



ZERO-EMISSION SHIPPING REPORT CARD

68
100



HMM earned 68 / 100 available points, or a C 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. HMM earned a C in the ending port pollution category; an D in abandoning dirty ships; and a B in putting zero at the helm.

HMM is the 8th-largest container shipping company in the world and is the largest in the Republic of Korea. While HMM has made laudable strides in addressing their emissions and climate impact, it is not yet the “global leader in creating sustainable value for the world,” as the company’s vision statement states.

HMM scored fairly well in the port pollution category. The company emphasizes air pollutant reduction in ports and has committed to utilizing shore power. It continues to invest in efficiency and emissions reduction measures for the terminals that it operates. HMM has received recognition from the Port of Vancouver for its port pollution reduction efforts, and has partnered with ports on zero-emission infrastructure projects. The company received some credit for its pollution education program for employees.

Ship It Zero urges HMM to use its position to advocate for regulatory changes to reduce port pollution. We also encourage the company to invest in offshore charging stations to further reduce port and coastal air pollution. While the company reports some of its air pollutant emissions, it lacks reduction benchmarks and does not break the information down by vessel and route. HMM reports its shore power use. Ship It Zero calls on HMM to provide more specificity on its shore power use and the full emissions data for criteria pollutants; in addition to its reporting on its emissions of nitrogen oxides, sulfur oxides, and particulate matter, the company also needs to report ozone, and carbon monoxide emissions.

HMM has an admirable short-term greenhouse gas emissions reduction target of 50% by 2030, based on a 2008 baseline. The company has committed to switching their freight to readily available lower-emission fuels, with a target of 12% alternative fuels by 2025. HMM has committed to and implemented efficiency retrofits and slow steaming as part of their 2030 goal.

However, the company had points deducted for relying on liquified natural gas (LNG) and using and advocating for Exhaust Gas Cleaning Systems (i.e., “scrubbers”).

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 CO₂. 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.

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.

We urge HMM to publicly reject these false solutions and use its position to advocate for stronger emissions reduction standards, though the company is active in industry-led decarbonization initiatives like Clean Cargo. HMM received credit for reporting on the fleet’s total CO₂e emissions, fuel use by type, and propulsion technologies.

HMM has committed to carbon neutrality by 2050, which is too long a timeframe given the urgency of the climate crisis. However, the company received credit for having interim emissions reduction goals and time bound targets for utilizing cleaner fuels and other emissions reduction technologies. HMM understands the role of zero-emission vessels in their goals and is a member of the Getting to Zero Coalition. While HMM received credit for having green newbuilds on the order book and working with ports and carriers on zero-emission technologies and infrastructure, it had points deducted for continued investment in LNG. We commend HMM for investing in ammonia bunkering and for establishing an Alternative Fuels Task Force, as well as supporting green corridor development. The company has a fairly detailed pathway toward decarbonization, and reports annually on their progress toward this goal.

While Ship It Zero recognizes the many positive steps that HMM has taken, we urge the company to stop embracing false solutions like LNG and scrubbers, which significantly impacted its overall score. We also call on the company to commit to decarbonization by 2030 and only invest in green newbuilds in the future. These are necessary steps the company must take to do their part in avoiding a collective climate catastrophe.





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End Port Pollution Now | TOTAL SCORE: 25

Performance Criteria	Possible Points	Company Score
End Port Pollution Now: Commitment (30% of category grade)	10.5	7.5
<ul style="list-style-type: none">Publicly-stated commitment to reduce/eliminate criteria air pollution (PM, NOX, SOX) from maritime shippingCommitment to converting fleet/ordering newbuilds that are shore power-compatibleCommitment to using shore power/ZEV offshore charging stationsPublicly committing to prioritize shore power-ready/green portsMember of corporate initiatives to reduce air pollution (First Movers, Getting to Zero)Founding member (First Movers, Getting to Zero)	<div>5</div> <div>2</div> <div>1</div> <div>1</div> <div>1</div> <div>0.5</div>	<div>2.5¹</div> <div>2²</div> <div>1</div> <div>1</div> <div>1</div> <div>0</div>
End Port Pollution Now: Implementation Plan (20% of category grade)	7	6.5
<ul style="list-style-type: none">Investment in or implementation of ZEV port infrastructure (e.g., bunkering ZE fuels, shore power)Investment in or implementation of zero-emission offshore charging stationsImplementation of a plan to reduce air pollution and clean air for port communities	<div>4.5</div> <div>0.5</div> <div>2</div>	<div>4.5</div> <div>0</div> <div>2</div>
End Port Pollution Now: Advocacy (20% of category grade)	7	5
<ul style="list-style-type: none">Public support for policy or regulatory measures to reduce port pollutionPartnerships with carriers, ports, and regulators to ZEV infrastructure projects	<div>4</div> <div>3</div>	<div>2³</div> <div>3</div>
End Port Pollution Now: Transparency (30% of category grade)	10.5	6
<ul style="list-style-type: none">Public disclosure of progress toward criteria air pollution reduction benchmarksBroken down by vessel and routePublic disclosure of shore power use	<div>7</div> <div>1</div> <div>2.5</div>	<div>3.5⁴</div> <div>0</div> <div>2.5</div>

Abandon Dirty Ships | TOTAL SCORE: 16.5

Performance Criteria	Possible Points	Company Score
Abandon Dirty Ships: Commitment (30% of category grade)	9	4
<ul style="list-style-type: none">Commitment to immediate (2023) reductions in GHG emissions from maritime shippingCommitment to switch to readily available cleaner burning fuelsCommitment to high efficiency retrofitting and operational measures like slow steaming for vesselsDeduction for commitments that rely on LNG (which is a false solution) and carbon offsets	<div>3.5</div> <div>3.5</div> <div>2</div> <div>-2</div>	<div>2⁵</div> <div>2⁶</div> <div>2⁷</div> <div>-2</div>

¹Emphasize pollutant reduction without specific benchmarks

²Specific mention of retrofitting but short of full commitment

³Pollution education program for HMM staff

⁴Reporting on NOX, SOX, and PM but lack specific benchmarks

⁵50% reduction by 2030 on 2008 baseline with short-term mitigation strategies

⁶12% alternative fuels by 2025

⁷Lots of efficiency strategies and slow operating speed



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Performance Criteria	Possible Points	Company Score
Abandon Dirty Ships: Implementation Plan (20% of category grade)	6	5
<ul style="list-style-type: none">Benchmarks for percentage of fleet using short-term cleaner fuels and lower-carbon technologies (e.g., responsibly sourced biofuels)Benchmarks for percentage of existing fleet with efficiency & hybrid retrofitsOffering slow steaming options for customersDeduction for scrubber useDeduction for absolute emissions increasing despite commitmentsBonus for absolute emissions reduction	3 2 1 -2 -2 Bonus +2	2.5 1.5 ⁷ 1 -2 — +2
Abandon Dirty Ships: Advocacy (20% of category grade)	6	-1
<ul style="list-style-type: none">Publicly support strengthening the level of ambition of the GHG reduction policiesPublicly reject HFO, LNG and false solutionsAdvocate for rapid decarbonization through trade organizationsDeduction for advocating for scrubber use	2 3 1 -2	0 0 1 -2
Abandon Dirty Ships: Transparency (30% of category grade)	9	8.5
<ul style="list-style-type: none">Annual public reporting of fleet metrics, including:<ul style="list-style-type: none">Propulsion technologies and efficiency retrofitsFuel types and volumes consumedCO₂e emissions for entire fleet	2 3 4	1.5 3 4

Put Zero at the Helm | TOTAL SCORE: 26.5

Performance Criteria	Possible Points	Company Score
Put Zero at the Helm: Commitment (30% of category grade)	10.5	7
<ul style="list-style-type: none">General climate commitment<ul style="list-style-type: none">Absolute CO₂e reduction benchmarks for 2025, 2030 and 2035No use of carbon offsets to meet goalNet Zero vs. Absolute Zero2040 vs. 2050Commitment to move freight onto low- and zero-emission vessels (with time-bound targets)Set short-term targets for moving increasing volumes of cargo on cleaner ships, i.e., MGO/hybrid-powered vessels, shore power-equipped vesselsMentions low- and zero-emission vesselsOther<ul style="list-style-type: none">Expressions of public support for zero-emission shipping developmentMember of Science-Based Target Initiative (a We Mean Business Coalition commitment)Getting to Zero (GTZ) Coalition (managed by the Global Maritime Forum, the World Economic Forum and Friends of Ocean Action)	9 (3) (1) (1) (1) (1) (1) (1) 1.5 (0.5) (0.5) (0.5)	6 (3) (0) (0) (0) (1) (1) 1 (0.5) (0) (0.5)

⁷Increasing number of ships meeting CII regulations part of 2030 goal



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Performance Criteria	Possible Points	Company Score
Put Zero at the Helm: Implementation Plan (20% of category grade)	7	4
<div><div>◦ Ships</div><div><div>◦ Number of orders or leases for new ZEVs and ZEV-ready ships</div><div>◦ Deduction for number of LNG newbuilds or leases</div><div>◦ Working with other carriers and/or entering conglomerations/partnerships on the development of ZEV technologies</div><div>◦ Working with ports and/or investing financially in ZEV infrastructure and/or shipping corridors</div></div></div>	<div>3</div> <div>(1)</div> <div>(-2)</div> <div>(1)</div> <div>(1)</div>	<div>1</div> <div>(1)</div> <div>(-2)</div> <div>(1)</div> <div>(1)</div>
<div><div>◦ Fuels</div><div><div>◦ Bunkering contracts for zero-emission fuels</div><div>◦ Investment in R&D in fossil-free ZEV fuels and propulsion technologies</div><div>◦ Using MGO/hybrid-powered vessels</div><div>◦ Bonus for green fuel contracts</div></div></div>	<div>3</div> <div>(1)</div> <div>(1)</div> <div>(1)</div> <div>(Bonus +2)</div>	<div>2</div> <div>(1)</div> <div>(1)</div> <div>(0)</div> <div>—</div>
<div><div>◦ Efficiency</div><div><div>◦ Implement efficiency measures (e.g., hull coatings, routes, etc.)</div></div></div>	<div>1</div>	<div>1</div>
Put Zero at the Helm: Advocacy (20% of category grade)	7	7
<div><div>♦ Publicly support the rapid development of green (ZEV) shipping corridors for high-volume routes per the Clydebank Declaration</div></div>	<div>3</div>	<div>3</div>
<div><div>♦ 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)</div></div>	<div>4</div>	<div>4</div>
<div><div>♦ Deduction for membership in the Society for Gas as a Marine Fuel</div></div>	<div>-2</div>	<div>—</div>
Put Zero at the Helm: Transparency (30% of category grade)	10.5	8.5
<div><div>♦ 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 CO₂e reduction targets and achieve a 100% zero emission fleet by 2040</div></div>	<div>6.5</div>	<div>4.5⁸</div>
<div><div>♦ 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</div></div>	<div>4</div>	<div>4</div>

⁸Fairly detailed pathway with some interim targets, but net zero goal is 2050