	Supplier of MGO:	
17.	Supplier of diesel:	

Ninth Schedule - (Concl'd)

THIS IS TO DECLARE that:

1. The fuel supplied to vessels comply with the fuel requirements stipulated under MARPOL Annex VI.
2. When supplying fuel to vessels, the master of the vessel is provided with a bunker delivery note containing the information set out in Appendix 5, MARPOL Annex VI.
3. A declaration is provided in the bunker delivery note that is signed by the fuel oil supplier's representative, that the fuel oil supplied conforms with Regulations 14(1) or 14(4)(a), as applicable and 18(1) of MARPOL, Annex VI.
4. A copy of the bunker delivery note will be retained for 3 years from the date of delivery.
5. The fuel is not contaminated or blended so that it no longer conforms with the requirements of MARPOL Annex VI or the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-).

Name: _____

Signature: _____

Date: _____

Note: Any changes to the Initial Declaration must be re-submitted with the new information.

Note also: The Initial Declaration is to be submitted within the first 3 months of the [commencement] of the Act.

TENTH SCHEDULE*(Section 59(2))*

Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

Local Fuel Supplier's Annual Declaration

1.	Name of company:	
2.	Company address:	
3.	Contact name:	
4.	Telephone number:	
5.	Fax number:	
6.	Email address:	

THIS IS TO DECLARE that for the calendar year _____:
(yyy)

1. The fuel supplied to vessels comply with the fuel requirements stipulated under MARPOL Annex VI.
2. When supplying fuel to vessels, the master of the vessel is provided with a bunker delivery note containing the information set out in Appendix 5, MARPOL Annex VI.
3. A declaration is provided in the bunker delivery note that is signed by the fuel oil supplier's representative, that the fuel oil supplied conforms with Regulations 14(1) or 14(4)(a), as applicable and 18(1) of MARPOL Annex VI.
4. A copy of the bunker delivery note will be retained for 3 years from the date of delivery.
5. The fuel is not contaminated or blended so that it no longer conforms with the requirements of MARPOL Annex VI or the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-).

Name: _____

Signature: _____

Date: _____

Note: The annual period will commence [the 19th of May each year or the date of the commencement of the Act].

ELEVENTH SCHEDULE

(Section 73(3))



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

Port Air Quality Management and Monitoring

AIR POLLUTANTS	SOURCES	HEALTH AND ENVIRONMENTAL EFFECTS
<p>Particulate Matter (PM) is discrete solid or aerosol particles in the air. Dust, dirt, soot, smoke and exhaust particles are considered PM. PM is typically categorized as total PM, or just PM, or can be further divided into two smaller size categories: PM₁₀, which consists of particles measuring up to 10 micro-metres in diameter and PM_{2.5}, which consists of particles measuring 2.5 micro-metres in diameter or smaller. Diesel Particulate Matter (DPM) is a species of PM considered very important.</p>	<p>Airborne PM is a mixture of solid particles and liquid droplets generated in numerous ways. The primary port-related PM sources are from exhaust of engines that power shore-side equipment and vehicles, marine vessels, non-renewable energy generation and other industrial and commercial sources that burn fuel. PM can also be generated from large open areas of exposed earth or dirt roads where vehicles and equipment can disperse PM into the air.</p>	<p>Fine particles are a concern due to their microscopic size, which enables them to travel more deeply into the lungs and blood stream, increasing health issues. Exposure to PM_{2.5} is linked to respiratory disease, decreased lung function, asthma attacks, heart attacks and premature death.</p>

Eleventh Schedule - (Cont'd)

AIR POLLUTANTS - (Cont'd)	SOURCES - (Cont'd)	HEALTH AND ENVIRONMENTAL EFFECTS - (Cont'd)
Oxides of Sulphur (SO _x) is a group of colourless, corrosive gases, produced by burning fuels containing Sulphur.	SO _x is group of gases released when fuels containing Sulphur are burned in the combustion process. The primary port-related SO _x sources is exhaust from engines that power shore-side equipment and vehicles, marine vessels, non-renewable energy generation, other fossil-fuel based industrial and commercial activities in and around the port.	SO _x is associated with a variety of respiratory diseases. Inhalation of SO _x can cause increased airway resistance by constricting lung passages. Some of the SO _x become sulphate particles in the atmosphere, adding to measured PM levels. High concentrations of gaseous SO _x can lead to the formation of acid rain, harming trees and plants by damaging foliage and decreasing growth.
Volatile Organic Compounds (VOCs) are any compound of carbon other than CO, CO ₂ , carbonic acid, metallic carbides, or carbonates and ammonium carbonate which participate in atmospheric photochemical reactions. Some VOCs are also considered PM.	VOCs are generated when fuel is burned in the combustion process. The primary port-related VOC sources are from the exhaust of engines that power shore-side equipment and vehicles, marine vessels, non-renewable energy-generation and other fossil-fuel based commercial and industrial activities in and around the port.	VOCs contribute to ozone depletion, and some are toxic and contribute to a wide range of adverse health effects.

Eleventh Schedule - (Concl'd)

AIR POLLUTANTS - (Concl'd)	SOURCES - (Concl'd)	HEALTH AND ENVIRONMENTAL EFFECTS - (Concl'd)
Carbon monoxide (CO) is a colourless, odourless toxic gas commonly formed when carbon containing fuel is not completely burned.	CO forms during incomplete combustion of fuels. The primary port-related CO sources are from the exhaust from engines that power shore-side equipment and vehicles, marine vessels, non-renewable energy generation and other fossil-fuel based commercial and industrial activities in and around the port.	CO combines with haemoglobin in red blood cells and decrease the oxygen-carrying capacity of the blood. CO weakens heart contractions, reducing the amount of blood pumped through the body. It can affect brain and lung function.
Greenhouse gases (GHGs) that are typically emitted from port-related sources include carbon dioxide (CO ₂), methane (CH ₄), and nitrous oxide (N ₂ O).	GHGs come from natural processes and human activities. The primary port-related GHG sources are from engines that power shore-side equipment and vehicles, marine vessels, non-renewable energy generation and other fossil-fuel based commercial and industrial activities in and around the port.	Most climate scientist agree that the main cause of the current global warming trend is the human expansion of the 'greenhouse effect'. Warming results when the atmosphere traps heat radiating from Earth towards Space. Certain gases in the atmosphere block heat from escaping, otherwise referred to as GHGs. Climate change results in extreme and unusual weather pattern shifts within the Earth's atmosphere.

TWELFTH SCHEDULE

(Section 107(3))



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

EGCS Operations Notification Form

Particulars of vessel

1. Name of vessel: _____
2. Distinctive numbers or letters: _____
3. Port of registry: _____
4. Gross tonnage: _____
5. IMO number: _____
6. Type of ship: oil tanker chemical tanker bulk carrier passenger ship
 container other cargo ship other (specify) _____

Details of shipowner or agent

7. Name of shipowner or agent: _____
8. Address of shipowner or agent: _____

9. Particulars of vessel's EGCS operations: open-loop closed-loop hybrid mode

Twelfth Schedule - (Concl'd)

10. Does vessel have onboard treatment EGCS facilities? yes no

EGCS wash-water discharge

11. State type and amount of waste for discharge:

EGCS wash-water_____ (m³)

EGCS residue_____ (m³)

12. Notwithstanding the discharge options specified at section 103 of the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-) do alternative discharge arrangements need to be made for the vessel pursuant to section 103(1)(e)? yes no

If yes, give additional details:

EGCS residue discharge

13. Notwithstanding the EGCS residue discharge options specified at section 106 of the *Marine Transport (Emissions Control) Act, 2024* (Act 2024-) do alternative discharge arrangements need to be made for the vessel pursuant to section 106(c)(ii)? yes no

If yes, give additional details:

14. Estimated date and time of arrival of vessel into Barbados: _____
(dd/mm/yyyy)

15. Estimated date and time of departure of vessel from Barbados: _____
(dd/mm/yyyy)

Signature of shipowner, Agent or Master: _____

Date: _____
(dd/mm/yyyy)

THIRTEENTH SCHEDULE*(Section 118)***PART I****Administrative Penalties**

Description of Contravention	Provision	Penalty
Failing to have on board an ozone-depleting substances record book, contrary to section 17(6)	Section 17(6)	\$10 000
Failing to make entries in the ozone-depleting substances record book, contrary to section 17(7)	Section 17(7)	\$7 000
Failing to retain or produce the ozone-depleting substances record book, contrary to section 18(2)	Section 18(2)	\$7 000
Failing to retain the ozone-depleting substances record book, contrary to section 18(3)	Section 18(3)	\$10 000
Failing to make an entry in or retain a fuel record book, contrary to section 25(1)	Section 25(1)	\$10 000
Failing to have a ship energy efficiency plan on board, contrary to section 34(2)	Section 34(4)	\$10 000
Using fuel oil that does not meet fuel oil quality requirements, contrary to section 61(1)	Section 61(1)	\$15 000

*Thirteenth Schedule - (Cont'd)***PART I - (Concl'd)****Administrative Penalties - (Concl'd)**

Description of Contravention	Provision	Penalty
Failing to retain or produce bunker delivery note, contrary to section 65(1)	Section 65(1)	\$7 000
Failing to retain or produce bunker delivery note, contrary to section 65(2)	Section 65(2)	\$10 000
Failing to retain or produce bunker delivery note, contrary to section 65(3)	Section 65(3)	\$10 000
Failing to notify sulphur content of gas fuel, contrary to section 68(1)	Section 68(1)	\$10 000

Thirteenth Schedule - (Concl'd)

(Section 119(1))

PART II



Marine Transport (Emissions Control) Act, 2024
(Act 2024-)

Administrative Penalty Notice

On the _____ day of _____, 20____, at _____
(Time)

_____, you _____
(Location) *(Name of owner/master of vessel/local fuel supplier)*

*being the (owner)/(master)*being the local fuel supplier of _____
(Name and particulars of vessel)

contravened section _____ of the *Marine Transport (Emissions Control) Act, 2024*
(Act 2024-). The particulars of the contravention are that you:

Dated this _____ day of _____.

Director of Ocean Affairs

*delete as appropriate

Read three times and passed the House of Assembly this
day of _____, 2024.

Speaker

Read three times and passed the Senate this _____ day of
, 2024.

President