



## Bulletin No. 01/2022

### CII & SEEMP III

During the 78<sup>th</sup> session of the IMO's Marine Environment Protection Committee (MEPC 78), the finalization of technical guidelines regarding the CII and SEEMP Part II was carried out. The first reporting period for the CII is the year 2023.

- The requirements will be applicable to the Bulk carrier, Gas carrier, Tanker, Containership, General cargo ship, Refrigerated cargo carrier, Combination carrier, Ro-ro cargo ship (vehicle carrier), Ro-ro cargo ship, Ro-ro passenger ship, LNG carrier, and Cruise passenger ship above 5000 GT.
- A verified **SEEMP part III** should be on board from 1 January 2023 together with the CoC (Confirmation of Compliance). **It is worth being noticed that SEEMP part III is additional to SEEMP Part I and SEEMP Part II.** The SEEMP III should include the following:
  - ✓ CII calculation methodology
  - ✓ Required CII values over the next 3 years (Required CII will be annually reduced by 2%.)
  - ✓ implementation plan for achieving the required CII
  - ✓ Procedures for self-evaluation and improvement
- **CII reporting:** Within three months after the end of 2023, the company should submit the aggregation of the collected data, calculation of the CII, and the CII rating to the administration for verification. The Document of compliance will be issued in 2024 and will include the annual Attained / Required CII, as well as the resulting CII Rating. The CII refers to the actual emissions in operation and should be calculated and verified every calendar year.
- **CII Rating:** The CII rating will be calculated based on the annual fuel consumption of each vessel. From 2024, the rating A, B, C, D, or E will be given to each vessel. In case a vessel is rated D for three consecutive years or E for one reporting year, SEEMP Part III should be revised to include a plan of corrective actions. The plan of corrective actions should be submitted to the Administration along with revised SEEMP part III, within 1 month after reporting the Attained CII, otherwise in no case later than 30 April.





**Emicert** is delegated to carry out the review and verification of SEEMP Part III and CII, calculation of CII, and determination of carbon intensity rating including review and verification of any corrective actions in SEEMP Part III for ships rated D for 3 consecutive years or rated E according to regulations 26, 27 & 28.8.

For the verification of the **Attained Annual Operational CII**, along with the documentation for the verification of the annual data report, the company should also submit the following:

- ✓ a copy of the verified ship's Operational Carbon Intensity Plan (SEEMP Part III).
  - ✓ documents (IEE certificate, Stability Booklet, or International Tonnage Certificate) evidencing the capacity parameter of the ship in the metric relevant for the calculation of its operational carbon intensity (deadweight or gross tonnage)
  - ✓ EEDI /EEXI technical file
  - ✓ Documentary evidence in case of the correction factors and voyage adjustments (as per Resolution MEPC 355 (78)) applied in the attained annual operational CII calculation, if any, during the reporting period (as per Resolution MEPC 348(78)292(71), appendix 2)
  - ✓ Statements of compliance for the previous two calendar years (**In case of the vessel is verified by another classification/verifier**)
- 
- **Change of Flag/Company:** In the case of a ship's transfer (As per regulations 27.4, 27.5 or 27.6 of MARPOL Annex VI) there is no obligation for the previous administration to verify the attained annual operational CII and to determine the annual CII rating of the ship for a partial year. The verification of the attained annual operational CII is an obligation for the new Administration, which will use the data over an entire calendar year. In such cases, the aggregated data necessary to calculate the attained annual operational CII before the transfer, which should have already been verified by the losing Administration, can be directly used by the receiving Administration without further verification (**as per Resolution MEPC 348 (78) appendix 3 and appendix 3 - add1**).
  - **Verification of trial CIIs:** The trial CIIs (EEPI, cbDIST, cIDIST or EEOI), if voluntarily calculated and reported, should be verified by the Administration following the same procedure as for the attained annual operational CII (AER or cgDIST). However, the Administration needs not to assign a rating to a ship based on trial CIIs.





## Correction Factors and Voyage Adjustments

### 1. Voyage adjustment

- I. The fuel consumed in a voyage period during the calendar year for the following conditions may be deducted from the calculation of the attained CII as well as the associated distance:
  - i. Scenarios specified in regulation 3.1 of MARPOL Annex VI may endanger the safe navigation of a ship.
  - ii. Sailing in ice conditions, which means sailing of an ice-classed ship in a sea area within the ice edge
- II. The Company should provide the following documents:
  - ✓ The ship's logbook should include data entries for the voyage period with the date, time, and position of the ship, when a scenario specified in regulation 3.1 of MARPOL Annex VI, when started to apply and ceased to apply, or when the ship encountered ice conditions and left ice conditions.
  - ✓ The ship's engine logbook or noon reports, indicate the fuel oil consumption during the subject voyage period.
  - ✓ For ships that **sailed in ice conditions**, the administrator may ask for ice charts related to the subject voyage period or a weather forecasting report.

### 2. Correction Factors for use in CII calculation

#### I. **Corrections relating to electrical power**

##### a. **Refrigerated Containers**

- i. The Shipping Company should provide evidence for the vessel-specific fuel consumption (SFOC):
  - ✓ EEDI/EEXI Technical File or,
  - ✓ NOx Technical File or,
  - ✓ kWh from auto-logged data or,
  - ✓ exported PMS form.
- ii. As evidence for the in-use reefers carried:
  - ✓ the BAPLIE file
  - ✓ or Load condition summary.





## **b. Cargo Cooling Systems on Gas Carriers and LNG Carriers**

- i. For Gas carriers and LNG carriers with electrical cargo cooling systems or reliquefaction plants, the Shipping Company should provide evidence for the vessel-specific fuel consumption (SFOC):
  - ✓ EEDI/EEXI Technical File or,
  - ✓ NOx Technical File or,
  - ✓ kWh from auto-logged data or,
  - ✓ exported PMS form.

## **c. Electric Cargo discharge pumps on tankers**

- i. For Tankers with directly or indirectly electrically powered discharge pumps, the Shipping Company should provide evidence for the vessel-specific fuel consumption (SFOC):
  - ✓ EEDI/EEXI Technical File or,
  - ✓ NOx Technical File or,
  - ✓ kWh from auto-logged data or,
  - ✓ exported PMS form.

*In the case of ships without a Technical File, a default value of 175 g/kWh for 2-stroke engines and 200 g/kWh for 4-stroke engines may be applied for the above categories.*

## **II. Corrections for cargo heating and discharge pumps on tankers**

- i. For Tankers with fuel-fired boilers used for cargo heating or steam-driven cargo pumps, the shipping company should provide
  - ✓ Engine logbook or
  - ✓ Heating log or
  - ✓ official document that indicates the fuel used by the boiler during cargo heating or discharge operations for the subject voyage period.

## **III. Corrections for discharge pumps on tankers**

- i. For Tankers with discharge pumps powered by their own generator, the shipping company should provide.
  - ✓ Engine logbook or
  - ✓ official document that indicates the fuel used by their own generator during the period that the discharge pumps were in operation.





## SHIP ENERGY EFFICIENCY MANAGEMENT PLAN III

- I. The verifier should confirm that company has updated Ship Operational Carbon intensity Plan - SEEMP III as per Regulation 26.3.1 of MARPOL Annex VI to include the following:
  - a. a description of the methodology that will be used to calculate the ship's attained annual operational CII required by regulation 28 of MARPOL Annex VI
  - b. the processes that will be used to report this value to the ship's Administration.
  - c. the required annual operational CIIs, as specified in regulation 28 of MARPOL Annex VI, for the next three years.
  - d. an implementation plan with corrective action, documenting how the required annual operational CIIs will be achieved during the next three years
  - e. a procedure for self-evaluation and improvement.
- II. Before the assessment of the Ship Operational Carbon intensity Plan (SEEMP III), the Auditor, that has been appointed by the Technical Manager, may ask the company to send the following documents
  - ✓ SoC for SEEMP II *(as SEEMP III is additional to SEEMP I & II, the company must have evidence that SEEMP II has been assessed)*
  - ✓ Supplement to IEE certificate *(for cross-checking ship's type)*
  - ✓ EEDI/EEI technical file *(for cross-checking that values and corrective factors for the calculation of CII have been properly used)*
  - ✓ Fuel oil consumption report including the data required for the calculation of the attained required CII (in accordance with regulation 27 - Fuel Oil Data Collection System).

**Vessel's Ship Operational Carbon intensity Plan using a template corresponding to the model set out in Appendix 2bis of IMO Resolution MEPC.346(78)**

- III. The SEEMP should include a log for the verifier as well as the shipping company to review and update when changes have been carried out. Also, the verifier should perform initial, periodical, and additional verification, and upon satisfactory completion of the assessment of SEEMP III, proceed with the issuance of Confirmation of compliance.
  - a) **Initial Verification:** The Administration should perform an initial verification to ensure that for each ship the SEEMP complies with regulation 26.3.1 of MARPOL Annex V
  - b) **Periodical Verification:** If any of the elements in regulation 26.3.1 is updated and in any case every three years, the Administration should perform a periodical verification to ensure the SEEMP complies with regulation 26.3.1 of MARPOL Annex VI in accordance with regulation 5.4.6 of MARPOL Annex VI.
  - c) **Additional verification:** in the case of a ship rated as D for three consecutive years or a ship rated as E, perform an additional verification to ensure that a plan of corrective actions has been established in accordance with regulations 28.7 and 28.8.





## SHIP ENERGY EFFICIENCY MANAGEMENT PLAN II

Kindly note that as of 10 June 2022, all SEEMP part II being submitted for review and verification should be developed/reviewed against the 2022 Guidelines for the development of SEEMP MEPC. Resolution 346(78).

There are important changes regarding sect. 7 and the fuel oil consumption method. Under the MEPC. Resolution 346(78), new methods for the calculation of the fuel oil consumption have been inserted. Paragraph 7.4 refers to the method using LNG cargo tank monitoring on board and Paragraph 7.5 to the method using cargo tank monitoring on board for ships using cargo other than LNG as a fuel.

Minor changes have been made also to the template of SEEMP II (APPENDIX 2 - SAMPLE FORM OF SHIP FUEL OIL CONSUMPTION DATA COLLECTION PLAN), regarding the Ship's particulars.

### Conclusion of the fuel oil consumption data report verification, attained operational CII calculation & Rating determination

To complete the verification of the annual report, the Verifier shall at least:

- ✓ confirm that all verification activities have been carried out
- ✓ verify whether the information in the report satisfies the requirements of MARPOL, Annex VI, Regulation 22A
- ✓ verify whether the information in the report satisfies the requirements of MARPOL, Annex VI, Regulation 27, 28, and IMO Resolutions MEPC. 348, 352,353, 354 & 355

Additionally, the following documents should be provided:

- ✓ Confirmation that the Part III of the SEEMP has been developed as per requirements of MARPOL, Annex VI, Regulation 26.3.1 & 28.
- ✓ IMO DCS report (*a sample generated by EMICERT is attached for your easy reference*)
- ✓ Annual attained operational CII calculation and Rating determination as per MARPOL, Annex VI, Regulation 27, 28, and IMO Resolutions MEPC. 348, 352,353, 354 & 355
- ✓ Annual data for the Bunker Delivery Notes (BDN) summaries in the format as per **Appendix 1 of IMO Resolution MEPC. 348(78)**.
- ✓ Annual data for the collected data summaries in the format as per **Appendix 2 of IMO Resolution MEPC.348(78)**
- ✓ Standardized data for the collection system and operational carbon intensity for the reporting to the administration in the format as per **Appendix 3 of IMO Resolution MEPC.346(78)**





- ✓ Standardized data for the parameters to calculate the trial carbon intensity indicators on voluntary have been reported in the format as per **Appendix 4 of IMO Resolution MEPC.346(78)**
- ✓ Annual data for the collected data summaries to calculate trial CII on a voluntary basis in the format as per **Appendix 2 – ADD 1 of IMO Resolution MEPC.348(78)**
- ✓ Aggregated Data before a transfer of flag/company addressed in regulations 27.4, 27.5 or 27.6 of MARPOL ANNEX VI basis in the format as per **Appendix 3 of IMO Resolution MEPC.348(78)**
- ✓ Aggregated Data before a transfer of flag/company addressed in regulations 27.4, 27.5 or 27.6 of MARPOL ANNEX VI to calculate trial CII metrics on a voluntary basis in the format as per **Appendix 3 of IMO Resolution MEPC.348(78)**

**Marine advisory  
20/2022 – Liberia  
Maritime Authority**

## **Early Submission of the Ship Energy Efficiency Management Plan (SEEMP) Part III for Review and Verification**

The purpose of this Marine Advisory is to remind shipowners of Regulation 26 (SEEMP) of the 2021 Revised MARPOL Annex VI, adopted by MEPC Resolution 328(76), which enters into force on 1 November 2022.

**On or before 1 January 2023, each ship of 5,000 gross tonnage and above engaged on international voyages shall keep on board a verified SEEMP Part III developed considering guidelines in MEPC Resolution 346(78).**

**The Liberia Maritime Authority** encourage Shipowners and Operators, of ships with SEEMP Parts I and II already onboard their ships, to submit their ships' SEEMP Part III **by 1 October 2022**, or as soon thereafter as possible, for review and verification.

**See attached the Marine advisory issued by the Liberia Maritime authority.**





THE REPUBLIC OF LIBERIA  
LIBERIA MARITIME AUTHORITY

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August 3, 2022

**Marine Advisory: 20/2022**

**Subject: Early Submission of the Ship Energy Efficiency Management Plan (SEEMP) Part III for Review and Verification**

**Dear Shipowners/Operators and Masters,**

**Purpose**

The purpose of this Marine Advisory is to remind shipowners of Regulation 26 (SEEMP) of the 2021 Revised MARPOL Annex VI, adopted by [MEPC Resolution 328\(76\)](#), which enters into force on 1 November 2022.

**Background**

After the end of calendar year 2023 and after the end of each following calendar year, each ship of 5,000 gross tonnage and above engaged on international voyages shall calculate the attained annual operational CII over a 12-month period from 1 January to 31 December for the preceding calendar year, using the fuel oil consumption data collected in accordance with regulation 27 of the 2021 Revised MARPOL Annex VI.

**Requirements**

On or before 1 January 2023, each ship of 5,000 gross tonnage and above engaged on international voyages shall keep on board a verified SEEMP Part III developed taking into account guidelines in [MEPC Resolution 346\(78\)](#), which shall include:

1. A description of the methodology that will be used to calculate the ship's attained annual operational CII required by regulation 28 of the 2021 Revised MARPOL Annex VI and the processes that will be used to report this value to the ship's Administration;
2. The required annual operational CII, as specified in regulation 28 of the 2021 Revised MARPOL Annex VI, for the next three years;
3. An implementation plan documenting how the required annual operational CII will be achieved during the next 3 years; and
4. A procedure for self-evaluation and improvement.

Shipowners and Operators, of ships with SEEMP Parts I and II already onboard their ships, are encouraged to submit their ships' SEEMP Part III by **1 October 2022, or as soon thereafter as possible**, for review and verification to one of the authorized Classification Society Verifiers or non-Classification Society Verifiers listed in [Appendix 1](#), that the Administration intends authorizing.

\* \* \* \* \*





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## **Appendixes**

**Appendix 1 of IMO Resolution MEPC. 348(78).**

**Appendix 2 of IMO Resolution MEPC.348(78)**

**Appendix 3 of IMO Resolution MEPC.346(78)**

**Appendix 4 of IMO Resolution MEPC.346(78)**

**Appendix 2 of IMO Resolution MEPC.346(78)**

**APPENDIX 2bis of IMO Resolution MEPC.346(78)**

**Appendix 2 – ADD 1 of IMO Resolution MEPC.348(78)**

**Appendix 3 of IMO Resolution MEPC.348(78)**



# APPENDIX 1

## SAMPLE OF THE BDN SUMMARIES

Date of Operations (dd/mm/yyyy)	Fuel Oil Type/Mass(MT)									Descriptions
	DO/GO	LFO	HFO	LPG(P)	LPG(B)	LNG	Methanol	Ethanol	Others(Cr)	
<b>① BDN</b>										
09/01/2023										
02/05/2023			150							
08/07/2023										
09/10/2023										
10/12/2023			300							
<b>① Annual Supply Amount</b>	0	0	450	0	0	0	0	0	0	
<b>② Correction for the tank oil remainings</b>										
01/01/2023			400							
31/12/2023			200							
<b>② Correction for the tank oil remaining</b>	0	0	200	0	0	0	0	0	0	The difference in the amount of the remaining tank oil at the beginning/end of the data collection period.
<b>③ Other corrections</b>										
30/03/2023										
15/09/2023										
31/12/2023										
<b>③ Annual other corrections</b>	0	0	0	0	0	0	0	0	0	
<b>Annual Fuel Consumption</b>										
<b>Annual Fuel Consumption (①+②+③)</b>	0	0	650	0	0	0	0	0	0	

Explanatory remarks:  
 If bunker supply/correction data have been recorded in a Company's electronic reporting system,the data is acceptable to be submitted in the existing format instead of submitting the data by this format.

## APPENDIX 2

### SAMPLE OF THE COLLECTED DATA SUMMARIES

Date and time from (dd/mm/yyyy; hh:mm UTC)	* Date and time to (dd/mm/yyyy; hh:mm UTC)	Distance travelled (n.m)	Hours under way (hh:mm)	**exceptional conditions specified in regulation 3.1 of MARPOL Annex VI (Y/N)	**Sailing in ice condition (Y/N)	**STS Operation (Y/N)	Fuel consumption (metric tons)							
							total mass		**mass to be deducted from the total					
									consumed for production of electrical power ( $FC_{electrical}$ )		consumed by oil-fired boiler for heating/discharge on tankers ( $FC_{boiler}$ )		consumed by standalone engine driven cargo pumps during discharge operations on tankers ( $FC_{others}$ )	
							***DO/GO	...	DO/GO	...	DO/GO	...	DO/GO	...
01/01/2023 00:00	01/01/2023 13:20	150	13:20	N	N	N								
01/01/2023 13:20	01/01/2023 24:00	60	10:40	N	Y	N								
02/01/2023 00:00	02/01/2023 24:00	288	24:00	N	N	Y								
03/01/2023 00:00	03/01/2023 24:00	260	24:00	N	N	Y								
.....	.....	.....	.....	.....	.....	.....								
.....	.....	.....	.....	.....	.....	.....								
31/12/2023 00:00	31/12/2023 24:00	290	24:00	N	N	N								
Annual total														

\* In the case of daily underlying data, this column would be left blank.

\*\* Refer to the 2022 *Interim guidelines on correction factors and voyage adjustments for CII calculations (G5)*, adopted by resolution MEPC.355(78). Supporting documentation may be additionally submitted to facilitate the verification when necessary, such as Baplie files where the number of in-use reefer containers on board are recorded. Note that voyages in different sailing or operational conditions should be recorded in separate rows so that the correction factors and voyage adjustments can be duly calculated and verified.

\*\*\* Refer to fuel types specified in the 2018 *Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships* (resolution MEPC.308(73), as may be amended)

Explanatory remarks: If bunker supply/correction data have been recorded in a company's electronic reporting system, the data is acceptable to be submitted in the existing format instead of submitting the data by this format.

## APPENDIX 2 – ADD.1

### SAMPLE OF THE COLLECTED DATA SUMMARIES TO CALCULATE TRIAL CII ON A VOLUNTARY BASIS

The following aggregated data should be additionally included in the table in appendix 2, if one or more trial CII metrics have been applied on a voluntary basis:

Date from (dd/mm/yyyy)	*Date to (dd/mm/yyyy)	Laden distance travelled (n.m)	****Transport work (metric of transport work)
01/01/2023			
02/01/2023			
03/01/2023			
31/12/2023			
Annual total			

\* In the case of daily underlying data, this column would be left blank.

\*\*\*\* As defined in section 3 of the *Guidelines for voluntary use of the ship energy efficiency operational indicator (EEOI)* circulated by MEPC.1/Circ.684.

Explanatory remarks: If bunker supply/correction data have been recorded in a Company's electronic reporting system, the data is acceptable to be submitted in the existing format instead of submitting the data by this format.

### APPENDIX 3

#### SAMPLE OF THE AGGREGATED DATA BEFORE A TRANSFER OF FLAG/COMPANY ADDRESSED IN REGULATIONS 27.4, 27.5 OR 27.6 OF MARPOL ANNEX VI

Date of transfer (dd/mm/yyyy)	Type of transfer (flag/company/both)	Reporting period		Distance Travelled (n.m)		Hours under way (hh:mm)	Fuel consumption (metric tons)							
		Date from (dd/mm/yyyy)	Date to (dd/mm/yyyy)	Total distance travelled	*distance to be deducted from CII calculation		total mass		*mass to be deducted from the total		**mass consumed in STS operations			
							***DO/GO	...	DO/GO	...	DO/GO	...		
12/05/2023	Flag	01/01/2023	11/05/2023											
15/06/2023	Company	12/05/2023	14/06/2023											
02/11/2023	Both	15/06/2023	01/11/2023											
.....														

\* Refer to the aggregated mass of fuel consumption to calculate  $FC_{voyage}$ ,  $FC_{electrical}$ ,  $FC_{boiler}$  and  $FC_{others}$  in the 2022 Interim guidelines on correction factors and voyage adjustments for CII calculations (G5), (resolution MEPC.355(78)).

\*\* Refer to the aggregated mass of fuel consumption to calculate  $AF_{Tanker,STS}$  in the 2022 Interim guidelines on correction factors and voyage adjustments for CII calculations (G5), (resolution MEPC.355(78)).

\*\*\* Refer to fuel types specified in 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships (resolution MEPC.308(73), as may be amended).

### APPENDIX 3 – ADD.1

#### SAMPLE OF THE AGGREGATED DATA BEFORE A TRANSFER OF FLAG/COMPANY ADDRESSED IN REGULATIONS 27.4, 27.5 OR 27.6 OF MARPOL ANNEX VI TO CALCULATE TRIAL CII METRICS ON A VOLUNTARY BASIS

The following aggregated data may be additionally included in the table in appendix 3, if one or more trial CII metrics have been applied on a voluntary basis:

Date of transfer (dd/mm/yyyy)	Type of transfer (flag/company/both)	Reporting period		Laden distance travelled (n.m)	****Transport work (metric of transport work)
		Date from (dd/mm/yyyy)	Date to (dd/mm/yyyy)		
12/05/2023	Flag	01/01/2023	11/05/2023		
15/06/2023	Company	12/05/2023	14/06/2023		
02/11/2023	Both	15/06/2023	01/11/2023		
.....					

\*\*\*\* As defined in section 3 of Guidelines for voluntary use of the ship energy efficiency operational indicator (EEOI) circulated by MEPC.1/Circ.684.

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APPENDIX 2

**SAMPLE FORM OF SHIP FUEL OIL CONSUMPTION DATA COLLECTION PLAN  
(PART II OF THE SEEMP)**

**1 Review and update log**

Date/timeline	Updated parts	Developed by	Implemented by

**2 Ship particulars**

Name of ship	
IMO number	
Company	
Flag	
Year of delivery	
Ship type	
Gross tonnage	
NT	
DWT	
Attained EEDI (if applicable)	
Attained EEXI (if applicable)	
Ice class	

**3 Record of revision of Fuel Oil Consumption Data Collection Plan**

Date of revision	Revised provision

**4 Ship engines and other fuel oil consumers and fuel oil types used**

	Engines or other fuel oil consumers	Power	Fuel oil types
1	Type/model of main engine	(kW)	
2	Type/model of auxiliary engine	(kW)	
3	Boiler	(...)	
4	Inert gas generator	(...)	

## 5 Emission factor

$C_F$  is a non-dimensional conversion factor between fuel oil consumption and CO<sub>2</sub> emission in the 2018 Guidelines on the method of calculation of the attained Energy Efficiency Design Index (EEDI) for new ships (resolution MEPC.308(73)), as amended. The annual total amount of CO<sub>2</sub> is calculated by multiplying annual fuel oil consumption and  $C_F$  for the type of fuel.

Fuel oil type	$C_F$ (t-CO <sub>2</sub> / t-Fuel)
Diesel/Gas oil (e.g. ISO 8217 grades DMX through DMB)	3.206
Light fuel oil (LFO) (e.g. ISO 8217 grades RMA through RMD)	3.151
Heavy fuel oil (HFO) (e.g. ISO 8217 grades RME through RMK)	3.114
Liquefied petroleum gas (LPG) (Propane)	3.000
Liquefied petroleum gas (LPG) (Butane)	3.030
Liquefied natural gas (LNG)	2.750
Methanol	1.375
Ethanol	1.913
Other (.....)	

## 6 Method to measure fuel oil consumption

The applied method for measurement for this ship is given below. The description explains the procedure for measuring data and calculating annual values, measurement equipment involved, etc.

Method	Description

## 7 Method to measure distance travelled

Description

## 8 Method to measure hours under way

Description

## 9 Processes that will be used to report the data to the Administration

Description

## 10 Data quality

Description

**SAMPLE FORM OF SHIP OPERATIONAL CARBON INTENSITY PLAN  
(PART III OF THE SEEMP)**

**1 Review and update log**

Date/timeline	Updated parts	Developed by	Implemented by
<1 <sup>st</sup> time>			
<2 <sup>nd</sup> time>			
Etc.			

**2 Required CII over the next three years, attained CII and rating over three consecutive years**

Name of the ship		IMO number		
Company		Year of delivery		
Flag		Ship type		
Gross tonnage		DWT		
Applicable CII		<input type="checkbox"/> AER ; <input type="checkbox"/> cgDIST		
Year	Required annual operational CII	Attained annual operational CII (before any correction)	Attained annual operational CII	Operational carbon intensity rating (A, B, C, D or E):
<year -1>				
<year -2>				
<year -3>				
	Required annual operational CII			
<year>:				
<year + 1>				
<year + 2>				

**3 Calculation methodology of the ship's attained annual CII, including required data and how to obtain these data as far as not addressed in part II**

Description

**4 Three-year implementation plan**

Description



**Company personnel to be responsible for the three-year implementation plan, monitoring and recording performance**

**List of measures to be considered and implemented**

Measure	Impact on CII	Time and method of implementation and responsible personnel			Impediments and contingency measures	
		Milestone	Due	Responsible	Impediment	Contingencies

**Calculation showing the combined effect of the measures and that the required operational CII will be achieved**

Year	Required annual operational CII	Targeted operational annual CII	Targeted rating
<year>:			
<year + 1>			
<year + 2>			

**5 Self-evaluation and improvement**

Description

**6 Plan of corrective actions (if applicable)**


**Analysis of causes for inferior CII rating**

Cause	Analysis of effect	Actions

**Analysis of measures in the implementation plan**

Measure	Analysis of effect	Actions

**List of additional measures and revised measures to be added to the implementation plan**

Measure	Impact on CII	Time and method of implementation and responsible personnel			Impediments and contingency measures	
		Milestone	Due	Responsible	Impediments	Contingencies

APPENDIX 3

STANDARDIZED DATA REPORTING FORMAT FOR THE DATA COLLECTION SYSTEM  
AND OPERATIONAL CARBON INTENSITY TO THE ADMINISTRATION

Name of the ship		IMO number	
Company		Year of delivery	
Flag		Ship type	
Gross tonnage		DWT	
Applicable CII		<input type="checkbox"/> AER ; <input type="checkbox"/> cgDIST	
Operational carbon intensity rating		<input type="checkbox"/> A ; <input type="checkbox"/> B ; <input type="checkbox"/> C ; <input type="checkbox"/> D ; <input type="checkbox"/> E	
CII for trial purpose (none, one or more on voluntary basis)		<input type="checkbox"/> EEPI ; <input type="checkbox"/> cbDIST ; <input type="checkbox"/> clDIST ; <input type="checkbox"/> EEOI	
Attained annual operational CII before any correction (AER in g CO <sub>2</sub> /dwt.nm or cgDIST in g CO <sub>2</sub> /gt.nm)			
Attained annual operational CII (AER in g CO <sub>2</sub> /dwt.nm or cgDIST in g CO <sub>2</sub> /gt.nm)			
End date for annual CII (dd/mm/yy)*			
Start date for annual CII (dd/mm/yy)*			
Attained EEDI (if applicable)			
Attained EEXI (if applicable)			
EEPI (gCO <sub>2</sub> /dwt.nm)			
cbDIST (gCO <sub>2</sub> /berth.nm)			
clDIST (gCO <sub>2</sub> /m.nm)			
EEOI (gCO <sub>2</sub> /t.nm or others)			
.....			
.....			
IMO number			
End date for DCS (dd/mm/yy)			
Start date for DCS (dd/mm/yy)			

APPENDIX 4

STANDARDIZED DATA REPORTING FORMAT FOR THE PARAMETERS TO CALCULATE THE TRIAL CARBON INTENSITY INDICATORS ON VOLUNTARY BASIS\*

Attained annual EEOI	
Metric of Cargo Mass Carried or Work Done in EEOI calculation (gCO <sub>2</sub> /t.nm or others)*****	
Transport work*****	
Attained annual EEPI (gCO <sub>2</sub> /dwt.nm)	
Laden distance travelled (n.m)	
Attained annual cIDIST (gCO <sub>2</sub> /m.nm) ****	
Length of lanes (metre) ****	
Attained annual cbDIST(gCO <sub>2</sub> /berth.nm) ***	
Available lower berths***	
End date for trial CII (dd/mm/yy)**	
Start date for trial CII (dd/mm/yy)**	
IMO number**	
End date for DCS (dd/mm/yy)**	
Start date for DCS (dd/mm/yy)**	

\* For reporting a trial CII, the data should be reported as applicable taking into account the information already provided in appendix 3.

\*\* Consistent with appendix 3.

\*\*\* Only applicable to cruise passenger ships.

\*\*\*\* Only applicable to ro-ro ships.

\*\*\*\*\* As defined in section 3 of *Guidelines for voluntary use of the ship energy efficiency operational indicator (EEOI)* circulated by MEPC.1/Circ.684. The distance travelled shall be determined from berth of the port of departure to berth of the port of arrival and shall be expressed in nautical miles.