YANG MING

ZERO-EMISSION SHIPPING

REPORT CARD

39
100

F

Yang Ming earned 39 / 100 available points, or an F grade, on the Ship It Zero 2023 Report Card for the company's actions to date to end its ocean shipping pollution. The Ship it Zero Report Card grades companies based on the Ship it Zero campaign's three campaign demands, which are End Port Pollution Now, Abandon Dirty Ships, and Put Zero at the Helm. Yang Ming earned a D in the ending port pollution category; an F in abandoning dirty ships; and an F in putting zero at the helm.

Yang Ming Marine Transport Corporation, headquartered in Taiwan, is the world's 9th-largest container shipping company. The company must improve its efforts to address the company's climate impact in line with the urgent need for global decarbonization.

Yang Ming received credit for its efforts to address its air pollutant emissions. The company has committed to utilize shore power and ensure that their fleet is shore-power compatible. The company also prioritizes green ports, and is a member of the Getting to Zero Coalition. The company has invested in terminal electrification and received recognition for addressing port pollution by the Port of Vancouver. We urge Yang Ming to invest in offshore charging stations. We also encourage the company to use its political power to publicly advocate for regulations to reduce port pollution. The company reports its air pollutant emissions, but does not break the data down by vessel and route. The company does not appear to report their shore power use.

Yang Ming received partial credit for its membership in the Silk Alliance, an effort to create green shipping corridors in Asia. However, Ship It Zero is concerned with the Silk Alliance's support for liquefied fossil gas (LNG) as a so-called potential decarbonization pathway.

Yang Ming has achieved their short-term greenhouse gas emissions reduction goal of 40% by 2030, from a 2008 baseline. The company received credit for its commitment to and targets for efficiency retrofits and slow steaming, but was docked points for reliance on LNG in its commitments.

LNG is a fossil fuel that is primarily methane, a potent greenhouse gas that has over 80% more heat-trapping power on a 20-year timescale compared to CO_2. A 2020 comparative analysis showed that LNG powered ocean vessels emit 70-82% more climate-disrupting lifecycle greenhouse gases than business-as-usual.

Non-fossil methane gas, so-called "biomethane" or "renewable natural gas" is at times touted by the fossil fuel industry and the shipping sector as a future so-called "clean" maritime fuel. However, once produced, it is still methane and presents the same climate-warming emissions profile in ship engines as its fossil fuel counterpart.

Yang Ming was docked points for using Exhaust Gas Cleaning Systems (i.e., "scrubbers") and advocating for scrubbers as a solution. NE relies on Exhaust Gas Cleaning Systems (i.e., "scrubbers"), which the company should reject in the long-term as it has with LNG. Scrubbers are installed on vessels to reduce sulfur air emissions resulting from the use of high-sulfur fuel. Most vessels are equipped with scrubbers in order to allow ship operators to continue to use one of the dirtiest fossil fuels on earth, heavy fuel oil. This is a thick, tar-like waste product from the world's oil refineries. It is high in not only sulfur, but also in other dangerous contaminants such as heavy metals. Scrubbers use seawater to "wash" sulfur from the exhaust plume. When sulfur reacts with water, it forms sulfuric acid (this is the reason sulfur oxides air emissions cause acid rain). The scrubber wastewater is acidic, toxin-laden, thermal pollution. It is an entirely voluntary wastestream, as ship operators can choose cleaner, low-sulfur distillate fuel which comply with air emission standards and do not produce water pollution.

Scrubbers either continuously discharge the wastewater directly into the oceans (open-loop) or can hold most of the wastewater onboard (closed-loop). Closed loop systems still discharge waste, referred to as bleed-off. Bleed-off is smaller in volume than the wastewater from open loop operation, but more highly concentrated in toxins. Closed loop systems can be operated in zero-discharge mode, but there is little evidence that ship operators choose this option unless required by law.

The use of scrubbers also requires energy, thus increasing fuel demand and potentially greenhouse gas emissions. The California Air Resources Board also found that the use of scrubbers increases the amount of particulate matter emitted by vessels, after extensively studying ships operating the systems as compared to ships using lower sulfur fuels. It is for this reason the state, also the 5th largest economy in the world, disallowed the use of scrubbers as an air pollution compliance mechanism within 24 nautical miles of its coastline. It has also mandated the use of cleaner marine fuels.

The company received bonus points for reporting a reduction in absolute emissions. Yang Ming advocates for rapid decarbonization through trade organizations, but has not publicly rejected HFO, LNG, and false solutions or advocated for stronger greenhouse gas emission reduction standards. The company received credit for transparency, as it reports on total fleet CO_2e emissions, fuel types consumed, and propulsion technologies and efficiency retrofits.

Yang Ming has a weak overall decarbonization goal: a 70% reduction in emissions by 2050. This is completely out of alignment with a 1.5° C aligned goal. It also fails to meet targets agreed in July 2023 by the United Nations International Maritime Organization (IMO), which call for 30% absolute emissions reductions by 2030, 80% absolute emissions reductions by 2040, and net-zero by 2050.

The company does not have time-bound commitments to move their freight onto lower-emission vessels, and does not discuss investing in zero-emission ships in much detail. The company had points deducted for having LNG newbuilds on the order book. Yang Ming also does not appear to have any bunkering contracts for zero-emission fuels or investments in research and development for new fuel types. The company is utilizing MGO-powered vessels in Emission Control Areas (ECAs), but we found no disclosure of the percentage of their that fleet has this capability. Yang Ming received credit for supporting green corridor development, but had points deducted for membership in the Society for Gas as a Marine Fuel. Yang Ming has not presented a clear decarbonization pathway publicly, and its reporting on transition progress is extremely limited.

Yang Ming must invest more in readily available lower emission fuels and move cargo onto those vessels immediately. Ship It Zero calls on Yang Ming to commit to full decarbonization by 2040, in line with the urgent need to halve global emissions across all sectors. We urge the company to only invest in low and zero-emission vessels moving forward.

SHIP IT ZERO

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End Port Pollution Now | TOTAL SCORE: 19.5

Performance Criteria	Possible Points	Company Score
End Port Pollution Now: Commitment (30% of category grade)	**10.5**	**7.5**
• Publicly-stated commitment to reduce/eliminate criteria air pollution (PM, NOX, SOX) from maritime shipping	5	2.5
• Commitment to converting fleet/ordering newbuilds that are shore power-compatible	2	2
• Commitment to using shore power/ZEV offshore charging stations	1	1
• Publicly commiting to prioritize shore power-ready/green ports	1	1
• Member of corporate initiatives to reduce air pollution (First Movers, Getting to Zero)	1	1
• Founding member (First Movers, Getting to Zero)	0.5	0
End Port Pollution Now: Implementation Plan (20% of category grade)	**7**	**6.5**
• Investment in or implementation of ZEV port infrastructure (e.g., bunkering ZE fuels, shore power)	4.5	4.5
• Investment in or implementation of zero-emission offshore charging stations	0.5	0
• Implementation of a plan to reduce air pollution and clean air for port communities	2	2
End Port Pollution Now: Advocacy (20% of category grade)	**7**	**2**
• Public support for policy or regulatory measures to reduce port pollution	4	0
• Partnerships with carriers, ports, and regulators to ZEV infrastructure projects	3	2[1]
End Port Pollution Now: Transparency (30% of category grade)	**10.5**	**3.5**
• Public disclosure of progress toward criteria air pollution reduction benchmarks	7	3.5[2]
• Broken down by vessel and route	1	0
• Public disclosure of shore power use	2.5	0

Abandon Dirty Ships | TOTAL SCORE: 12.5

Performance Criteria	Possible Points	Company Score
Abandon Dirty Ships: Commitment (30% of category grade)	**9**	**3**
• Commitment to immediate (2023) reductions in GHG emissions from maritime shipping	3.5	3[3]
• Commitment to switch to readily available cleaner burning fuels	3.5	0
• Commitment to high efficiency retrofitting and operational measures like slow steaming for vessels	2	2
• Deduction for commitments that rely on LNG (which is a false solution) and carbon offsets	-2	-2

[1] Silk Alliance membership, which does not exclude LNG from green corridor framework

[2] NOX/SOX reporting, no specific benchmarks

[3] 40% reduction by 2030; CII and EEXI-informed short-term efficiency goals

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Performance Criteria	Possible Points	Company Score
Abandon Dirty Ships: Implementation Plan (20% of category grade)	**6**	**2.5**
• Benchmarks for percentage of fleet using short-term cleaner fuels and lower-carbon technologies (e.g., responsibly sourced biofuels)	3	0
• Benchmarks for percentage of existing fleet with efficiency & hybrid retrofits	2	1.5
• Offering slow steaming options for customers	1	1
• Deduction for scrubber use	-2	-2
• Deduction for absolute emissions increasing despite commitments	-2	—
• Bonus for absolute emissions reduction	Bonus +2	+2
Abandon Dirty Ships: Advocacy (20% of category grade)	**6**	**-1**
• Publicly support strengthening the level of ambition of the GHG reduction policies	2	0
• Publicly reject HFO, LNG and false solutions	3	0
• Advocate for rapid decarbonization through trade organizations	1	1
• Deduction for advocating for scrubber use	-2	-2
Abandon Dirty Ships: Transparency (30% of category grade)	**9**	**8**
• Annual public reporting of fleet metrics, including:		
◦ Propulsion technologies and efficiency retrofits	2	1
◦ Fuel types and volumes consumed	3	3
◦ CO_2e emissions for entire fleet	4	4

Put Zero at the Helm | TOTAL SCORE: 7

Performance Criteria	Possible Points	Company Score
Put Zero at the Helm: Commitment (30% of category grade)	**10.5**	**1.5**
• General climate commitment	9	1
◦ Absolute CO_2e reduction benchmarks for 2025, 2030 and 2035	(3)	(0.5)
◦ No use of carbon offsets to meet goal	(1)	(0)
◦ Net Zero vs. Absolute Zero	(1)	(0)
◦ 2040 vs. 2050	(1)	(0)
◦ Commitment to move freight onto low- and zero-emission vessels (with time-bound targets)	(1)	(0)
◦ Set short-term targets for moving increasing volumes of cargo on cleaner ships, i.e., MGO/hybrid-powered vessels, shore power-equipped vessels	(1)	(0.5)
◦ Mentions low- and zero-emission vessels	(1)	(0)
◦ Other	1.5	0.5
◦ Expressions of public support for zero-emission shipping development	(0.5)	(0)
◦ Member of Science-Based Target Initiative (a We Mean Business Coalition commitment)	(0.5)	(0)
◦ Getting to Zero (GTZ) Coalition (managed by the Global Maritime Forum, the World Economic Forum and Friends of Ocean Action)	(0.5)	(0.5)

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Performance Criteria	Possible Points	Company Score
Put Zero at the Helm: Implementation Plan (20% of category grade)	**7**	**0.5**
◦ Ships	3	-1.5
◦ Number of orders or leases for new ZEVs and ZEV-ready ships	(1)	(0)
◦ Deduction for number of LNG newbuilds or leases	(-2)	(-2)
◦ Working with other carriers and/or entering conglomerations/partnerships on the development of ZEV technologies	(1)	(0)
◦ Working with ports and/or investing financially in ZEV infrastructure and/or shipping corridors	(1)	(0.5)[4]
◦ Fuels	3	1
◦ Bunkering contracts for zero-emission fuels	(1)	(0)
◦ Investment in R&D in fossil-free ZEV fuels and propulsion technologies	(1)	(0)
◦ Using MGO/hybrid-powered vessels	(1)	(1)
◦ Bonus for green fuel contracts	(Bonus +2)	—
◦ Efficiency	1	1
◦ Implement efficiency measures (e.g., hull coatings, routes, etc.)		
Put Zero at the Helm: Advocacy (20% of category grade)	**7**	**4**
◆ Publicly support the rapid development of green (ZEV) shipping corridors for high-volume routes per the Clydebank Declaration	3	2[5]
◆ Join First Movers Coalition and/or Getting to Zero (GTZ) Coalition (managed by the Global Maritime Forum, the World Economic Forum and Friends of Ocean Action)	4	4
◆ Deduction for membership in the Society for Gas as a Marine Fuel	-2	-2
Put Zero at the Helm: Transparency (30% of category grade)	**10.5**	**1**
◆ Publish ZEV transition pathway for fleet with short-, mid- and long-term fuels and/or technologies that will allow the carrier to meet both interim absolute CO_2e reduction targets and achieve a 100% zero emission fleet by 2040	6.5	0[6]
◆ Annual public reporting of transition progress toward emissions reduction benchmarks and long-term targets, including fuels, technologies and operational measures implemented to achieve reported emissions reductions	4	1

[4] Silk Alliance membership, which does not exclude LNG from green corridor framework

[5] Silk Alliance membership, which does not exclude LNG from green corridor framework

[6] No interim targets or substantive discussion of alternative fuels