



Marine Power Engineering | 2026

Marine Generator Class Society Selection Matrix

12-Page Decision Guide for
Procurement Teams & Vessel Owners

Built from 200+ Marine Projects (2020-2025)

Covers ABS · DNV · Lloyd's Register · BV · CCS

Cost · Timeline · Decision Trees · Worksheets

2026 Edition | v1.0

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How to Use This Guide

Marine generator classification is one of the highest-stakes decisions in your vessel project. Choose the wrong class society and you face inflated costs, charter restrictions, and insurance complications.

This guide distills ASO Genset's experience across 200+ marine generator projects into a 4-step decision framework you can run in under an hour.

STEP 1	Identify Your Flag State Match your vessel registration country to the recommended primary class society.
STEP 2	Cross-Reference Vessel Type Refine the recommendation by vessel type and operating region.
STEP 3	Estimate True Cost Project actual lifecycle classification costs - not just sticker price.
STEP 4	Build Your Timeline Apply the society-specific template to your project schedule.

Disclaimer

This guide reflects ASO Genset's project experience as of 2026. Class society rules evolve - for project-specific advice, consult your shipbuilder, flag state administration, and ASO engineering team.

Questions? Email info@asogenset.com

The Big 5 IACS Societies for Marine Generators

Society	Members	Headquarters	Share of IACS-classed tonnage	Operating Regions	Typical Project Costs	Typical Project Duration	Typical Project Size
ABS	1862	Houston, USA	~16%	N. America, Middle East, Asian offshore	\$12K-\$35K	12-20 wks	12+
DNV	1864	Oslo / Hamburg	~21%	Europe, North Sea, wind energy	\$14K-\$32K	10-18 wks	8+
Lloyd's Register	1760	London, UK	~13%	Commonwealth, global trade, LNG	\$11K-\$30K	12-20 wks	15+
Bureau Veritas	1828	Paris, France	~11%	W. Africa, Mediterranean, Latin America	\$9K-\$26K	10-16 wks	10+
CCS	1956	Beijing, China	~9% (rising)	China + Belt & Road (60+ countries)	\$8K-\$20K	8-14 wks	45+

*Approximate share of IACS-classed tonnage, 2024 estimates.

Key Insight

All 5 are IACS members - certifications are mutually recognized. But "mutually recognized" does NOT equal "equally accepted."

The right choice depends on your flag state, vessel type and operating region, project financing source, and target charter market.

Detailed Comparison: 20 Decision Criteria

Strong Moderate Weak

COST FACTORS					
Design appraisal cost	\$6K	\$5.5K	\$5K	\$4K	\$3.5K
Production survey cost	\$4.5K	\$4K	\$3.5K	\$3K	\$2.5K
Surveyor travel cost	\$2.5K	\$2K	\$2K	\$1.5K	\$500
Re-inspection fee	\$1.5K+	\$1K+	\$1K+	\$800+	\$500+
TIMELINE FACTORS					
Average approval weeks	12-20	10-18	12-20	10-16	8-14
Modular approval	Partial	Yes	Yes	Yes	Yes
Re-cert speed (repeat)	8 wks	6 wks	6 wks	6 wks	4 wks
DOCUMENTATION					
English required	Yes	Yes	Yes	French preferred	Chinese OK
Digital submission	Yes	Yes	Yes	Yes	Yes
Translation needed	No	No	No	Sometimes	Sometimes

Detailed Comparison: Market, Network & Expertise

Continuation of 20 decision criteria.

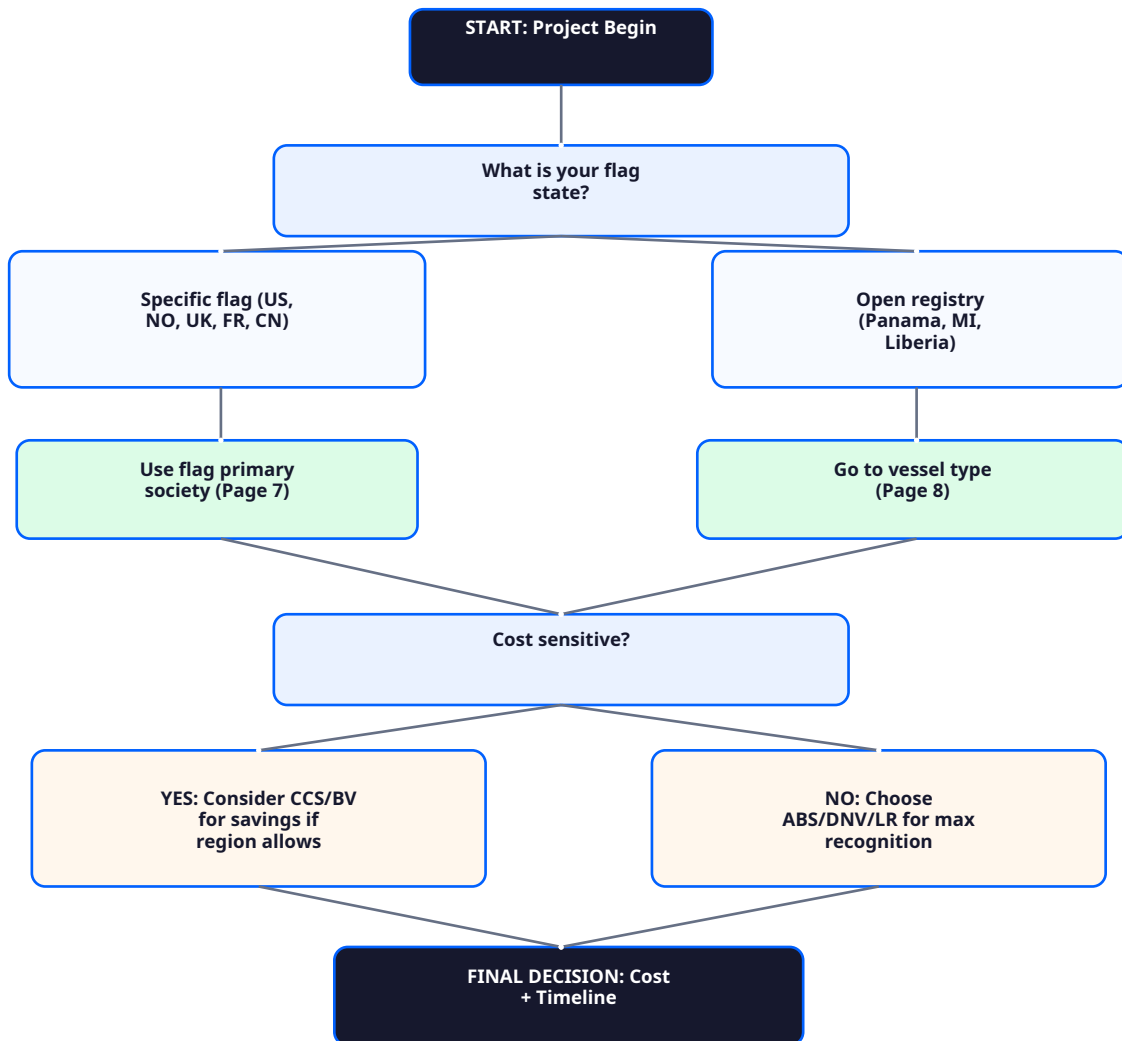
MARKET ACCEPTANCE					
US ports / USCG	Native	Strong	Strong	OK	OK
EU ports / Paris MoU	Strong	Native	Strong	Native	OK
Asian ports / Tokyo MoU	OK	OK	Strong	OK	Native
Oil major charter list	All	All	All	Most	Some
Belt & Road financing	No	No	No	OK	Native
SURVEYOR NETWORK					
Global office count	200+	350+	220+	1500+	350+
Africa presence	OK	OK	Strong	Native	Strong
Latin America	OK	OK	Strong	Native	OK
SPECIAL EXPERTISE					
Offshore wind	Good	World-class	Good	Good	Strong
LNG carriers	Strong	Strong	World-class	Good	Growing
Hospital / specialty	Strong	Strong	Strong	Good	Limited

Bottom Call-Out

Cheapest direction: CCS or BV
 Most globally accepted direction: Lloyd's Register
 Innovation tolerance direction: DNV
 US-aligned projects: ABS
 Belt & Road financing: CCS

Quick Decision Tree

(Print this page for reference)



Legend

Decision point Recommendation Caution / verify

Flag State to Class Society Mapping

The most important factor in your class society decision is your flag state. Some flag states strongly prefer specific societies; others accept any IACS member. This table covers the top 20.

Flag State	Primary Class Society	Secondary Class Society	Notes
USA	ABS	LR	USCG defers to ABS
UK	LR	BV	Commonwealth standard
Norway	DNV	-	DNV strongly preferred
Germany	DNV	LR	Post-2013 merger
France	BV	LR	National preference
Italy	RINA / BV	LR	Local + international
Greece	BV	LR	Mediterranean shipping hub
Singapore	LR	ABS	Global trade hub
Hong Kong	LR	ABS	Open registry
China	CCS	-	Domestic mandatory
Japan	ClassNK	LR	National preference
South Korea	KR	LR	National preference
Panama	Any IACS	-	Most flexible registry
Marshall Islands	Any IACS	-	Open registry
Liberia	Any IACS	-	Open registry
Bahamas	LR	ABS	Caribbean
Saudi Arabia	ABS	LR	Gulf preference
UAE	ABS	LR	Gulf preference
Nigeria	BV	LR	West African standard
Brazil	BV	ABS	Latin America
Indonesia	CCS / BKI	BV	SE Asia

Key Notes

For open registries (Panama / MI / Liberia), choose by vessel type, operating region, cost sensitivity, and charter party requirements.

For specific flag states, deviate from primary only if charter, financing, or resale strategy requires it.

Vessel Type & Operating Region Matrix

YACHTS			
Yacht (under 24m)	Global cruising	LR	BV
Yacht (24-50m, commercial)	Mediterranean	BV	LR
Yacht (24-50m, commercial)	Caribbean / US	ABS	LR
Yacht (over 50m, superyacht)	Anywhere	LR	DNV
COMMERCIAL CARGO			
Containership	Global trade	LR	DNV
Bulker (Capesize)	Global trade	LR	DNV
Tanker (oil/chemical)	Global trade	LR / ABS	DNV
Tanker (LNG)	Global	LR	ABS
RoRo / Car carrier	Global	LR	DNV
OFFSHORE			
Supply vessel	North Sea	DNV	LR
Supply vessel	Gulf of Mexico	ABS	LR
Supply vessel	West Africa	BV	LR
Supply vessel	SE Asia / Belt & Road	CCS	BV
Drillship / FPSO	Anywhere	ABS or DNV	LR
Wind installation vessel	Europe	DNV	LR
Wind installation vessel	Asia	CCS	DNV
FISHING			
Trawler (commercial)	Atlantic / Pacific	LR	DNV
Trawler	Africa / SE Asia	CCS	BV
Factory ship	Open ocean	LR	DNV
SPECIALTY			
Hospital ship	Anywhere	ABS	LR
Research vessel	Anywhere	ABS	DNV
Cable layer	Anywhere	DNV	LR
Cruise ship	Anywhere	LR / RINA	DNV
INLAND			
River barge	China	CCS	-
River pusher	Europe	Local + LR	BV
Canal vessel	US	Local + ABS	LR

Cost Breakdown Worksheet

(Print and fill in your project parameters)

Project Parameters

Project Name: _____ Vessel Type: _____
 Flag State: _____ Operating Region: _____
 Generator Power: _____ kVA × _____ units Estimated Delivery: _____
 Class Society 1: _____ Class Society 2: _____ Class Society 3: _____

1. Design appraisal	\$ _____	\$ _____	\$ _____
2. Type approval testing	\$ _____	\$ _____	\$ _____
3. Production survey (× units)	\$ _____	\$ _____	\$ _____
4. Surveyor travel	\$ _____	\$ _____	\$ _____
5. Documentation fees	\$ _____	\$ _____	\$ _____
6. Translation (if needed)	\$ _____	\$ _____	\$ _____
7. Additional class notations	\$ _____	\$ _____	\$ _____
8. First annual class survey	\$ _____	\$ _____	\$ _____
9. Re-inspection buffer (10%)	\$ _____	\$ _____	\$ _____
10. Contingency (15%)	\$ _____	\$ _____	\$ _____
TOTAL FIRST YEAR	\$ _____	\$ _____	\$ _____

Range Reference

Typical range reference for 300 kVA:
 ABS: \$14,000 - \$22,000 first year | DNV: \$13,000 - \$20,000 | LR: \$12,000 - \$19,000
 BV: \$10,000 - \$16,000 | CCS: \$7,500 - \$12,000

Decision Box

Best total cost: _____ \$ _____
 Best risk/value balance: _____
 ASO recommendation for this project: _____

Notes:

Pre-FAT Surveyor Coordination Checklist

(30 items - print and use during project planning)

A: Documentation

Engine block type approval certificate (current)	Alternator manufacturer certificate
Control panel schematics (latest revision)	Wiring diagrams (English)
Fuel system P&ID; drawings	Cooling system P&ID; drawings
Vibration analysis report	Noise level test report
Material certificates (crankshaft, pistons, valves)	Quality plan signed by QA manager

B: Facility Readiness

Test cell calibration valid (within 12 months)	Load bank capacity confirmed (110% of nameplate)
Fuel quality test report (within 30 days of FAT)	Cooling water system tested and ready
Emergency shutdown systems verified	Fire suppression system operational
Lighting adequate for surveyor inspection	Safety briefing prepared for surveyor visit

C: Logistical Coordination

Surveyor visa arrangements confirmed (4+ weeks ahead)	Hotel booking near factory (3+ nights)
Airport transport arranged	Translator booked (if non-English documentation)
Schedule buffer added (1-2 days for unexpected re-tests)	Backup surveyor contact

D: Common Pitfalls - What to Avoid

Do NOT schedule FAT on Friday afternoon	Do NOT skip pre-test load bank calibration
Do NOT assume previous approval covers new design changes	Do NOT delay submitting docs (less than 4 weeks before = re-schedule risk)
Do NOT have key engineers absent on FAT day	Do NOT forget spare parts on-site (filters, gaskets, fuses)

Tip

ASO Tip: Most FAT failures we've seen come from documentation gaps, not technical issues. Spend the time on docs.

Class Society Timeline Templates

(Sample timelines for 300 kVA marine generator approval)

ABS (16-Week Standard)

Week 1-4: Design documentation submission & appraisal
 Week 5-6: Type approval test preparation
 Week 7-8: Type approval testing (witness attended)
 Week 9-12: Production manufacturing parallel
 Week 13-14: Production survey (each unit)
 Week 15: Final documentation & certificates
 Week 16: Delivery + handover
 Critical path: Week 4-5 transition

DNV (14-Week with Modular Approval)

Week 1-3: Design documentation (modular reuse possible)
 Week 4-5: Component-level type approval
 Week 6-7: Witness testing (FAT)
 Week 8-11: Production manufacturing
 Week 12-13: Production survey
 Week 14: Documentation + delivery
 Critical path: Week 4 modular decision

Lloyd's Register (14-Week Express)

Week 1-2: Design appraisal (existing approval reuse)
 Week 3-5: Prototype + witness testing
 Week 6-10: Production manufacturing
 Week 11-12: Production survey
 Week 13: Documentation
 Week 14: Delivery + class certificate
 Critical path: Week 3 surveyor availability

Bureau Veritas (12-Week Streamlined)

Week 1-2: Design appraisal (modular)
 Week 3-4: Type approval testing
 Week 5-9: Production manufacturing
 Week 10-11: Production survey
 Week 12: Documentation + delivery
 Critical path: Week 4-5 transition

CCS (10-Week Fast Track)

Week 1-2: Design submission (often in Chinese OK)
 Week 3-4: Type approval testing (domestic surveyor)
 Week 5-8: Production manufacturing
 Week 9: Production survey
 Week 10: Documentation + delivery
 Critical path: Week 1 documentation completeness

Buffer Recommendations

Add to your project schedule: +2 weeks for documentation gaps, +1 week for surveyor scheduling, +1 week for potential re-inspection = 4 weeks total recommended buffer.

ASO Genset Reference Projects

(5 anonymized case studies across all 5 class societies)

ABS - Middle East Hospital Vessel
Region: Gulf (Middle East)
Equipment: 2 × 320 kVA marine generators
Class: ABS (US-financed loan covenant)
Cost: USD \$18,500 per generator
Timeline: 16 weeks
Delivered: 2024

DNV - North Sea Offshore Supply Vessel
Region: Norwegian sector, North Sea
Equipment: 4 × 480 kVA (2 main + 2 emergency)
Class: DNV + ICE-1A notation
Cost: USD \$22,000 per generator
Timeline: 14 weeks (modular approval)
Delivered: 2024

LR - Singapore-Flagged Bulker
Region: Singapore flag, global trade
Equipment: 1 × 600 kVA main + 1 × 250 kVA emergency
Class: Lloyd's Register
Cost: USD \$16,500 main + \$11,000 emergency
Timeline: 14 weeks
Delivered: 2024

BV - West African Offshore Crew Boat
Region: Niger Delta, Nigeria
Equipment: 1 × 200 kVA marine generator
Class: Bureau Veritas
Cost: USD \$11,500
Timeline: 11 weeks
Delivered: 2023

CCS - Belt & Road Fishing Fleet, Mauritania
Region: Nouakchott, Mauritania (China EXIM financed)
Equipment: 12 × 150 kVA marine generators
Class: CCS (financing requirement)
Cost: USD \$9,200 per unit
Timeline: 10 weeks
Delivered: 2023
Savings: USD \$27,600 fleet-wide vs BV equivalent

Contact

REQUEST A CLASS-SOCIETY-SPECIFIC QUOTE

ASO Genset will provide a complete quote tailored to your chosen class society within 48 hours. No commitment required.

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About ASO Genset

15+ years powering critical infrastructure across 3 continents. Marine generators delivered with ABS, DNV, Lloyd's Register, Bureau Veritas, and CCS certifications.

Your Tailored Energy Solution.

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