



**FLEET PRESERVE**  
— MARINE CONSULTANTS —

TECHNICAL ADVISORY · FP-TA 03/2026

# CII 2027–2030

## The tightening carbon rating — and what to do

Resolution MEPC.400(83) sets the CII reduction factors for 2027 to 2030. The required CII falls by about 2.6 points every year — faster than in 2023–2026 — and many bulk carriers that are C-rated today will slide to D without action. What the rating means, what a D or E triggers, and a practical measures plan for bulkers and general cargo ships.

---

---

**13.625 %**

---

Reduction factor for 2027, vs. 2019 reference line

---

---

**21.5 %**

---

Reduction factor for 2030 — almost double the 2026 level (11 %)

---

---

**3 × D or 1 × E**

---

Triggers a plan of corrective actions in SEEMP Part III



The Carbon Intensity Indicator (CII) applies to all cargo ships of **5,000 GT and above**. Each year the ship's attained CII is compared with a required value that gets stricter every year. From **2027** the annual step increases from 2 to **2.625 percentage points**, and the 2026–2028 implementation plan in SEEMP Part III must show how the ship will keep up.

**11 → 21.5 %**

Required reduction vs. 2019, from 2026 to 2030

**≈ -3 %/yr**

Average annual tightening of the required CII from 2027 (relative)

**31 Mar**

Annual deadline for reporting fuel and operational data (IMO DCS) for the previous year

## Five things every Technical Manager needs to know

- 1 The goalposts move every year.** A ship whose performance stays the same will drop a rating band roughly every two to three years. A Supramax at C today with no improvement typically becomes D from 2027 (see page 4).
- 2 D for three years, or E once, has consequences.** The SEEMP Part III must be revised with a **plan of corrective actions**, verified by the Administration/RO. Repeated poor ratings are visible to charterers, banks and vetting.
- 3 Speed is the biggest lever.** Fuel per mile varies roughly with the square of speed: 10 % slower ≈ 19 % less main-engine fuel per mile. Charter-party terms must allow it (e.g. BIMCO CII Operations Clause).
- 4 Data quality decides the rating.** The enhanced IMO DCS (from 2026 data) splits fuel by consumer and underway / not underway, and adds laden distance and transport work. Wrong distance or idle fuel can cost a full rating band.
- 5 The global "Net-Zero Framework" is not adopted yet.** Adoption was adjourned in October 2025 and MEPC 84 continued discussions without a timeline. CII remains the operative IMO carbon rule — plan on it.

### Who is affected

All cargo, passenger and ro-ro ships ≥5,000 GT on international voyages under MARPOL Annex VI regs. 26–28. For bulk carriers and general cargo ships the metric is the **AER** (g CO<sub>2</sub> per dwt-nautical mile).

### Our recommendation

Run a 2027–2030 CII projection for each ship now, using 2025 verified data and 2026 year-to-date data. Ships projected to reach D in 2027 need a measures plan before the January 2027 voyage orders — not after the first D rating in 2028.

## How the rating works

### Attained CII (AER)

$$AER = \sum (FC_j \times C_{F,j}) / (DWT \times D_t)$$

FC = annual fuel consumed by type (t → g); C<sub>F</sub> = CO<sub>2</sub> factor (e.g. HFO 3.114, LFO 3.151, MDO/MGO 3.206 t CO<sub>2</sub>/t); DWT = summer deadweight; D<sub>t</sub> = distance travelled (nm), all from IMO DCS data.

### Required CII

$$CII_{ref} = a \times DWT^{-c} \cdot CII_{req} = (1 - Z/100) \times CII_{ref}$$

Bulk carrier: a = 4,745, c = 0.622. General cargo: a = 31,948, c = 0.792 (≥20,000 dwt) or a = 588, c = 0.3885 (<20,000 dwt) — MEPC.353(78).

### Rating boundaries

Boundaries = exp(d<sub>i</sub>) × CII<sub>req</sub>. Bulk carrier: 0.86 / 0.94 / 1.06 / 1.18. General cargo: 0.83 / 0.94 / 1.06 / 1.19 — MEPC.354(78). A ≤ superior < B ≤ lower < C ≤ upper < D ≤ inferior < E.

### Reduction factor Z (vs. 2019)

| Year | Z       | Source       |
|------|---------|--------------|
| 2023 | 5%      | MEPC.338(76) |
| 2024 | 7%      | MEPC.338(76) |
| 2025 | 9%      | MEPC.338(76) |
| 2026 | 11%     | MEPC.338(76) |
| 2027 | 13.625% | MEPC.400(83) |
| 2028 | 16.25%  | MEPC.400(83) |
| 2029 | 18.875% | MEPC.400(83) |
| 2030 | 21.5%   | MEPC.400(83) |

Factors beyond 2030 are not yet set. The CII review at MEPC 83–84 kept the metric unchanged for bulk carriers and general cargo ships.

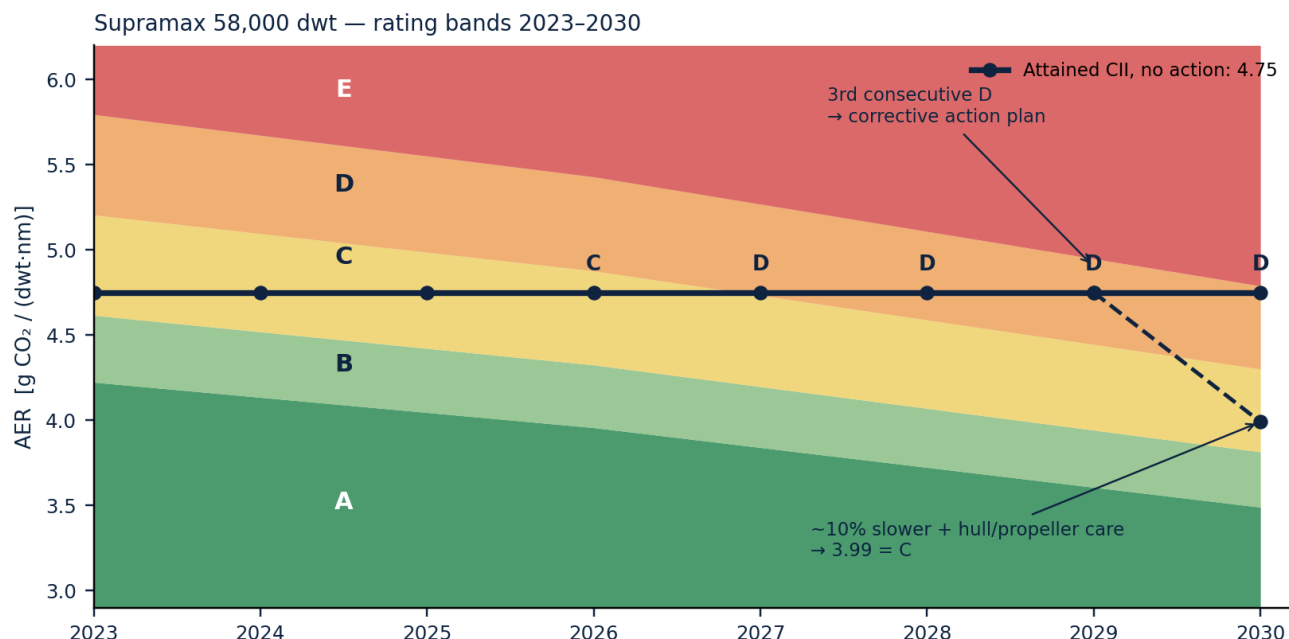
### Required CII and D-boundary by size (g CO<sub>2</sub>/dwt·nm)

| Type          | DWT     | CII ref | Req. 2026 | Req. 2027 | 2027: D above | Req. 2030 | 2030: D above |
|---------------|---------|---------|-----------|-----------|---------------|-----------|---------------|
| Handysize     | 35,000  | 7.08    | 6.30      | 6.11      | <b>6.48</b>   | 5.56      | <b>5.89</b>   |
| Supramax      | 58,000  | 5.17    | 4.60      | 4.46      | <b>4.73</b>   | 4.06      | <b>4.30</b>   |
| Ultramax      | 63,500  | 4.89    | 4.35      | 4.22      | <b>4.47</b>   | 3.84      | <b>4.07</b>   |
| Kamsarmax     | 82,000  | 4.17    | 3.71      | 3.60      | <b>3.82</b>   | 3.27      | <b>3.47</b>   |
| Capesize      | 180,000 | 2.56    | 2.27      | 2.21      | <b>2.34</b>   | 2.01      | <b>2.13</b>   |
| General cargo | 12,000  | 15.30   | 13.61     | 13.21     | <b>14.01</b>  | 12.01     | <b>12.73</b>  |

Calculated by Fleet Preserve from MEPC.353(78), MEPC.354(78) and MEPC.400(83). "D above" = upper boundary (1.06 × required). Use the ship's actual DWT from the certificates.

## Worked example — a C-rated Supramax

Fictitious 58,000 dwt Supramax with an attained AER of 4.75 g CO<sub>2</sub>/dwt·nm, constant operating profile.



### What happens with no action

| Year | Required | Upper (C/D) | Rating |
|------|----------|-------------|--------|
| 2026 | 4.60     | 4.88        | C      |
| 2027 | 4.46     | 4.73        | D      |
| 2028 | 4.33     | 4.59        | D      |
| 2029 | 4.19     | 4.44        | D      |
| 2030 | 4.06     | 4.30        | D      |

The ship is C in 2026 and becomes **D in 2027**. After the third consecutive D (2029 rating, issued in 2030) a corrective-action plan becomes mandatory — and the ship is D-rated in every charterer's screening from 2028.

### What a realistic plan achieves

Reducing service speed by ~10 % cuts main-engine fuel per mile by ~19 % (fuel per mile  $\propto v^2$ ). With the main engine at ~85 % of annual CO<sub>2</sub>, the AER improves by ~16 %: **4.75 → 3.99 = C in 2030**, before any technical upgrade.

**Simplified.** The  $v^2$  rule ignores weather, fouling and engine load effects; slower speed also means fewer miles per year. Use the ship's own speed-consumption curve from noon/DCS data for a real projection.

## Measures toolbox for bulkers & general cargo ships

Indicative effect on the AER of a typical geared or gearless dry-bulk ship. Effects are not additive — they must be evaluated together on the ship's own data.

| Measure                                                           | CII effect      | Cost     | Lead time | Notes                                                                                        |
|-------------------------------------------------------------------|-----------------|----------|-----------|----------------------------------------------------------------------------------------------|
| <b>Operational — no or low capex</b>                              |                 |          |           |                                                                                              |
| Speed management / slow steaming                                  | High            | Low      | Immediate | Needs CP terms (CII clause, speed/consumption warranties)                                    |
| Just-in-time arrival & reduced anchorage time                     | Med             | Low      | Immediate | Idle days add CO <sub>2</sub> without distance — they hurt the AER directly                  |
| Weather routing                                                   | Low–Med         | Low      | Weeks     | Also reduces heavy-weather damage                                                            |
| Trim optimisation                                                 | Low             | Low      | Weeks     | Use trim tables / sea trials or CFD where available                                          |
| Hull cleaning & propeller polishing (afloat)                      | Med             | Low–Med  | Port call | Plan on performance monitoring, not on the calendar; check local rules for in-water cleaning |
| Auxiliary load control (pumps, fans, lighting, reefers)           | Low             | Low      | Immediate | Fuel "not underway" is now reported separately                                               |
| <b>Technical — capex, best at dry-dock</b>                        |                 |          |           |                                                                                              |
| Low-friction / foul-release hull coating                          | Med–High        | Med      | Dry-dock  | Combine with full blast where coating is old                                                 |
| Energy-saving devices (pre-swirl duct/stator, PBCF, rudder bulb)  | Med             | Med–High | Dry-dock  | Needs model/CFD justification; Class approval                                                |
| Propeller retrofit for actual operating profile                   | Med             | High     | Dry-dock  | Good match with permanent slow steaming                                                      |
| VFDs on ER fans/pumps, LED lighting                               | Low             | Low–Med  | Afloat    | Reduces auxiliary consumption                                                                |
| <b>Data &amp; commercial</b>                                      |                 |          |           |                                                                                              |
| DCS data quality (distance, fuel by consumer, BDN reconciliation) | Protects rating | Low      | Immediate | Errors can move the rating a full band                                                       |
| Correction factors & voyage adjustments (MEPC.355(78), G5)        | Case-by-case    | Low      | Annual    | Check what applies before filing — e.g. ice navigation, specific operations                  |

### Speed — the rule of thumb

Power  $\propto v^3 \rightarrow$  fuel per day  $\propto v^3 \rightarrow$  fuel per mile  $\propto v^2$ .  
 –5 % speed  $\approx$  –10 % fuel/mile · –10 %  $\approx$  –19 % · –15 %  $\approx$  –28 %.

### EEXI power limitation

Ships with an engine power limitation (EPL/ShaPoLi) already operate within a capped power. Check the EPL override log and the margin left before planning further speed changes.

## Data, SEEMP Part III and corrective actions

### Enhanced IMO DCS — from 2026 data

- Fuel consumption per consumer type (main engine, auxiliaries, boilers...) and per fuel type.
- Fuel consumed **underway** and **not underway** (FAOP → EOSP defines "underway").
- Laden distance, total transport work, shore power, innovative technologies.
- SEEMP Part II had to be reviewed before 1 January 2026. The first full report (2026 data) is due by **31 March 2027**.
- The CII itself is still calculated on total annual CO<sub>2</sub> and total distance.

### SEEMP Part III

- Must contain the required CII for the next three years and an implementation plan; the revised plan for **2026–2028** had to be verified before 1 January 2026.
- A **Confirmation of Compliance** is issued once the plan is verified.
- From the 2027 rating onwards, check that the plan's measures are actually being done — auditors and RO will compare plan vs. data.

### Corrective action plan (D × 3 or E × 1)

- Required by MARPOL Annex VI reg. 28 when the ship is rated D for three consecutive years or E in any year.
- SEEMP Part III to be revised with a plan of corrective actions showing how the required CII will be achieved, and verified by the Administration/RO — **confirm the submission deadline with your RO**.
- Content: root-cause analysis of the rating, measures with dates and owners, expected CII effect, monitoring and self-evaluation.

#### Commercial exposure

Charterers' CII clauses (e.g. BIMCO CII Operations Clause for time charters), bank Poseidon Principles reporting, RightShip GHG rating and EU ETS costs all respond to the same data. A poor CII rating is now a commercial problem before it is a regulatory one.

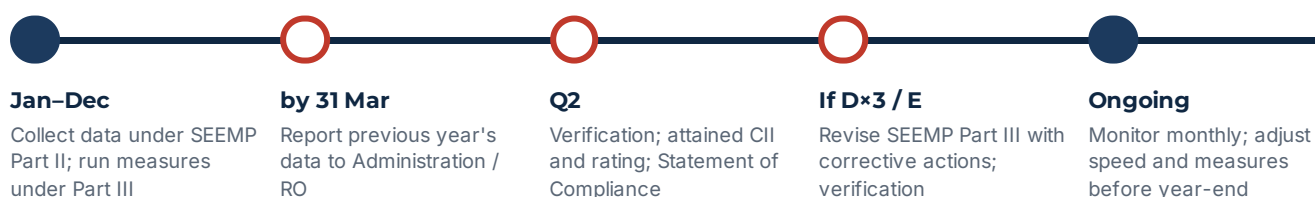
#### Net-Zero Framework — status

The IMO Net-Zero Framework (global fuel standard and GHG pricing) was not adopted in October 2025. MEPC 84 continued negotiations without a set timeline. Monitor — but do not delay CII measures waiting for it.

## Action plan 2026–2030

| #             | Action                                                                                              | Owner                   | Target          |
|---------------|-----------------------------------------------------------------------------------------------------|-------------------------|-----------------|
| <b>Office</b> |                                                                                                     |                         |                 |
| 1             | Fleet CII projection 2026–2030 per ship (verified 2025 + 2026 YTD data); flag ships at risk of D/E  | Technical / Performance | Nov 2026        |
| 2             | Agree speed/consumption policy and CP terms (CII clause) with chartering                            | Commercial / Technical  | Dec 2026        |
| 3             | Measures plan per ship: operational now, technical aligned with 2027–2029 dry-docks                 | Superintendents         | Jan 2027        |
| 4             | DCS data quality procedure: distance, fuel by consumer, underway / not underway, BDN reconciliation | Performance / DPA       | Dec 2026        |
| 5             | Submit 2026 DCS data; obtain verified attained CII and rating                                       | Performance             | by 31 Mar 2027  |
| 6             | Where D×3 / E: corrective action plan in SEEMP Part III, verified by RO                             | Technical / RO          | Per RO deadline |
| 7             | Prepare SEEMP Part III implementation plan for 2029–2031                                            | Technical               | 2028            |
| <b>Vessel</b> |                                                                                                     |                         |                 |
| 8             | Accurate noon / event reporting — FAOP, EOSP, anchorage, drifting, port; fuel by consumer           | Master / C/E            | Ongoing         |
| 9             | Implement trim, auxiliary load and idle-time measures; record in SEEMP log                          | Master / C/E            | Ongoing         |
| 10            | Report hull/propeller performance drop; request cleaning when triggered                             | C/E                     | Ongoing         |

### The annual CII cycle





## How Fleet Preserve can help

Fleet Preserve is an independent marine surveying and technical consultancy in Athens, Greece. Our naval architects and marine engineers have hands-on experience with EEXI/CII compliance, dry-docking and fleet technical management of bulk carriers and general cargo ships.

### 01

#### CII projection 2026–2030

Ship-by-ship projection from your DCS and noon data, with rating per year, risk flags and the margin to the next band.

### 02

#### Measures plan & business case

Operational and technical measures matched to each ship and dry-dock, with indicative effect on the AER and on fuel/EU ETS costs.

### 03

#### SEEMP Part III & corrective action plans

Drafting or review of implementation plans and D/E corrective-action plans, ready for RO verification.

### 04

#### Data quality audit

Review of noon/event reporting, distance and fuel-by-consumer data against the enhanced DCS, with corrections before filing.

### Request a CII projection

Send us the 2025 DCS data and 2026 year-to-date noon reports for your ships. We will reply with a scope, programme and quotation.

WEB

[fleetpreserve.com](https://fleetpreserve.com)

EMAIL

[info@fleetpreserve.com](mailto:info@fleetpreserve.com)

### REFERENCES

MARPOL Annex VI regulations 26–28 · IMO Resolutions MEPC.338(76) as amended by MEPC.400(83) (reduction factors) · MEPC.352(78) (CII calculation, G1) · MEPC.353(78) (reference lines, G2) · MEPC.354(78) (rating, G4) · MEPC.355(78) (correction factors and voyage adjustments, G5) · Amendments to MARPOL Annex VI Appendix IX (enhanced DCS, in force 1 August 2025) · Lloyd's Register Class News 13/2025 and 25/2024 · DNV, "IMO MEPC 84: Revisiting the Net-Zero Framework" (2026).

### DISCLAIMER

This advisory is a technical summary for guidance only. Calculations and measure effects are indicative. It does not replace MARPOL Annex VI, the IMO guidelines, or the requirements of the flag Administration and the recognised organisation, which prevail in all cases. © 2026 Fleet Preserve P.C.