While LNG is primarily methane (CH₄), the concentrations vary from between 70-99% depending on the feedstock. Other hydrocarbons commonly found in LNG are ethane, butane, and propane. Butane and propane are both categorized as Very Volatile Organic Compounds (VVOC) by the United States Environmental Protection Agency, readily reacting with sunlight to form ground level ozone.

Butane and propane are also hazardous to human health, benzene raises significant concern as it is a known human carcinogen. There is no known safe level for human exposure to benzene.

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 do not produce water pollution.

The shipping and fossil fuel industries often point to lower emissions of some air pollutants (NOₓ, SOₓ, and particulate matter) as benefits of the use of LNG. While these particular pollutants may be reduced, they are not eliminated. Further, the methane releases are a precursor to ground level ozone when the gas reacts with sunlight, contributing to smog.

CMA CGM has made significant investments in the electrification of its land and ocean fleets.

CMA CGM performed fairly well on advocacy across grading categories. It publicly supports the European Commission Green Deal and green shipping corridors, both of which will dramatically reduce port air pollution. It also publicly supports the European Commission Fit-for-55, which aims to reduce greenhouse gas emissions by 55% from 1990 levels by 2030.

CMA CGM is the world’s third largest container shipping line. Its headquarters are in France, and it has presence in 160 countries. The company is attempting to position itself as an end-to-end logistics provider through expansions into land and air freight. Although its quarterly profits have recently declined from its COVID boom highs, it is still reporting over a billion USD in profits each quarter. This is approximately 36-37% greater than its pre-pandemic profits. It’s significant investments in liquefied fossil gas (LNG) vessels and pollution conversion devices — referred to by industry as Exhaust Gas Cleaning Systems or scrubbers — drastically reduced its score.

CMA CGM’s strongest performance is in the “End Port Pollution Now” category, in which it earned a C. The company has committed to powering its 700 warehouses and 50 port terminals with low and emission-free energy from wind, solar, hydrogen, and biomass. Although Ship It Zero does not support the use of biomass, as it is not a scalable solution and still produces significant amounts of air and climate pollution, we applaud its efforts to convert its operations to wind and solar.

CMA CGM has made significant investments in the electrification of its land and ocean fleets.

CMA CGM performed fairly well on advocacy across grading categories. It publicly supports the European Commission Green Deal and green shipping corridors, both of which will dramatically reduce port air pollution. It also publicly supports the European Commission Fit-for-55, which aims to reduce greenhouse gas emissions by 55% from 1990 levels by 2030.

CMA CGM has recently announced major investments in methanol fueled vessels.

While Ship It Zero applauds these efforts, these were not sufficient to overcome the points lost as a result of its investments in LNG vessels and scrubbers. For example, in April 2022, CMA CGM Group announced an agreement to ship 40,000 TEUs of household appliances through CMA CGM’s “Cleaner Energy LNG” solution, referring to it as a “sustainable” “low-carbon offering.” Unfortunately, that is not the case.

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 70-83% more climate-disrupting lifecycle greenhouse gases than business-as-usual.

While these pollutants are all hazardous to human health, benzene raises significant concern as it is a known human carcinogen. There is no known safe level for human exposure to benzene.

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

The hybrid systems CMA CGM has installed on its vessels can operate in either closed-loop or open-loop mode. These are more flexible, allowing the company to comply as increasing numbers of countries and ports around the world ban the discharge of scrubber wastes. However, holding wastes onboard and offloading for treatment is onshore is expensive, and thus it is reasonable to assume that hybrid systems are primarily operated in open-loop mode.

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 control mechanism within 24 nautical miles of its coastline. It has also mandated the use of cleaner marine fuels.

CMA CGM has also included some biofuels in its portfolio. The Ship It Zero campaign does not support long-term biofuel use, as it is not a scalable solution for the maritime sector and still produces problematic emissions. We do, however, recognize that this does provide some immediate reductions in lifecycle air pollution and greenhouse gas emissions compared to fossil fuel combustion. It is a valid short-term bridge fuel for harm reduction while zero-emission fuels and technologies are brought to scale. The company was given partial credit in the “Abandon Dirty Ships” category for this effort.

Ship It Zero calls on CMA CGM to take immediate action to end its investments in LNG newbuild ships and urges the company to rapidly transition its existing fleet to zero-emission fuels and technologies. This is the single most important step the company can take to meet its decarbonization goals.

It is also a smart business move in light of the greenhouse gas reduction strategy agreed by the United Nations International Maritime Organization (IMO), which regulates international ocean shipping, in July 2023. The IMO set targets of a 30% reduction in maritime GHG emissions by 2030, 80% by 2050, and 100% by 2050. For the first time, the IMO has included the full suite of greenhouse gases in its reduction targets, rather than only CO₂. It is also considering emissions on a life-cycle basis. This means that methane emissions must be rapidly cut. It also means that emissions throughout the process — from the point of extraction to its combustion in ship engines — will be included. In this international regulatory environment, continued reliance on fossil gas poses serious risks of near-future stranded assets.

Ship It Zero also urges CMA CGM to meet the ambitions of its competitors, and commit to achieving zero-emissions across its global fleet by 2040. We also encourage CMA CGM to explore joining ambitious international initiatives to decarbonize shipping, such as the First Movers Coalition or Getting To Zero.
### End Port Pollution Now | TOTAL SCORE: 23

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Possible Points</th>
<th>Company Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>End Port Pollution Now: Commitment</strong> (30% of category grade)</td>
<td>10.5</td>
<td>6.5</td>
</tr>
<tr>
<td>- Publicly-stated commitment to reduce/eliminate criteria air pollution (PM, NOX, SOX) from maritime shipping</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>- Commitment to converting fleet/ordering newbuilds that are shore power-compatible</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>- Commitment to using shore power/ZEV offshore charging stations</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>- Publicly committing to prioritize shore power-ready/green ports</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>- Member of corporate initiatives to reduce air pollution (First Movers, Getting to Zero)</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>- Founding member (First Movers, Getting to Zero)</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td><strong>End Port Pollution Now: Implementation Plan</strong> (20% of category grade)</td>
<td>7</td>
<td>4.5</td>
</tr>
<tr>
<td>- Investment in or implementation of ZEV port infrastructure (e.g., bunkering ZE fuels, shore power)</td>
<td>4.5</td>
<td>4.5</td>
</tr>
<tr>
<td>- Investment in or implementation of zero-emission offshore charging stations</td>
<td>0.5</td>
<td>0</td>
</tr>
<tr>
<td>- Implementation of a plan to reduce air pollution and clean air for port communities</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td><strong>End Port Pollution Now: Advocacy</strong> (20% of category grade)</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>- Public support for policy or regulatory measures to reduce port pollution</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>- Partnerships with carriers, ports, and regulators to ZEV infrastructure projects</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>End Port Pollution Now: Transparency</strong> (30% of category grade)</td>
<td>10.5</td>
<td>5</td>
</tr>
<tr>
<td>- Public disclosure of progress toward criteria air pollution reduction benchmarks</td>
<td>7</td>
<td>3.5</td>
</tr>
<tr>
<td>- Broken down by vessel and route</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>- Public disclosure of shore power use</td>
<td>2.5</td>
<td>1.5</td>
</tr>
</tbody>
</table>

### Abandon Dirty Ships | TOTAL SCORE: 15.5

<table>
<thead>
<tr>
<th>Performance Criteria</th>
<th>Possible Points</th>
<th>Company Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abandon Dirty Ships: Commitment</strong> (30% of category grade)</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>- Commitment to immediate (2023) reductions in GHG emissions from maritime shipping</td>
<td>3.5</td>
<td>3</td>
</tr>
<tr>
<td>- Commitment to switch to readily available cleaner burning fuels</td>
<td>3.5</td>
<td>2</td>
</tr>
<tr>
<td>- Commitment to high efficiency retrofitting and operational measures like slow steaming for vessels</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>- Deduction for commitments that rely on LNG (which is a false solution) and carbon offsets</td>
<td>-2</td>
<td>-2</td>
</tr>
</tbody>
</table>

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1. Discuss reducing without specific benchmarks
2. Committed to building shore power at their terminals
3. Terminal decarbonization; green corridor
4. CMA CGM presents LNG as solution to SOX/NOX/PM emissions, which would produce different air pollutants
5. Pushing Shanghai port to accelerate shore power use
6. NOX/SOX reporting, no specific benchmarks
7. Number and percentage of fleet listed but no specific information on shore power use
8. 55% reduction by 2030 below 1990 levels
9. Biofuels
## Abandon Dirty Ships: Implementation Plan

### (20% of category grade)

- **Benchmarks for percentage of fleet using short-term cleaner fuels and lower-carbon technologies (e.g., responsibly sourced biofuels)**
  - 3 points possible, earns 1.5 points

- **Benchmarks for percentage of existing fleet with efficiency & hybrid retrofits**
  - 2 points possible, earns 1 point

- **Offering slow steaming options for customers**
  - 1 point possible, earns 0 points

- **Deduction for scrubber use**
  - 2 points possible, earns -2 points

- **Deduction for absolute emissions increasing despite commitments**
  - 2 points possible, earns -2 points

- **Bonus for absolute emissions reduction**
  - Bonus +2

### Abandon Dirty Ships: Advocacy

### (20% of category grade)

- **Publicly support strengthening the level of ambition of the GHG reduction policies**
  - 2 points possible, earns 2 points

- **Publicly reject HFO, LNG and false solutions**
  - 3 points possible, earns 0 points

- **Advocate for rapid decarbonization through trade organizations**
  - 1 point possible, earns 1 point

- **Deduction for advocating for scrubber use**
  - 2 points possible, earns -2 points

### Abandon Dirty Ships: Transparency

### (30% of category grade)

- **Annual public reporting of fleet metrics, including:**
  - Propulsion technologies and efficiency retrofits
    - 2 points possible, earns 1 point
  - Fuel types and volumes consumed
    - 3 points possible, earns 3 points
  - CO₂e emissions for entire fleet
    - 4 points possible, earns 4 points

## Put Zero at the Helm: Commitment

### (30% of category grade)

- **General climate commitment**
  - 9 points possible, earns 4 points
    - Absolute CO₂e reduction benchmarks for 2025, 2030 and 2035
      - (3) points possible, earns (2) points
    - No use of carbon offsets to meet goal
      - (1) points possible, earns (0) points
    - Net Zero vs. Absolute Zero
      - (1) points possible, earns (0) points
    - 2040 vs. 2050
      - (1) points possible, earns (0) points
    - Commitment to move freight onto low- and zero-emission vessels (with time-bound targets)
      - (1) points possible, earns (0.5) points
    - Set short-term targets for moving increasing volumes of cargo on cleaner ships, i.e., MGO/hybrid-powered vessels, shore power-equipped vessels
      - (1) points possible, earns (0.5) points
    - Mentions low- and zero-emission vessels
      - (1) points possible, earns (0) points
  - **Other**
    - Expressions of public support for zero-emission shipping development
      - (0.5) points possible, earns (0.5) points
    - Member of Science-Based Target Initiative (a We Mean Business Coalition commitment)
      - (0.5) points possible, earns (0.5) points
    - Getting to Zero (GTZ) Coalition (managed by the Global Maritime Forum, the World Economic Forum and Friends of Ocean Action)
      - (0.5) points possible, earns (0) points

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57.5
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### Notes:

- Biofuels, no real benchmark
- CMA CGM emphasizes retrofitting but without a firm benchmark
- Talk about retrofits but specifics are lacking
- Support 55% reduction by 2030
- Over-reliance on LNG
- Increasing shore power capability for fleet
- Green methanol newbuilds
- Support for Fit-for-55
### Put Zero at the Helm: Implementation Plan

(20% of category grade)

<table>
<thead>
<tr>
<th>Performance Criteria</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Ships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Number of orders or leases for new ZEVs and ZEV-ready ships</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>▪ Deduction for number of LNG newbuilds or leases</td>
<td>(-2)</td>
<td>(-2)</td>
</tr>
<tr>
<td>▪ Working with other carriers and/or entering conglomerations/partnerships on the development of ZEV technologies</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>▪ Working with ports and/or investing financially in ZEV infrastructure and/or shipping corridors</td>
<td>(0)</td>
<td>(0)</td>
</tr>
<tr>
<td>Fuels</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Bunkering contracts for zero-emission fuels</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>▪ Investment in R&amp;D in fossil-free ZEV fuels and propulsion technologies</td>
<td>(0)</td>
<td>0</td>
</tr>
<tr>
<td>▪ Using MGO/hybrid-powered vessels</td>
<td>(0)</td>
<td>0</td>
</tr>
<tr>
<td>▪ Bonus for green fuel contracts</td>
<td>(Bonus +2)</td>
<td>(0)</td>
</tr>
<tr>
<td>Efficiency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▪ Implement efficiency measures (e.g., hull coatings, routes, etc.)</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Put Zero at the Helm: Advocacy

(20% of category grade)

- Publicly support the rapid development of green (ZEV) shipping corridors for high-volume routes per the Clydebank Declaration
- 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)
- Deduction for membership in the Society for Gas as a Marine Fuel

<table>
<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>-2</td>
<td>-2</td>
</tr>
</tbody>
</table>

### Put Zero at the Helm: Transparency

(30% of category grade)

- 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
- 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

<table>
<thead>
<tr>
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<th>Company Score</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.5</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

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18 Energy Observer 2 and other ZEV projects
19 Green corridor
20 Bunkering
21 Fund for Energies
22 32 dual-fuel vessels, but emphasis on LNG and only some biofuel use to date
23 CMA CGM provides a detailed pathway, but highly reliant on LNG and target date is 2050