

# IMO Tier III Compliance Path Decision Worksheet

A printable buyer's worksheet for evaluating IMO Tier III compliance options on a specific marine generator project. Covers the 5-factor applicability check, the 4-path compliance comparison (SCR / EGR / alternative fuel / route planning), class society documentation checklist, and vessel-type decision tree. Based on ASO Genset marine delivery commissionings across DNV, ABS, LR, BV, and CCS.

## QUICK REFERENCE — Tier III Applies Only Inside a NOx ECA

IMO Tier III is enforced only while subject engines (above 130 kW, on vessels meeting the relevant keel-laid trigger date) are operating inside a designated NOx Emission Control Area (NOx ECA / NECA). Outside a NOx ECA, the same engines operate under Tier II rules. A vessel that never enters a NOx ECA does not require Tier III compliance equipment — route planning is itself a valid compliance path.

## 1. Five-Factor Applicability Check

Walk through each factor for the specific vessel and engine before quoting any compliance equipment. Get any of these wrong and you over- or under-specify.

- Engine power above 130 kW?** If no — Tier III does not apply, exempt.
- Keel-laid date on or after the trigger date for the NOx ECA being transited?** North American + US Caribbean: January 1, 2016. Baltic + North Sea: January 1, 2021. Other NOx ECAs: confirm with class society.
- Will the engine actually operate inside a designated NOx ECA?** If no — Path 4 (operational routing) is the correct answer; no Tier III equipment required.
- Engine type covered?** Tier III applies to diesel engines under most circumstances. Dual-fuel and gas-only engines have separate provisions in MARPOL Annex VI.
- Exemptions apply?** SOLAS Chapter II-1 emergency generators are exempt in most interpretations. Government / non-commercial vessels may also be exempt. Verify with certifying class society before specification.

## 2. Current NOx ECA Map (As of 2026)

Status	Areas	Practical Treatment
Established NOx ECAs	North American, US Caribbean, Baltic Sea, North Sea	Tier III applies to subject engines meeting construction-date triggers.
New / Phased NOx ECAs	Canadian Arctic, Norwegian Sea	Effective-date caveats apply. Confirm with class society.
SOx ECA / NOx Under Review	Mediterranean Sea	Currently SOx ECA only. Mediterranean NOx ECA is under review; not yet effective.
Non-ECA Routes	West Africa, much of Indian Ocean, SE Asian fishing routes	Operational routing valid when documented and vessel does not enter any NOx ECA.

## 3. Four Compliance Paths At-a-Glance

Path	CAPEX	OPEX	Best Fit
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<b>SCR (Selective Catalytic Reduction)</b>	Significant	Moderate (urea + catalyst)	Most vessels routing through NOx ECAs
<b>EGR (Exhaust Gas Recirculation)</b>	Lower than SCR (when available)	Higher engine wear	Compatible engine families only
<b>Alternative Fuel (LNG / methanol / biofuel)</b>	High (new build)	Variable by fuel	Large new-build with bunkering access
<b>Operational Routing (Path 4)</b>	Zero	Zero	Vessels with documented non-NOx-ECA routes

#### 4. Class Society Documentation Checklist

Core documentation set is broadly similar across ABS, DNV, Lloyd's Register, Bureau Veritas, and CCS. Format and submitted language differ.

- Engine NOx Technical File** per MARPOL Annex VI Regulation 13.
- EIAPP certificate** issued by or on behalf of the flag Administration.
- SCR or EGR system technical documentation** (where aftertreatment is fitted).
- Test bench NOx emissions certificate** from a recognized test bench.
- On-board NOx monitoring arrangements** consistent with the NOx Technical File.
- Urea quality management procedure** (for SCR-equipped installations).
- Tier II / Tier III dual-mode switching procedure** documented in vessel technical file.
- Engine duty cycle reference** per the NOx Technical Code (D2 for auxiliary generators, E2 / E3 for propulsion as applicable).

#### QUICK DECISION TREE — Tier III Path Selection

Assumes vessel-class consultation with the certifying class society and current MARPOL Annex VI amendment. Decision logic is sequential.

1. Will the vessel routinely operate inside a designated NOx ECA? **No** → **Path 4 (Tier II only, no equipment)**.
2. Are all main gensets at or below 130 kW? **Yes** → **Exempt (Tier II only)**.
3. Is the engine family available with factory EGR? **Yes** → **Compare EGR vs SCR on CAPEX / OPEX / engine wear**.
4. Is the vessel a new-build cruise or LNG-bunkering-capable cargo ship? **Yes** → **Consider dual-fuel**.
5. Otherwise → **SCR (factory-integrated preferred, retrofit if necessary)**.

**Disclaimer:** All thresholds, cost ranges, and compliance details in this worksheet are OEM-dependent and represent typical industry observations, not absolute specifications. Specific requirements vary by engine family, class society, vessel flag state, and current MARPOL Annex VI amendments. Always refer to the latest IMO guidance and your certifying class society for definitive compliance specifications. Recommendations are based on anonymized internal commissioning and service records from delivered marine generator installations.

**For full methodology, see:** [asogenset.com/marine-generator-imo-tier-iii-compliance-guide/](https://asogenset.com/marine-generator-imo-tier-iii-compliance-guide/)

**Marine generator sizing:** [asogenset.com/marine-diesel-generator-sizing-guide/](https://asogenset.com/marine-diesel-generator-sizing-guide/)

**Class society comparison:** [asogenset.com/abs-vs-dnv-vs-ccs-marine-generator-classification/](https://asogenset.com/abs-vs-dnv-vs-ccs-marine-generator-classification/)

**Wet stacking and SCR protection:** [asogenset.com/marine-generator-wet-stacking-prevention-guide/](https://asogenset.com/marine-generator-wet-stacking-prevention-guide/)