



# **Contents**

## 1. INTRODUCTION

- 1.1. About this Report
- 1.2. Letter from our CEO

## 2. MINERVA GAS OVERVIEW

- 2.1. About Minerva Gas
- 2.1.1. Our Services
- 2.1.2. Key Figures
- 2.1.3. Worldwide Presence
- 2.1.4. Our Vessels
- 2.2. Vision, Mission

# 3. ENGAGING OUR STAKEHOLDERS

- 3.1. Identifying our Stakeholders
- 3.2. Engaging our Stakeholders

# 4. GOVERNANCE

- 4.1. Our Leadership and Committees
- 4.2. Mitigating Risks
- 4.3. Minerva Gas (MOC)
- 4.4. Operational Excellence & Continuous Improvement
- 4.5. Cyber Security & Information Protection

## 5. SOCIAL

- 5.1. Our People
- 5.1.1. Overview, Employee Benefits, Retention
- 5.1.2. Training & Skill Development ATHINA
- 5.2. Health & Safety
- 5.3. Community Engagement

## 6. ENVIROMENT

- 6.1. Environmental Stewardship
- 6.2. Environmental Protection
- 6.3. Energy Emissions
- 6.4. Water Management On Board
- 6.5. Waste Management Ashore
- 6.6. Waste Conservation and Protecting Marine Ecosystem

## 7. APPENDICES

7.1. ESG Data Tables – Environment

# 1. INTRODUCTION

## 1.1. ABOUT THIS REPORT

#### PURPOSE AND SCOPE OF THIS REPORT

Minerva Gas Inc. ("Company") continues to demonstrate its commitment towards environmental sustainability and stewardship by publishing its Sustainability Report for year 2022.

The aim is to continuously monitor, evaluate, and improve our Environmental, Social, and Governance (ESG) goals and performance. The purpose of this report is to assist the Company in monitoring its progress on the goals set out from previous years on ESG matters, whilst at the same time engaging its people, and various stakeholders to ensure alignment on the sustainability priorities, strategies, and initiatives of Minerva Gas.

### **REPORTING STANDARD**

Our report has been prepared in accordance with the GRI standards: Core option, which is widely seen as the global best practice for sustainability reporting. We have also applied Marine Transportation reporting standard offered by the SASB to guide our disclosures on sector-specific ESG issues.

### **PUBLICATION DATE**

This Sustainability Report was published in November 2023.

### REPORTING PERIOD

The report consists of disclosures for the financial year ending 31 December 2022 ("FY2022").

### **CONTACT DETAILS**

sustainability@minervagas.com



### 1.2. LETTER FROM OUR COO

The Minerva Gas 2022 Sustainability Report is published at a time when the shipping industry is undergoing a transformation process caused by the rapid technological advancement, the requirements and targets set towards the decarbonization of our industry, as well as the economic, and social changes due to the ongoing geopolitical crisis/developments. With that background in mind, we welcome the opportunity to provide our perspective on sustainability within Minerva Gas and the wider LNG industry.

Minerva Gas aims to provide sustainable LNG transportation services by taking active responsibility for the society and the environment that we operate in, acknowledging that business development must balance social, economic and environmental sustainability.

Recognizing that the environmental, social and corporate governance (ESG) considerations may impact the company's ability to execute its business strategy and create value over the long term, we have consolidated our sustainability efforts during 2022 into this report and we continue to integrate same further into our business.

Minerva Gas fully embraces the UN Sustainable Development Goals and recognizes that fighting climate change and to ultimately reach carbonzero is the grand challenge of our time. We are fully committed not only to meet, but to exceed the targets set by IMO and EU for the reduction of CO2 emissions and the carbon intensity of international shipping.

As we are moving fast towards 2030, all of us in the maritime industry must increasingly focus on efficiency and digitalization. Minerva Gas intends to continue investing in the most technologically advanced ships, industry pilot projects and partnerships that will enable the decarbonization of LNG shipping transportation. In 2022, Minerva Gas signed newbuilding contracts with Samsung Heavy Industries for the construction of two 174K LNG Carriers with ME-GA propulsion, Air Lubrication System and Mark III Flex Containment Systems coupled with a sub-cooler. In addition, we focus our attention to new type of gas carriers that will have to be designed and constructed with the aim of transporting new type of cargoes associated with decarbonization such as liquid CO2 and green ammonia.

Macro-economic factors and regulations are shaping the future of our industry and driving change through demand for fuels and sustainability standards. With all the challenges and opportunities facing the shipping industry in the years to come, in Minerva Gas we believe that our people are the Company's greatest asset and a critical parameter for our success. We value and respect each other, we care about the safety, health and well-being of our personnel both onboard and ashore, thinking of ourselves as "family". We are glad to report that 2022, Minerva Gas had a flawless HSE record.

"We are fully committed not only to meet, but to exceed the targets set by IMO and EU for the reduction of CO2 emissions and the carbon intensity of international shipping".

During 2022 the training program of our in-house training center "ATHINA" was further enhanced and this a practicable example of our ongoing efforts to continually invest in our people in developing and empowering a highly competent workforce that has the right skills to perform their roles effectively and drive improved business performance through safe, compliant, efficient and reliable operations.

Throughout 2022 LNG demand has continued to grow despite a more challenging global economic environment. Looking forward ahead and taking

into consideration the commitment showcased by major energy providers towards the production and supply of LNG we are certain the market will continue to outpace itself when compared to other commodity sectors. We believe in LNG as a transitional fuel and its important role towards achieving the decarbonization goals, and we remain committed in providing safe and efficient energy transportation to support the sustainable development of our society. In producing this sustainability report we have

engaged our stakeholders to identify the ESG issues that matter most to them and we will continue to take their input into account while designing our future strategy in ensuring the long-term creation of value and success for Minerva Gas.

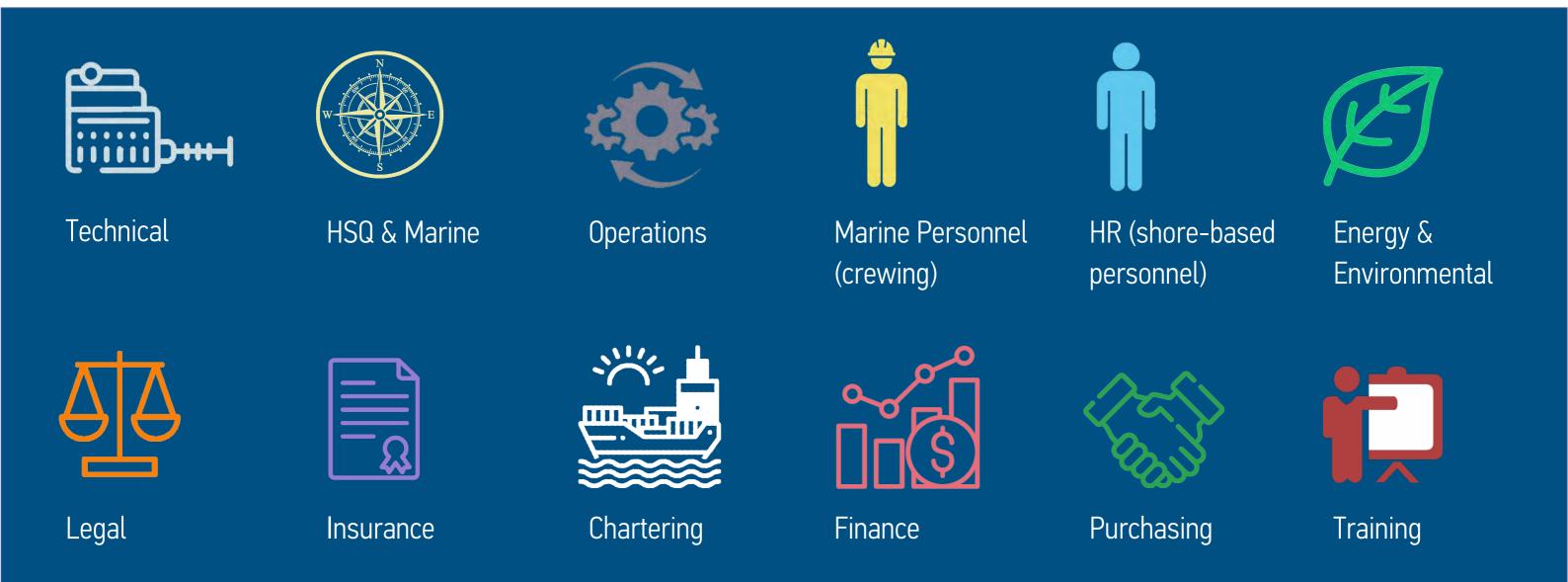
**Sokratis Dimakopoulos** Chief Operating Officer

# 2. MINERVA GAS OVERVIEW

## 2.1. ABOUT MINERVA GAS

Minerva Gas Inc. provides LNG maritime transportation services through a modern and high specification fleet of LNG carriers. As a dedicated ship management company our aim is to provide high quality services on behalf of our principals to our partners whilst ensuring safe, sustainable, reliable and efficient day to day to operations.

# 2.1.1. OUR SERVICES



## 2.1.2. KEY FIGURES



**DISTANCE SAILED 473756.20**NAUTICAL MILES



60



**1.6** YEARS

VOYAGES FLEET AVG. AGE FLEET CAPACITY



454.372



21.9

AROUND THE EARTH

# 2.1.3. WORLDWIDE PRESENCE



#### **ATHENS**

**HEADQUARTERS** 

ATHINA MARITIME CENTER (AMLDC)

**CHIOS** 

LOCAL MANNING OFFICE

**KALYMNOS** 

LOCAL MANNING OFFICE

ODESSA

MANNING AGENCY

**MANILA** 

MANNING AGENCY

S. KOREA

SHI NB SITE OFFICE

ROTTERDAM

MARINE SUPERINTENDENT

HOUSTON

TECHNICAL SUPERINTENDENT

# **2.1.4. OUR VESSELS**

# **EXISTING FLEET**

Vessel Name	Built	Builder	Size	Containment System	Propulsion	Reliq	Flag	Class
Minerva Psara	2021	DSME	173,400	GTT NO96	ME-GI	Yes	Malta	ABS
Minerva Kalymnos	2021	SHI	174,000	GTT Mark III Flex +	X-DF	Yes	Malta	ABS
Minerva Limnos	2021	DSME	173,400	GTT NO96	ME-GI	Yes	Malta	DNVGL
Minerva Chios	2021	SHI	174,000	GTT Mark III Flex +	X-DF	Yes	Malta	DNVGL
Minerva Amorgos	2022	SHI	174,000	GTT Mark III Flex +	X-DF	Yes	Malta	ABS

# NEWBUILDINGS ON ORDER

Vessel Name	Built	Builder	Size	<b>Containment System</b>	Propulsion	Reliq	Flag	Class
Minerva	2026	SHI	174,000	GTT Mark III Flex	MEGA	Yes	Liberia	LR
SN2652								
Minerva	2026	SHI	174,000	GTT Mark III Flex	MEGA	Yes	Liberia	LR
SN2653		PA -						

Our fleet vessels are constructed under the direct supervision of the Minerva Gas Inc. inhouse dedicated Yard Supervision team.

## 2.2. VISION, MISSION

### **OUR PURPOSE**

Safe and efficient energy transportation to support the sustainable development of our society.

### **OUR VISION**

To be the shipping company of choice, recognized for our people, our performance, and business ethos.

### **OUR MISSION**

We are committed to providing ship management services of the highest quality while adding value to our stakeholders, our people, and society. Through a continuous improvement process towards operational, health, safety, security and environmental excellence, we aim for:

// Zero spills, leakage, environmental releases, or unauthorized cargo venting

// Zero incidents

// Reduction in permitted emissions

// Promotion of industry best practices



# 3. ENGAGING OUR STAKEHOLDERS

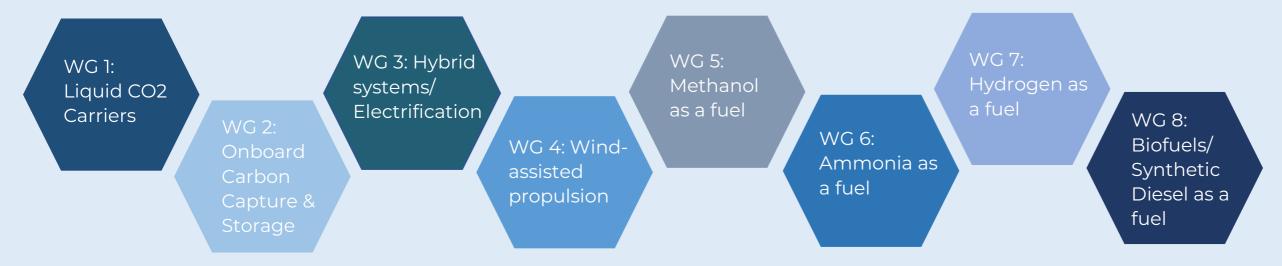
### 3.1. IDENTIFYING OUR STAKHOLDERS



Minerva recognizes its shareholders the as counterparties that it interacts with as part of its day-to-day activities. operations, requirements. The Company aims to work with industry leaders on each sector, with the its continuous aim of enhancement and growth, whilst at the same time meetings its stakeholder's related expectations to environmental, economic, and social governance.

### 3.2. ENGAGING OUR STAKEHOLDERS

In view of further emphasizing its commitment towards decarbonization, enhance its familiarization and knowledge towards new technologies in shipping Minerva Gas has established the Minerva Technology Forum which consists of the following working groups:



As a follow up to this initiative and ongoing day to day progress, the Company organizes an "Annual Meeting" whereas both internal and external stakeholders/partners are invited to follow the progress of each working group, but also to attend presentations of various industry leaders who share their insight towards the environmental/decarbonization challenges that lie ahead.

# 4. GOVERNANCE

### 4.1. OUR LEADERSHIP AND COMMITTEES

A robust corporate governance is the cornerstone of a trustworthy and reputable company. The path to long-term sustainability requires that we manage our progress and continue to learn from our experience and peers. To ensure compliance and continuous improvement, Minerva Gas has established six committees to evaluate the effectiveness of current policies and objectives, monitor performance, learn from experience, and collect ideas for future improvement.

Management Review	<b>Purpose</b> : To assess the overall effectiveness of the Company's	Frequency: Meets every	Participants: CEO, COO, DPA, all Company's
Committee	HSQE performance, review the MGMS, policies, objectives, and targets, and identify opportunities for improvement.	three months at the Management Review Meeting (MRM).	Managers.
Managers Committee	Purpose: To ensure better coordination and planning of the Company's activities, review the progress of the various projects underway, and evaluate proposals for MGMS update/development.	Frequency: Meets every month.	Participants: Top Management and the Company's Managers.
Legal Review Committee	Purpose: To monitor the developments in regulations and industry requirements and assign responsibilities and target dates for initiating the relevant actions to ensure compliance, including updating the MGMS.	Frequency: Meets every three months.	Participants: Top Management and the Company's Managers.
Learning Committee	<b>Purpose</b> : To analyze the learnings from incidents, identify trends, and establish measures to enhance HSQE performance, including the MGMS.	Frequency: Meets every three months.	Participants: COO, DPA, HSQ & Marine, Energy and Environmental, Marine Personnel, Technical, Operations, Purchasing Managers and any other Senior personnel of these departments in accordance with the Manager's decision.
Safety, Technical & Operational Committee	Purpose: To keep all Departments up-to-date on the fleet's status and operational issues and coordinate the activities.	Frequency: Meets every week.	Participants: Representatives from Operations, Technical, HSQ & Marine, Marine Personnel, Energy & Environmental, Purchasing, IT and Insurance Departments and the CSO.
Shipboard Safety Committee	Purpose: To discuss all HSQE aspects, including safe working practices, increase HSQE aware-ness through a commitment to the MGMS, promote safe environmental practices, and review incidents, near misses, and lessons learned.	Frequency: Meets every month.	Participants: Master, Officers and Ratings.

### 4.2. MITIGATING RISKS

Risk assessment is the pillar of our Safety Management System (SMS). To develop our SMS, we carried out ex-tensive gap analysis considering all the hazards and physical barriers and assess our mitigation strategies.

For the assessment, we generate a risk matrix that follows the 5x5 rule that maps out the effects against the probability. We have divided the consequences into five major categories, ranging from the least severe to the most severe of the probable outcomes. The risk matrix defines our threshold, the zones where risk levels are acceptable and those where they are not, and the measures that we must take when assessed over the threshold.

# 4.3. MINERVA GAS (MOC)

Taking the management of our entire LNG Carrier fleet in-house has been the Company's first priority since its establishment in 2018, successfully completed in 2022, with the Minerva Limnos being the first vessel in February 2022, followed by the newly delivered Minerva Amorgos in October 2022, and the Minerva Kalymnos, Minerva Psara, and Minerva Chios in December 2022.

The entry of the vessels into management followed a robust Manage-ment of Change process to ensure no impact to the vessel's safety and operational performance during this change. The process began with the successful audit (TMSA) of Minerva Gas by the vessel's charterers; Shell, TOTAL Energies and ExxonMobil confirming Minerva Gas approval for all levels of business include long term period charter. In coordination and in agreement with all stakeholders during the entry of each vessel into Minerva Gas management the vessel's underwent internal inspections and audits as well as external audits by Class, OCIMF SIRE, and where applicable local port state control, which were all executed with perfect results.

As a result of the robust process all vessels changed over to Minerva Gas management without any negative impact to their operational performance and no impact to our stakeholders including the vessel's charterers. Operational performance of the vessels as measured by the vessel's charterers has since shown no deterioration and in many areas a steady improvement while under Minerva Gas management. As an indication Minerva Gas was ranked first in the Shell's time charter operators ranking during 2022 Q4 and 2023, Q2 with a perfect result in the categories of Safety Culture, Management review, Industry ranking, SIRE risk rating and Crew matrix compliance. This constitutes an additional confirmation of the high standards of operation of the Company, within both the tanker and LNG shipping industry.

### 4.4. OPERATIONAL EXCELLENCE & CONTINUOUS IMPROVEMENT

#### **Operational Excellence**

The Company is committed to deliver every cargo safely, provide our partners with operational excellency, careful voyage planning/optimization, and efficient gas management.

In accordance with the Company's Maintenance policies/procedures a number of condition based/real time monitoring tools such as the following are in place and implemented on board all our LNGC fleet vessels with the aim of ensuring optimal equipment performance.

- Expert Insight & Engine Monitoring System (performance & remote diagnostic tool for M/Es)
- Wartsila Data Collecting Unit (for DGs of MEGI vessels)
- Dongle key for DGs Snapshot (for XDF vessels)
- ExxonMobil CCM units for Cylinder oil Analysis
- Shore based Oil Analysis
- Water analysis (Aux. Boiler)
- Infrared Inspection records for high voltage switchboards
- K-IMS for real time monitoring

The above tools provide real time monitoring and remote troubleshooting capabilities for all the main engines and generator engines through long term service and maintenance agreements. Similar agreements are in place for the main components of the fuel gas management system.

As mentioned above, the office has real time monitoring access to the vessels through virtual operating stations of the IAS and the K-IMS service of KM.

For each vessel the identification of critical equipment is carried out using a comprehensive risk assessment and each vessel is also provided with all the necessary critical and business critical spares implementing a risk assessment process which has also taken into account the OEM's safety parts lists.

The above-mentioned strategy would be implemented aboard all additional/future Gas Carriers entering our fleet.

#### **Continuous Improvement**

As part of the Technical Department's follow up of the new regulations and technology developments, especially towards the decarbonization of shipping and all the relevant regimes IMO, EU and other national and international organizations are establishing, we have been engaged in the evaluation of an innovative design for the propulsion of LNG carriers which will provide benefits compared to the designs already available in the market.

The design consists of a hybrid electrical (HyEl) propulsion and power generation plant equipped with a combination of the latest generation dual fuel four stroke engines and pure gas engines, coupled with battery arrays which ensure spinning reserve and peak savings. This arrangement allows for optimization of the number and the load of the running engines for every vessel's speed and during port stays or idling.

For the efficiency of this design to be further increased, the propulsion plant has been based on the Low Loss Concept (LLC) which allows the removal of the propulsion transformers from the design and subsequently less electrical losses. Additionally, the Propulsion Motors will be of low-speed permanent magnet type which can be direct coupled to the propeller shafts thus again the mechanical losses of the reduction gearboxes will be eradicated.

The HyEL design also presents many operational merits and seriously enhanced redundancy. The fact that the engine room volume can be reduced due to the smaller number and size of the equipment which will be installed in it has created extra cargo space without any alternation of the basic dimensions of the vessel, something that promotes seriously the compatibility and the freight cost. Another key advantage of this design is that is based on electrification of the propulsion plant which means that it is quite future proof since it can easily adopt Fuel Cells, ORCs, Solar Panels or WASP that will improve the plants efficiency even more.

The above described design it is a proposal of Wartsila and it has been evaluated through various Joined Working Groups with Minerva, ABS (Singapore Simulation Center) Korean and Chinese Shipyards. For Minerva Gas the adoption of this design is the way forwarded and we are working in this direction, aiming to add such a vessel in our fleet before the end of this decade.

## 4.5. CYBER SECURITY AND INFORMATION PROTECTION



Minerva Gas continues to invest in improving information security measures during business operations to reduce cyber risks and become more resilient.

The cyber security framework is aiming to protect the Company's systems and data and is reviewed once a year to ensure continual improvement. The program is based on industry standards and best practices and follows the International Organization for Standardization (ISO 27001) Standard on Information Security Management.

Company employees and third parties with access to systems or personal information are required to adhere to the cyber security policy, procedures and requirements, as set by the Company.

### **CYBER AWARENESS**

In July 2022, a Cyber Security awareness campaign was run ashore and onboard. The campaign included short training sessions on phishing, password security and safe web browsing. The Campaign was evaluated by the attendees with a score of 4.6/5

### ASSESSMENTS AND PENETRATION TESTS

In October 2022 the Company run a cyber security assessment with Microsoft. During the assessment, the Company's Maturity scope was calculated. The areas with the highest scores were Data Recovery (4/4), Security assessment (4/4), Malware Defenses (3.67) and Penetration Testing (3.5).

In addition, 4 penetration test activities took place during 2022. Vulnerabilities identified during the assessments and penetration tests were addressed with corrective and preventive measures.

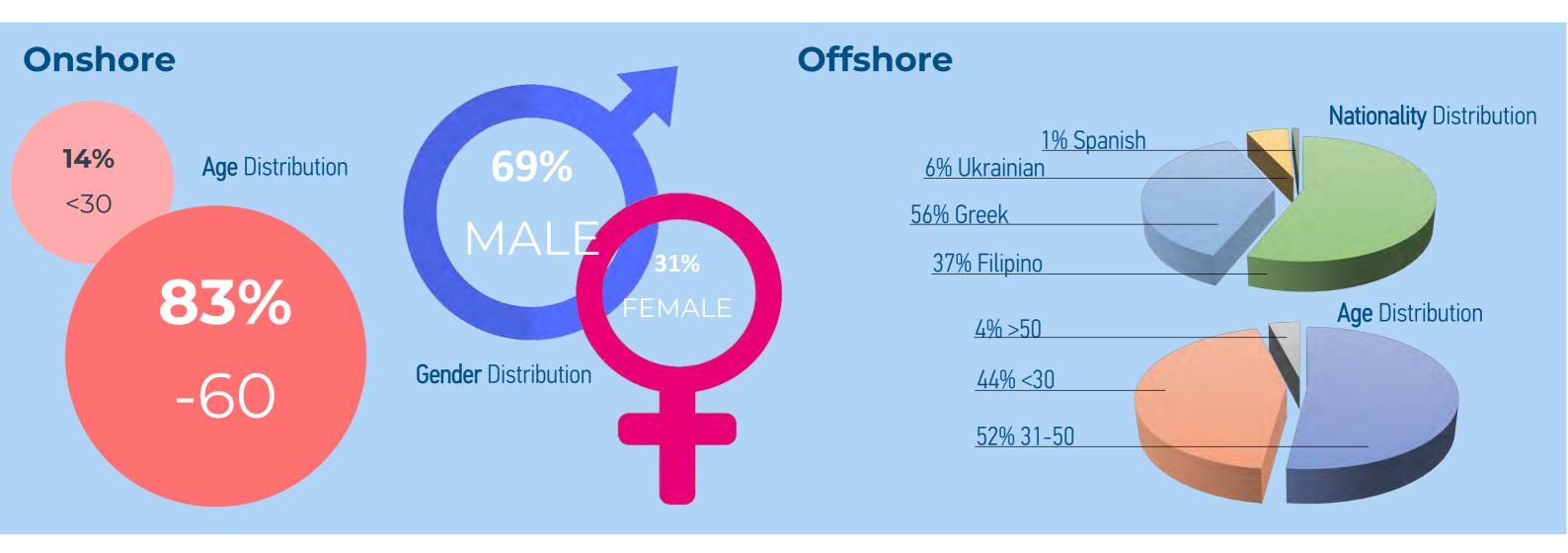
#### **BUSINESS CONTINUITY**

In 2022, the Company's Disaster Recovery site has been implemented, ensuring the Company's business continuity by the uninterrupted access to the most critical IT services, such as the email, access to shared files and Company's ERP.

# 5. SOCIAL

### 5.1. OUR PEOPLE

At Minerva Gas, one of our core priorities is to care for our people. Every employee is a member of the Minerva Gas family and embraces the company's values, visions, and philosophy.



# 5.1.1. OVERVIEW, EMPLOYEE BENEFITS, RETENTION

experience and competence to advance to management positions.

### **DIVERSITY & INCLUSIVITY**

Minerva Gas believes that inclusivity and diversity are essential to the shipping industry. We recruit people with various backgrounds and perspective in our pursuit for balance in the way we work. We provide equal opportunities to all employees and have implemented a fair promotion scheme based on effort, performance, and skillset.

As stated in our Code of Conduct and we have zero tolerance for any form of harassment and bullying. We aim to ensure that all personnel is treated with dignity and respect and that they extend the same to others. Our new policy for the prevention and elimination of violence and harassment is testament to how seriously we take the matter. Harassment and bullying must be reported to the company to be effectively treated always with confidentiality. As a learning organization, it is critical to continue and improve current approaches and policies to promote diversity, equity, and inclusivity. To increase gender diversity in top management, we constantly seek talented young female professionals and create a development path for them to gain the necessary

#### PROTECTION OF HUMAN RIGHTS

We rigorously adhere to the MLC (Maritime Labour Convention) and ILO (International Labour Organization) regulations. Our Code of Conduct and Ethics demonstrates our commitment to ensuring an environment free of human trafficking, forced labor, and illegal child labor for our employees. All contractors, subcontractors, vendors, suppliers, and others with whom the Company conducts business shall not be complicit in any act constituting human trafficking, forced labor, or child labor.

#### OUR MANAGEMENT APPROACH

Minerva Gas is committed to provide shore-based employees with all the benefits as per the relevant/applicable legislation. Besides that, we offer a competitive remuneration package with a series of additional benefits to motivate our employees, including performance related bonuses, wellbeing programs, private health insurance, and other initiatives.



Continuous Training & Development - Leadership skills, Succession Planning



Study Leave – For all employees showcasing our commitment to continuous learning



Performance Bonus - Remuneration benefit depends on employee's performance



**Private Insurance** – Provided to all employees and their 1st degree relatives



Well Being – Gym & Personal Training, Football/Basketball teams, Restaurant on premise, Doctor, Nutritionist



**Retirement Provision** – Provided to all employees



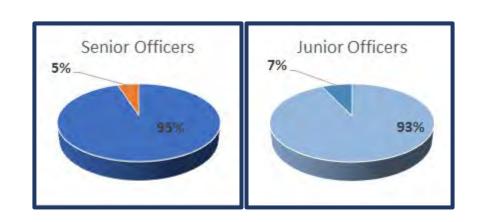
Parental Leave - Provided to all employees



**Disability & Invalidity coverage** – Provided to all employees

### ANNUAL SHORE ASSIGNMENT PLAN

Our seafarers are invited to work in the office. One of our organizational goals is to recruit top performing seagoing personnel from within our fleet. The Annual Shore Assignment Plan provides our seafarers with the chance to work in the offices for a certain period or on a specific project. Overall, it is a great chance for our seafarers to experience our culture and better integrate into our family, while at the same time enabling us to retain our talents.



### 5.1.2. TRAINING AND SKILL DEVELOPMENT – ATHINA

Learning and the constant pursuit towards improvement are embedded in the culture of Minerva Gas. We recognize the importance of the competency of our seafarers and shore-based personnel, and therefore, we invest and support their career and skill development through highstandard training programs and performance appraisal.

#### **OUR MANAGEMENT APPROACH**

Following our philosophy of continuous learning, we implement a variety of methods to encourage our staff to continuously enhance their skill sets and cultivate a learner's mindset. Based on their responsibilities and interests, we have designed a training matrix for our seafarers and shore- based personnel that includes both essential soft skills (such as leadership, project management, communication, and coaching) and useful technical skills (such as Navigation, Technical Engineering and Safety/Environmental related courses), ensuring they also receive the most up to date training in their fields. Additionally, we evaluate our employees using a performance appraisal tool to create appropriate career development paths for each one of them and to better unleash their potential. The department manager conducts appraisals for shore-based personnel twice a year which is based on a set of targets and competencies. At Minerva Gas, we value employee feedback, which is why we provide opportunities for each employee to evaluate their manager, with the assessments contributing to the manager's appraisal rating. An open appraisal method for seafarers is used to identify weak points on board and help our crew members improve their performance.

### HIGHER EDUCATION REIMBURSEMENT SCHEME

Minerva Gas places a high value on each employee's personal growth. Better training and knowledge of the sector, in our opinion, can result in a team composed pf individuals who are both highly competent and well-versed in their field. As a result, we encourage all employees to seek higher education degrees and gain industry knowledge through the Higher Education Reimbursement Scheme. To support our employees, we have a policy in place and formed a committee to evaluate the applications from employees who intend to pursue master/postgraduate degrees relevant professional certification.

### **OUR PERFORMANCE IN 2022**

<b>=</b> 😉	= 3
<del>7  </del>	7
20%	020

Of our shore-based personnel Of our have received at least 1 at leas specific in-house training. training

Of our seafarers have received at least 1 specific in-house training.



9.56 days

Average training time for seafarers.



32.5 hours

Average training time for shore – based personnel.

93%

Of employees have received a regular performance and career development review.

#### ATHINA MARITIME LEARNING AND DEVELOPMENT CENTER

Our Principals established the ATHINA Maritime Learning and Development Center recognizing the significance of continuous learning. We consider our training center one of the most important cornerstones of our organization; it is equipped with cut-ting-edge training facilities and marine simulators. The Center highlights the Minerva Gas culture as a learning organization and our commitment to provide the most effective training and establish a team of highly competent seafarers.

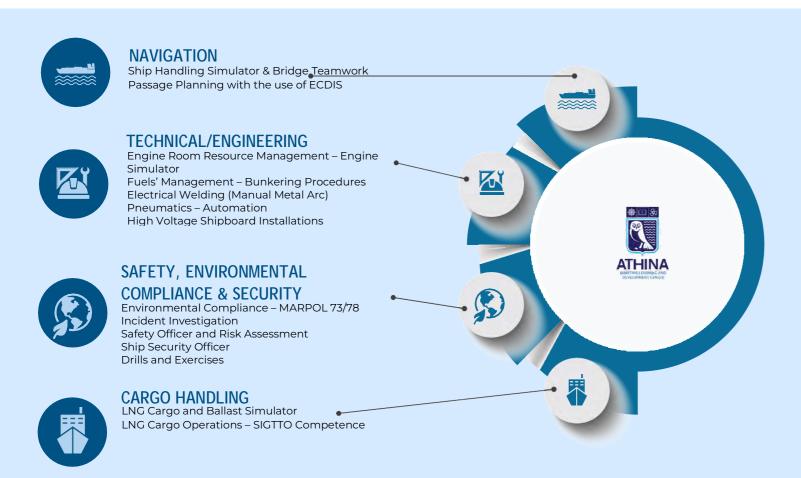
A quarterly Training Program for all seafarers and ranks is published, which includes seminars, courses, and conferences delivered by qualified and experienced trainers. Each quarter, both seafarers and shore-based personnel can register for these seminars and conferences.

The Training Center provides a variety of technical training courses that can be characterized as Navigational, Technical & Engineering, Safety & Environment, and Cargo Handling. This training would improve our seafarers' competence, hence improving the overall quality of our ship management services.

Furthermore, we have established an initiative known as the quarterly training moment, in which our instructors constantly capture interesting ideas from trainees and turn them into new training projects. These ideas are shared on our website and circulated during our management review meetings.

By integrating the training needs identified through various sources, such as the performance appraisal and training evaluation, we aim to further enhance our training programs to develop the knowledge and skills of our people.

### ACCREDITED STCW MARITIME TRAINING CENTER



#### BE A CONTINUOUS LEARNER

In order to continuously improve our training pro-grams, we began measuring the effectiveness and added value of our training courses in 2021. The effectiveness is measured using a four-tier metric that includes the evaluation of our seminars as well as the improvement in the performance of the seafarers who participate in the training. Through this approach, we aim to develop personalized training that meets the needs of our employees and assists them in their continuous improvement by enhancing the competence and skills.

#### EVALUATION MODEL OF THE EFFECTIVEENESS OF TRAINING



### 5.2. HEALTH & SAFETY

We place a high priority on the health and safety of our employees, and we try our best to achieve a zero-incident culture at Minerva Gas.

#### **OUR MANAGEMENT APPROACH**

#### COMMITMENT AND POLICY

Minerva Gas is committed to always be in compliance with all international maritime safety regulations, including the statutory requirements as per the International Safety Management Code (ISM) and Maritime Labour Convention (MLC). We have implemented a Health, Safety & Quality (HSQ) Policy within the organization to ensure safe, efficient, and flawless operations. The policy lays the foundation for the Minerva Gas safety culture and demonstrates the company's dedication to fostering a safe and healthy working environment for all our employees while also maintaining a high level of services for the benefit of our stakeholders.

#### SAFETY MANAGEMENT SYSTEM

Based on the requirements of the ISM Code, the ISO

9001, and ISO 45001 standards, we have established a comprehensive safety management system. The system defines the objectives of our safety performance and keeps monitoring the progress. The experienced team of our HSQ-Marine dept. is responsible for overseeing and managing all HSQ-related activities to ensure compliance with all policies, regulations, procedures, and processes of our controlled documentation and industry requirements. To ensure continuous improvement, we create a strategic plan which identifies the Strengths, Weaknesses, Opportunities & Threats (SWOT) and follows the PDCA Cycle (Plan - Do - Check - Act) strategic management method.

#### SAFETY AND HEALTH TRAINING

Based on the requirements of the ISM Code, the ISO

9001, and ISO 45001 standards, we have established a comprehensive safety management system. The system defines the objectives of our safety performance and keeps monitoring the progress. The experienced team of our HSQ-Marine dept. is responsible for overseeing and managing all HSQ-related activities to ensure compliance with all policies, regulations, procedures, and processes of our controlled documentation and industry requirements. To ensure continuous improvement, we create a strategic plan which identifies the Strengths, Weaknesses, Opportunities & Threats (SWOT) and follows the PDCA Cycle (Plan - Do - Check - Act) strategic management method.

We strongly believe that training plays a significant role in promoting our safety culture amongst our employees. Our ATHINA training center has carried out a series of health and safety training for both seafarers and shore-based personnel. All new shore employees attend a familiarization session by our Safety Engineer.

#### SAFETY AND HEALTH SERVICES

Minerva Gas has commissioned a certified Occupational Doctor who visits our premises once a week. The Occupational Doctor conducts a health checkup for new employees and issues a pre-employment health certificate to state whether employee is medically fit for the position. Furthermore, a Safety Engineer is also responsible for inspecting the working conditions within the office and ensuring that they are following the relevant legislation. Finally, all shore employees and their 1st degree relatives are offered a health insurance plan that offers a variety of medical services in the private healthcare system.

All seafarers are required to undergo this pre-employment medical examination before embarkation, and their health condition is under constant monitoring to ensure that they are physically fit for duty onboard.

To further complement the company's priorities on its people, and specifically keeping in mind our sea- farers' needs, Minerva has commissioned the ser- vices of Med Solutions' global team which consists of physicians of various specialties (internists, infectious disease specialists, cardiologist, dermatologist, orthopedic specialist, and other specialists as needed), physician's assistant, nurse case managers and health administrators and epidemiologists.

Med Solutions have streamlined their process as follows:

For medical assistance onboard 24/7 (telephone and e-mail), they provide specific instructions immediately through one of their specialists. Their medical team consists of health professionals in Greece, the Philip- pines, Panama, Brazil, and the US along with cooperating physicians in various other locations worldwide. Once initial instructions are provided, case is followed up through closure.

If examination in port is required, they supervise and coordinate the process in cooperation with our local agent, to provide guidance regarding examinations required and ensure the best available medical care for our personnel. Additionally, their team will always be able to speak to one of our team members regarding ongoing cases, to review progress, plan of action and decide on logistics of further management.

#### TRAINING PROGRAMS



New Employee Training / Familiarization



The course is mandatory for the designated Safety Officer who has amongst other responsibilities the role of supervising, controlling, and participating in the work permit system for all works and activities. The training would secure the appropriate safety management skills and competencies require for this role.



**New Employee Training** 



Before boarding the vessel or working in the office, all new employees are trained on the health and safety aspects, such as fire safety, evacuation, PPE usage, emergency response, etc.



Computer-based Training (CBT)

Onboard Computer-Based Training is mandatory for all Officers and Ratings. We have a library of over 250 training programs that are related to health and safety, including topics such as Personal Safety, Risk Perception and Assessment, Work Permit System, etc.

#### 04

#### Training Courses/Seminars



Our Training Center offers a wide portfolio of STCW training courses, industry recommended courses, tailor made seminars for licensed Deck and Engineer Officers, as various Shore Based Staff learnings.

The Training Courses can be broadly divided into the following categories:

- Approved STCW training courses.
- Courses to meet industry Competence Standards, such as SIGTTO LNG Training, Oil Tankers Cargo Handling Simulator Training, Ship Handling, Safety Leadership, etc.
- Courses that provide underpinning knowledge and skills on new technologies, such as Ballast Water Treatment Systems, Electronically Controlled Diesel Engines, Marine Fuel and Lubricating Oils Handling, etc.

- Practical courses such as MMA Welding, Lathes, etc.
In terms of content, the training courses relate to Navigation,
Technical/Engineering, Cargo Handling and Management and Safety, Environmental

05

#### Incident Reflective Training



Every month, a facilitator would lead an incident reflective training session with a small group of seafarers by presenting a high-impact incident, its causes and lessons learned using an interactive process.



Conduct Risk Assessment to identify the health and safety hazards.

Develop procedures and contingency plans.

Set objectives, targets and KPIs to measure performance.

Creating emergency response plans.



DO



Implement policies and measures.

Review the outcomes and performance.

Measure and benchmark KPIs and check compliance with set targets.

Identify potential actions to improve the current process and integrate into the future planning process.



Take preventative/corrective measures to reverse any

negative trends.

Identify potential actions to improve the current process and integrate into the future planning process.

Risk assessment is the core of our safety management system. We conduct a risk assessment of the hazards that could be found in the workplace, and we implement accordingly the necessary control measures. The evaluation's results and suggestions are then considered to enhance occupational health and safety. Our safety management system applies to all our employees, and all contractors are familiarized with the requirements of the relevant sections of the safety management system according to their scope of work.

### COMMUNITY ENGAGEMENT

#### INTERNAL AUDITS & INSPECTION

Regular audits and inspections are conducted by the technical and marine superintendents

Real-time audits are carried out by sailing with the vessel and observing the day-to-day vessel operations

Annual internal office audits

Monthly inspections on vessels are conducted by the Chief Officer, who is responsible for the safety on the vessel

#### **EXTERNAL AUDITS & INSPECTION**

Port vetting inspections are conducted by third parties

ISM audits on safety management system

External audits conducted by our stakeholders

Port state controls and inspections

Independent audit/inspections on-board fleet vessels

Creating social value is embedded in our sustainability strategy. We aim to operate in a socially responsible manner, ensuring the safety of people and the environment, through transparent and ethical behavior. We work diligently with our employees, local communities, and internationally recognized bodies to ensure that social factors are integral to our business principles, recognizing that our operations have a global influence.

At Minerva Gas, we keep monitoring and setting targets for safety-related performance indicators, such as near misses, minor injuries, lost-time incidents, and fatalities. As a learning organization, our incident investigation division carries out investigations on every incident to identify the root cause and take the necessary corrective/preventive measures to further improve the safety onboard and build up a safer culture for the next generation onboard our fleet.

The trends and results are presented and discussed during our Learning Committee meetings and Management Review meetings. Up to 2022, Minerva Gas does not have any incidents nor any detentions regarding health and safety aspects, however, it is important to keep learning from our experience and our stakeholders in the industry to achieve a better performance and promote a more robust safety management system.

### FIVE PILLARS OF OUR COMMUNITY ENGAGEMENT

### MARITIME EDUCATION

The education of the next generation is an important pillar with regards to our future

# LOCAL

We participate in various activities to bring our positive attitude and our values to the local development communities

#### **PUBLIC** COMMUNITIES ORGANIZATIONS

We cooperate and assist with a number of public organizations including port authorities, police departments, etc.

### **VULNERABLE GROUPS**

We actively support vulnerable groups through NGOs and a wide range of initiatives

#### **FNVIRONMENT**

We are committed to protect the environment and engage our employees to participate in related initiatives

### Distribution of Community Engagement Activities



9%

Merchant Marine **Academy Chios** Internship Program Supporting Maritime in acquiring on the job knowledge Panhellenic Union of Merchant Marine Captains

Sports Clubs Schools and Kindergartens

Municipalities

Port Authorities NAT **Local Churches** 

Via NGOs

Beach cleaning Event Recycling Plastic Free Restaurant

# 6. ENVIRONMENT

### 6.1. ENVIRONMENTAL STEWARDSHIP



We are committed to protecting the environment and preserving biodiversity and ecosystems' stability by ensuring pollution-free, environmentally friendly, and energy efficient operations.

We have adopted Climate Targets aligned with the IMO and EU decarbonization goals.

Having identified the importance of environmental compliance and the challenges of decarbonization ahead, we established a dedicated Energy & Environmental department with a direct reporting line to the COO.

We participate and invest in emission reduction or net zero emissions shipping pilot and demonstration projects.

Our environmental performance is benchmarked regularly with relevant industry standards and best practices, e.g., INTERTANKO's Environmental Performance and Monitoring Database (EPMD).

#### Maersk Mc-Kinney Moller for Zero Carbon Shipping

Minerva Gas has become a Mission Ambassador of Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping. Under this partnership, we collaborate with other industry partners to facilitate and accelerate the development and implementation of new technology solutions that contribute to the decarbonization of the maritime sector. The Mærsk Mc-Kinney Møller Center was established in June 2020 and focuses on evaluating the impact of new fuel types and technologies as the industry progresses toward achieving the IMO 2050 target.

### 6.2. ENVIRONMENTAL PROTECTION

The tool to enhance our energy and environmental performance, fulfill compliance obligations and voluntary undertakings, and achieve energy and environmental objectives for aspects that we can either control or influence is the implementation of an Energy and Environmental Management System (EEMS). Our EEMS is certified under ISO Standards 14001 and 50001 and specifies the procedures for establishing, implementing, maintaining, and improving Minerva Gas energy and environmental performance. EEMS enables Minerva Gas to follow a systematic approach to continually improve energy and environmental performance, including energy efficiency, energy use, and consumption.

Implementing a robust EEMS and achieving sound environmental performance requires all activities, operations, and personnel to be in the frame of environmental awareness, care, and a set of relevant objectives. Consequently, all the Company's employees are aware of this system and understand, implement, and continually support the requirements of the EEMS.

All Minerva Gas owned vessels are built with over and above MARPOL requirements and specifications to prevent oil pollution. In addition, they have improved technical measures and implemented striker management procedures to reduce discharges to sea and emissions to air. The latter is documented through the environmental protection notations that they are assigned.

We have achieved:

- Zero spills
- Zero untreated sewage discharges to the sea
- Zero untreated ballast discharges to the sea

#### RESPONSIBLE SHIP RECYCLING

Minerva Gas is committed to a safe and environmentally sound ship recycling process. For any fleet vessel reaching the end of its life, we will implement the applicable provisions of the Hong Kong IMO Convention and the EU Ship Recycling Regulation.

### 6.3. ENERGY & EMISSIONS

All vessels implement an SEEMP certified under ISO Standard 50001 for Energy Management Systems. This combination enables Minerva to enhance and further improve its energy performance, including energy efficiency, use, and consumption.

Scope 1 emissions were 212,151.0 mt CO2

Scope I emissions are the direct emissions from fuel combustion on vessels.

Scope 2 emissions were 18.9mt C02

Scope 2 emissions are the indirect emissions from grid electricity consumption in Athens. Some office locations without significant contribution to total emissions have been excluded.

#### **OUR CLIMATE TARGETS**

MG has aligned her targets with the IMO and EU decarbonization pursuits. As such we have committed to:

- 1. Minerva Gas is committed in operating vessels having an attained EEDI at least 50% lower than the required EEDI.
- 2. Minerva Gas is committed in operating vessels having an attained EEXI at least 34% lower than the required EEXI.
- 3. Until 2026 Minerva Gas is com- mitted in operating all its fleet vessels in meeting IMO's Carbon Intensity Indicator ranking A or B.
- 4. Minerva Gas is committed in developing and improving digital and other management tools to measure GHG emissions from its activities and optimize its operations.
- 5. Minerva Gas is committed in participating/investing in zero emission shipping pilot and demonstration projects.
- 6. Minerva Gas will disclose the verified GHG emission intensity and the total GHG emissions from its operated vessels

### FLEET DESIGN EFFICIENCY

Our fleet consists entirely of state-of-the-art 174k LNG Carriers, with low BOR, fitted with modern dual fuel, two-stroke, IMO Tier III NOx compliant engines having reduced environmental impact.

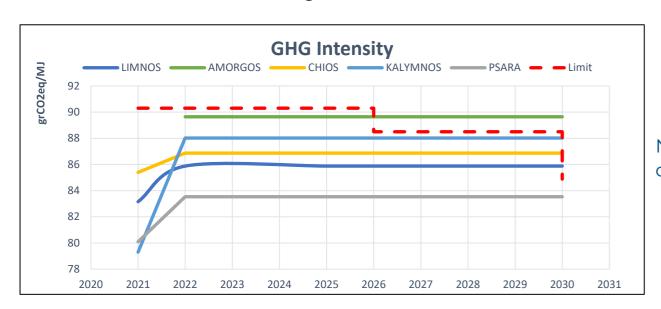
	UNIT	MINERVA AMORGOS	MINERVA CHIOS	MINERVA KALYMNOS	MINERVA LIMNOS	MINERVA PSARA
			EEDI			
ATT. EEDI	/	4.610	4.665	4.552	4.531	4.524
REQ. EEDI	/	9.182	9.182	9.182	8.873	8.873
EEDI PHASE COMPLIANCE	/	III	III	III	III	III
EEDI REDUCTION	/	50%	51%	50%	51%	51%
			EEXI			
REF. EEXI	/	10.202	10.202	10.201	9.859	9.859
REQ. EEXI	/	7.141	7.141	7.141	6.901	6.901
ATT. EEXI	/	4.665	4.665	4.552	4.531	4.524
EEXI REDUCTION	/	35%	35%	36%	34%	34%

All our fleet vessels are designed with at least 50% lower than the required EEDI and already comply with EEDI phase III emission reduction requirements.

Our fleet is not impacted by the EEXI implementation

#### **FUEL EU REGULATION**

The average GHG Intensity of the fleet for 2022 was well below the threshold value of 91.16 grCO2eq/MJ set by EU. Minerva fleet already meets the FuelEU Maritime regulation limits for 2025.



### **VESSEL IMO DCS RATING 2022**

The fleet operational carbon intensity (CII) for 2022, measured in terms of Annual Efficiency Ratio, lay well below the regulatory required values and resulted in an improved rating demonstrating the increased efficiency that is operated. Based on 2022 data, our entire fleet was rated "A" or "B" in the IMO Rating Scheme and is expected to range at similar levels at least until 2026.

	UNIT	MINERVA AMORGOS	MINERVA CHIOS	MINERVA KALYMNOS	MINERVA LIMNOS	MINERVA PSARA				
Cil										
CO2 EMISSION	mt	11456	43820	44444	58950	53481				
DISTANCE	Miles	22006	90170	100649	110817	100180				
CII (AER)	/	5.946	5.508	5.005	5.609	5.629				
RATING	/	В	В	А	А	А				

IMO Nr.	Vessel name	2022	2023	2024	2025	2026
✓ LNG Ca	rriers: 65000 - 99999 DWT (5)					
9869942	MINERVA KALYMNOS	A	A	A	A	A
9877341	MINERVA CHIOS	A	A	A	A	A
9885855	MINERVA AMORGOS	A	A	A	A	A
9854375	MINERVA LIMNOS	В	В	В	В	В
9854363	MINERVA PSARA	В	В	В	В	В

Note: Refer ESG data tables at the end of the report for further details on Energy consumption, GHG emissions, EEDI, EEXI and CII

### 6.4. WASTE MANAGEMENT ONBOARD

We ensure proper waste handling and management to limit the environmental impact of our waste streams. To monitor these activities onboard, we've created detailed management plans (for garbage, sludge and bilge, sewage, etc.) and assigned dedicated deck and engine room Environmental Officers.

Oily waste on our vessels mainly comes from the daily operation of our engine rooms. Appropriate equipment has been installed to ensure proper waste handling, including incinerators, oily bilge water separators, and compactors. Whenever the waste cannot be treated on board, we deliver it ashore to approved facilities for further treatment.

Hazardous waste improperly managed can have significant acute and long-term adverse effects on human health and the environment. It can contaminate surface water, groundwater, and land. In this respect, we have introduced an additional requirement regarding the facilities where it can be delivered to be treated in a safe and environmentally responsible manner.

#### SOLID WASTE MANAGEMENT

Regular monitoring to identify opportunities for reduction, improving garbage management, and ensuring regulatory compliance is implemented.

#### REDUCING PLASTIC WASTE

Regular monitoring of plastic waste generated on board is implemented. 40% of the plastic waste onboard originate from packaging material. In this respect we are working with suppliers to minimize plastic in packaging materials.

A plastic reduction program is implemented for the single use plastics on board.

Installing water dispensers on board the vessels to reduce the plastic water bottle consumption. We also use larger water containers instead of small water bottles to further reduce plastic waste onboard.

#### RECYCLING

Appropriate segregation of recyclable waste is performed onboard, and every effort is made that these are delivered ashore to appropriate shore facilities.

### 6.5. WASTE MANAGEMENT ASHORE

### **RECYCLING**

Minerva implements waste reduction and recycling programs. Appropriate segregation of recyclable waste is performed, and these are delivered to appropriate facilities. Recycled waste includes paper and batteries.

All printer cartridges are refiled.

### 6.6. WATER CONSERVATION AND PROTECTING MARINE ECOSYSTEM

#### WATER CONSERVATION

As an organization operating in the maritime transportation industry, we are conscious of the importance of water conservation, and we promote its reasonable use both onboard our vessels and at our office premises.

Our vessels are encouraged to produce fresh water from the freshwater generator to minimize their impact on natural resources.

Zero fresh water purchased from Minerva Gas vessels.

Fresh water consumed by office buildings for 2022 was 315 mt.

#### SAFEGUARDING OUR MARINE ECOSYSTEM

The discharge of untreated sewage poses significant risks for all aquatic ecosystems and can also have detrimental effects on human health. Minerva Gas vessels being assigned with environmental notations do not discharge any untreated sewage. Proper operation of Sewage Treatment Plants (STP) is ensured through a comprehensive maintenance plan, while discharges are being recorded.

All vessels are fitted with Ballast Water Treatment Systems (BWTS) suitably type approved by relevant authorities. We ensure that water discharged into the sea is adequately treated to avoid harming the marine ecosystem.

We are active participants of the beach cleaning initiatives organized by HELMEPA. HELMEPA is a Non-Profit and Non-Governmental Organization, with the mission to assist the wider maritime community to acquire a safety spirit and environmental consciousness.



# 7. APPENDICES

# 7.1. ESG DATA TABLES – ENVIRONMENT

TABLE 1: SCOPE 1 EMISSIONS AND FUEL CONSUMPTION

UNIT		MINERVA AMORGOS	MINERVA CHIOS	MINERVA KALYMNOS	MINERVA LIMNOS	MINERVA PSARA	TOTAL		
FUEL CONSUMPTION									
HFO	mt	0	0	0	0	0	0		
VLSFO	mt	1785	0	2241	4365	0	8391		
LSMGO	mt	408	2360	1196	987	3479	8430		
LNG	mt	1645	13183	12199	15284	15392	57704		
TOTAL	mt	3838	15543	15636	20636	18871	74524		
		El	MISSION AND INTE	NSITY					
CO2 EMISSION	mt	11456	43820	44443	58950	53481	212150		
GHG INTENSITY	g CO2e/MJ	89.6	86.9	88	85.9	83.5	86.8		
SO2 EMISSION	mt	16.8	0.0	21.1	41.0	0.1	79.0		
PARTICULATE MATTER	mt	2.8	2.7	4.3	6.8	3.9	20.5		

TABLE 2: SCOPE 2 EMISSION

UNIT	2021	2022	
PURCHASED ELECTRICITY (HEADQUARTER IN GREECE)	kWh	68902	69221
ENERGY CONSUMPTION	GJ	248.1	249.2
RENEWABLES %	%	54%	54%
CO2 EMISSIONS	grCO2/kwh	273	273
GHG EMISSIONS	Mt CO2	18.8	18.9

## TABLE 3: WASTE

GARBAGE	UNIT	MINERVA AMORGOS*	MINERVA CHIOS	MINERVA KALYMNOS	MINERVA LIMNOS	MINERVA PSARA	TOTAL
TOTAL	Cubic Meters	3.0	34.9	106.1	143.7	91.5	379.2
PLASTIC	Cubic Meters	3.0	9.3	21.8	16.4	17.7	68.1

## TABLE 4: SASB ACTIVITY METRICS

	UNIT	MINERVA AMORGOS	MINERVA CHIOS	MINERVA KALYMNOS	MINERVA LIMNOS	MINERVA PSARA
TOTAL DISTANCE TRAVELED BY VESSELS	Nautical miles	22006	90170	100649	110817	100180
OPERATING DAYS	days	77	365	365	365	365
DEADWEIGHT TONNAGE (SUMMER)	/	88228	88228	88235	94834	94833
NUMBER OF VESSEL PORT CALLS	/	8	19	29	24	20