Segment Business Business overview

Dry Bulk

Business /
Bulk Carrier
Business



We transport a large volume of dry bulk cargoes, including iron ore, steel products, woodchip, grain, and coal. We are expanding our business internationally by actively engaging in the transportation of cargoes bound for not only Japan but also South Korea, China, India, and the Middle East, as well as trade between other countries within the Atlantic region. We are taking on the challenge of low-carbon and carbon-free, such as wind power, biofuel, LNG fuel, and methanol / ammonia fuel.

Tanker Business / Fuel Business



We transport oil-related cargoes, such as crude oil and liquefied petroleum gas (LPG). We have developed a global business for customers both in Japan and overseas with the completion of the first large tanker in 1935, the first LPG carrier in 1974, and the first LPG / heavy oil dual fuel and LPG / ammonia carriers in 2023. In addition to procuring bunker fuel (heavy oil, marine diesel oil, LNG, biofuel, etc.) for "K" LINE fleets, we conduct LNG bunkering business, joint study of ammonia bunkering, and demonstration examinations of liquefied hydrogen carriers aimed at enhancing fleet environmental performance.

Energy Resource Transport

Electricity and Offshore Business



Our "Corona Series" of wide-beam, shallow-draft coal carriers, developed in-house in accordance with port restrictions of Japan's thermal power plants, provides safe and reliable transportation of coal mainly to power utility companies in Japan and Taiwan. In the offshore business, we participate in a drillship project off Brazil and a floating production storage and offloading system (FPSO) off Ghana.





In the LNG carrier business, we offer global transportation services of LNG, for which demand is increasing worldwide as an alternative fuel source, and provide service to customers with diversifying needs across the LNG value chain. In the carbon-neutral promotion business, we promote business development related to renewable energy, including offshore wind power generation; carbon capture and storage; and alternative fuels.

Car Carrier Business



Since developing and operating Japan's first pure car carrier (PCC) in 1970, we have continued to globally develop high-quality transportation services for passenger cars, trucks, and other vehicles. The business will further enhance its RORO cargo services (roll-on, roll-off cargo services using specialized handling equipment) based on knowledge honed over 50 years. An LNG-fueled car carrier was delivered in fiscal 2020, and we continue to perform optimal fleet management with special care for environmental concerns.





We provide comprehensive logistics services to meet various customer needs for ocean cargo transportation as well as air cargo transportation, tugboats, and transportation, warehousing, and automotive logistics. In addition, we operate container terminals at four ports in Japan–Tokyo, Yokohama, Osaka, and Kobe.

Product Logistics



tion lime elec gen it he furti

Kawasaki Kinkai Kisen Kaisha, Ltd., provides domestic marine transportation and ferry services. It operates ferries, RORO vessels, dedicated limestone carriers for steel mills, dedicated thermal coal carriers for electric power utilities, and also general cargo carriers. It also operates general cargo and bulk carriers for cargo to and from Asia. Furthermore, it has entered into offshore support vessel operations around Japan to further enhance the business.

Containership Business

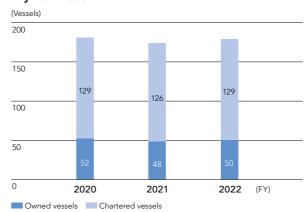


In April 2018, the containership businesses of three Japanese shipping companies were integrated to form a new company, Ocean Network Express (ONE). Drawing on its enhanced service route network covering more than 120 countries with a fleet of 218 containerships (1.68 million TEU) in August 2023, ONE provides highly reliable and rapid international transportation services.

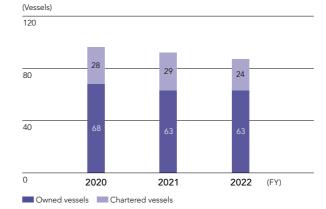
Others

The "K" LINE Group also operates businesses engaging in ship management services, travel agency services, and real estate rental and administration services.

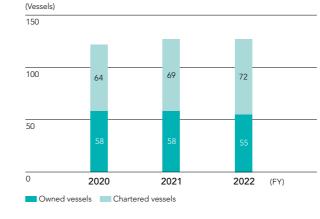
Dry Bulk Fleet



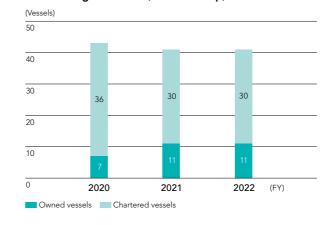
Energy Resource Transport Fleet



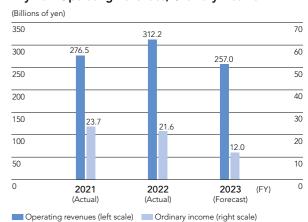
Product Logistics Fleet (Excluding Containership)



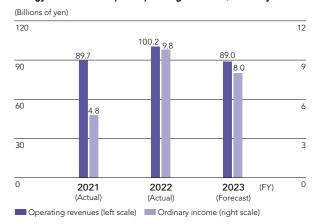
Product Logistics Fleet (Containership)



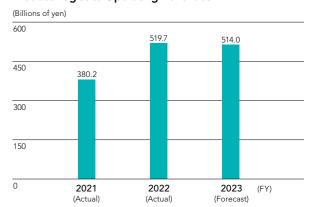
Dry Bulk Operating Revenues, Ordinary Income



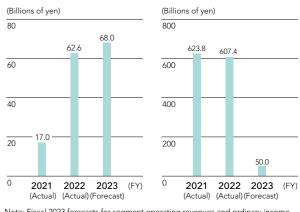
Energy Resource Transport Operating Revenues, Ordinary Income



Product Logistics Operating Revenues



Product Logistics Ordinary Product Logistics Ordinary Income (Excluding Containership) Income (Containership)



Note: Fiscal 2023 forecasts for segment operating revenues and ordinary income reflect the forecast announced in May 2023.

Business Overview

Dry Bulk



Overview of Fiscal 2022

Coal & Iron Ore Carrier Business

Looking at market conditions for cape-size bulkers, at the start of

the fiscal year, tonnage supply remained tight due to ships being

From the middle to the end of the year, while port congestion

forced to wait outside congested ports amid COVID-19 restrictions.

eased, market conditions softened as demand fell for transporting

raw materials to China, where domestic demand weakened amid

ongoing zero-COVID measures. Near the end of the year, prices increased on expectations for a recovery in steel demand as China

ended its zero-COVID policy and enacted measures to stimulate

the economy. Despite ups and downs, demand was generally brisk throughout the year. To maintain and expand our stable revenue

base, we strengthened our relationships with cargo owners, includ-

The market for Panamax and handy-size vessels softened as port

congestion eased in China and demand decreased for transport-

ing coal to India and steel to Europe at the beginning of the year.

demand fell for coal transportation, despite increasing for grain transportation to China. However, prices were higher compared

with the start of the year, as with the market for cape-size bulkers. We aimed to optimize the structure of the fleet by taking an

maintaining and expanding its stable earnings base, and increas-

From the middle to the end of the year, prices declined as

asset-light approach to the core fleet. At the same time, we worked to maximize the fleet's profit-generating capabilities by

ing initiatives directed at carbon-free operations.

Bulk Carrier Business

Atsuo Asano Vice President Executive Officer Responsible for Dry Bulk Carriers Unit, In charge of Bulk Carrier

Coal & Iron Ore Carrier **Business**

Bulk Carrier Business



Masatoshi Taguchi Managing Executive Officer In charge of Coal & Iron Ore Carrier Business, Coal & Iron Ore Carrier Planning & Operation, and Drybulk Planning



Coal & Iron Ore Carrier Business

Over the medium term, growth in overall transportation demand has slowed down, but the supply-demand balance for ship tonnage should improve, owing to the retirement of vessels that are economically unable to comply with new environmental regulations, as well as restraints on the speculative placing of orders for new ships. Meanwhile, the movement toward a low-carbon and carbon-free society is likely to create demand for alternative fuels for vessels. As existing ships are replaced with new fuel ships, technologies that lower fuel costs for existing ships are also expected to advance. "K" LINE aims to maintain and expand its earnings base and stabilize operations by maintaining robust relationships with its existing customers in Japan and broader Asia, and proactively addressing environment-related demand, including from the resource majors.

Bulk Carrier Business

■ Handymax ■ Small Handy ■ Chip

For Panamax and handy-size vessels, demand for the transportation of grain and nonferrous metals, mainly in emerging countries, looks likely to increase and remain strong, but attention must be given to changes in coal transportation demand in each country. With the supply of new ships expected to remain limited, as with cape-size vessels, the supply-demand balance for vessel tonnage will probably tighten. "K" LINE is keen to improve profitability by further increasing vessel allocation efficiency and strengthening its customer base in the Middle East, India, and Southeast Asia region, in addition to Japan, with a fleet of ships that is highly resilient to market conditions and able to sustainably generate earnings.

Dry Bulk (All Types) Fleet Ranking

ing the efficiency of vessel allocation.

(As of June 2023)

| Ranking | Operator | 100,000 DWT | Vessels |
|---------|----------------------|-------------|---------|
| 1 | China COSCO Shipping | 373.6 | 335 |
| 2 | Fredriksen Group | 146.5 | 104 |
| 3 | China Merchants | 140.6 | 113 |
| 4 | Star Bulk Carriers | 138.9 | 127 |
| 5 | NYK | 134.3 | 147 |
| 6 | Berge Bulk | 126.3 | 67 |
| 7 | "K" LINE | 119.1 | 98 |
| 8 | Pan Ocean | 113.8 | 80 |
| 9 | ICBC | 113.1 | 36 |
| 10 | Mitsui O.S.K. Lines | 102.2 | 84 |
| | | | |

Note: Owned vessels and a part of chartered vessels

Source: Clarksons

"K" LINE Dry Bulk Fleet (Vessels) 300 250 200 150 100 2018 2019 ■ Cape-size ■ Over Panamax ■ Panamax

➤ Medium-Term Management Plan FY2022

Cape-size Bulk Carrier CAPE SATSUKI

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|-------------------------------------|---|---|---|
| Coal & Iron Ore Carrier Business | Role of driving growth | We have established collaborative committees with JSW Steel (a leading Indian steel company), EGA (a major Middle Eastern aluminum company), and Anglo American (a resource major) and began joint research to promote decarbonization In addition to the commercial department, we have built an organizational business development structure that includes the technical and environmental departments, aiming to further strengthen and develop customerfocused, consultative sales activity | We will continue to deepen our strong relationships with existing customers in Japan, broader Asia, India, and the Middle East, thereby maintaining and developing a stable revenue base Through the realization of jointly developed zeroemission ships and the installation of Seawing wind propulsion assist equipment, we are keen to proactively assist our customers with their environmental initiatives and aim to maintain and expand our base for customer-oriented business |
| Bulk Carrier Business | Role of contributing by enhancing profitability | In order to augment asset management and business operations' center functions, we transferred some Panamax and Handy-size vessels owned by the Group to Singapore, and improved access to growing markets across Asia while reorganizing sales and vessel allocation operations We have made progress on new shipbuilding and chartering in the short to medium term while aiming to reduce environmental impact. Concurrently, we have shifted to an asset-light structure by aligning the timelines of freight contracts and ship ownership (charter) contracts | We will continue to promote an asset-light structure, and aim to strengthen a business model that facilitates reliable profit generation, even when market conditions fluctuate, by increasing resilience to market conditions We intend to strengthen our customer base and further improve vessel allocation efficiency while also advancing the acquisition of environmentally friendly cargo, such as reduced iron and wood pellets |

Commercialization of Draft Survey Application Utilizing ALOCP

| Commercialization of Draft Survey Application Utilizing Al-OCR |
|--|
| In the dry bulk business, we have been challenging ourselves to create new businesses through the promotion of DX, led primarily by our young and mid-career employees as DX navigators since September 2021. Various ideas have led to advances in DX, including the commercialization of an application for measuring a ship's draft. In dry bulkers, the weight of the cargo is measured by visually verifying the ship's draft in centimeter increments. However, erroneous measurements due to waves causing sea level fluctuations have led to issues in vessel operations. To solve this problem, we took advantage of Al-OCR technology to develop and commercialize an app that can make more accurate draft readings by eliminating the influence of waves by filming the sea surface and the draft mark over a certain period of time using a |
| smartphone. In this business, we will continue to actively advance initiatives to realize the ideas of our younger employees through DX. |
| 5 |

LPG / Ammonia Carrier AXIS RIVER

Energy Resource Transport



Hisashi Nakayama

Executive Officer
In charge of Tankers,
Fuel Strategy & Procurement

Tanker Business

Fuel Strategy & Procurement Business

Overview of Fiscal 2022

Tanker Business

We safely operate very large crude carriers (VLCCs), very large liquefied petroleum gas carriers (VLGCs), and AFRAMAX crude oil carriers (through our subsidiary in Singapore), mainly under medium- and long-term charter contracts and contract of affreightment (COA) arrangements. These operations have provided a boost to earnings and contributed to the stable supply of crude oil and LPG. In June, we took ownership of a dual-fuel large-scale LPG carrier that was built at Kawasaki Heavy Industries' Sakaide Works, adding the carrier to our fleet in the tanker business.

Fuel Strategy & Procurement Business

In the LNG fuel supply business, we performed bunkering of LNG fuel to LNG-fueled car carriers in the Chubu region. In Singapore, we commenced ship management of the LNG bunkering vessel FUELNG BELLINA, which is owned by FueLNG Pte Ltd, and supplied LNG fuel. In the hydrogen business, we conducted experiments with the CO₂-free Hydrogen Energy Supply-chain Technology Research Association (HySTRA), and provided technical support for the specifications of liquefied hydrogen carriers in the Liquefied Hydrogen Supply Chain Commercialization Demonstration Project promoted by the Green Innovation Fund. We participated in various associations to create a hydrogen supply chain as well.

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

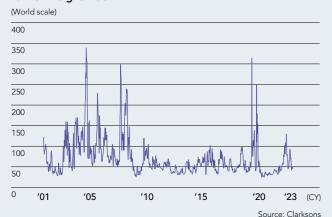
Tanker Business

Demand for transporting crude oil and LPG is likely to remain robust. We see new business opportunities in supporting the transition from traditional heavy oil-fueled ships to environmentally friendly ships, especially in the VLCC and VLGC categories. Furthermore, global efforts toward low-carbon emissions and carbon-free are also changing the demand structure for energy. "K" LINE is working toward securing future demand for transporting new forms of energy.

Fuel Strategy & Procurement Business

In the maritime transportation industry, the transition from heavy oil-fueled ships to next-generation fuel ships is progressing in line with the decarbonization goals set by the International Maritime Organization (IMO). In addition to LNG and biofuels, methanol, ammonia, and battery propulsion are being introduced for powering vessels. At the world's major ship fuel supply ports, the supply business for next-generation fuels has been expanding. "K" LINE is committed to both procuring next-generation fuels for its own fleet and supplying such fuels at key ports.

Tanker Freight Index



"K" LINE Tanker Fleet Scale



Product tankers / LR II Chemical tankers LPG carriers

➤ Medium-Term Management Plan FY2022

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|---|---|---|--|
| Tanker Business | Role of supporting smooth energy source conversion and taking on new business opportunities | Maintained and improved transportation quality and technologies for VLCCs and VLGCs Maintained ship management system for managing environmentally compliant vessels, such as dual-fuel ships, and ships to meet new transportation demand such as for ammonia | Respond to demand for introducing dual-fuel VLCCs and VLGCs |
| Fuel Strategy & Procurement Business | Expansion of new businesses in fields where "K" LINE can utilize its strengths | Continued LNG fuel supply business Examined creation of ammonia bunkering base | Expand LNG fuel and biofuel procurement and supply network Participate in bunkering business and build an ammonia bunkering base |

TOPICS

Completion of New Dual-Fuel LPG / Ammonia Carrier

Tanker KISOGAWA

The large LPG carrier (VLGC) that was under construction at Kawasaki Heavy Industries' Sakaide Works has been delivered. Going forward, this vessel will operate under a term charter contract with the customer, contributing to the stable supply of LPG while generating revenue. The vessel is designed as a dual-purpose ship for the transport of both LPG and ammonia, catering to the expected increase in demand for liquid ammonia transport.

Floating Production Storage and Offloading System (FPSO)

Energy Resource Transport



Michitomo Iwashita

Electricity Business
Managing Executive Officer

Offshore Business

Responsible for Advanced Technology, Ship Technical, GHG Reduction Strategy Unit, Digitalization Strategy Unit, In charge of Electricity and Offshore Business

Overview of Fiscal 2022

Electricity Business

With limited restarts of nuclear power plants in Japan, coal-fired power plants remained an important source of electricity on par with LNG-fired power plants. As more renewable energy power generation is installed, seasonal fluctuations in the operating rates of power plants have become amplified. Our fleet of ships has contributed to the stable supply of electricity through flexible vessel allocation that matches changes in demand for coal, and has added to stable earnings through medium- to long-term transportation contracts.

Offshore Business

The floating production storage and offloading system (FPSO) business produced stable earnings through continuously high utilization rates based on a long-term charter contract for the production of crude oil and LNG in the Offshore Cape Three Point (OCTP) zone approximately 60 kilometers southwest of Ghana. Moreover, our drillship business contributed to earnings from the smooth operation of a project in the pre-salt layer zone off the coast of Rio de Janeiro, Brazil, conducted under a long-term charter contract.

"K" LINE withdrew from the offshore support vessel business operated by an overseas subsidiary according to schedule in September 2022.

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

Electricity Business

In the context of a carbon-free society, although coal-fired power generation is being phased out, starting with inefficient power plants, due to its substantial emissions of CO₂, we believe coal will continue to be used at high-efficiency power plants in order to ensure a reliable supply of electricity, while efforts are made to cut CO₂ emissions. With the ultimate aim of becoming carbon neutral by 2050, demand is likely to emerge for the transportation of alternative fuels, such as ammonia and hydrogen, as well as liquefied CO₂, which is being considered as the mode of transport for CCUS.

Offshore Business

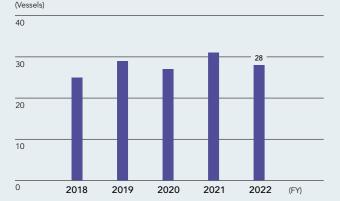
The global decarbonization movement has led to a decline in investments for the development of fossil fuels in recent years. Moreover, there is a risk that new projects will be suspended when crude oil prices are weak because this worsens the profitability of offshore gas and oil field development. Lately, however, conditions have been strong for FPSO and drill ships thanks to a plateauing in crude oil prices, and they are likely to remain robust. We are currently in a transition period for changes in the energy mix. "K" LINE aims to build a stable earnings base by engaging in business while hedging against risks as necessary.

➤ Medium-Term Management Plan FY2022

Thermal Coal Carrier CORONA ZENITH

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|----------------------|---|--|---|
| Electricity Business | Role of supporting smooth energy source conversion and taking on new business opportunities | Provided customers with a high-quality coal transportation service fleet, even during transition period in energy mix Decided to install the Seawing system on three of our own coal carriers Advanced R&D in ammonia carriers | Switch to new ship designs that meet transportation demand and reduce CO ₂ emissions Reduce lifecycle CO ₂ emissions by installing Seawing system on existing ships Conduct R&D into hydrogen and liquefied CO ₂ carriers, and build fleet of ammonia carriers |
| Offshore Business | Role of supporting smooth energy source conversion and taking on new business opportunities | Ensured stable earnings by maintaining high operating rates in existing businesses | Aim to ensure stable revenues and maintain high operating rates in existing participation projects while further strengthening relationships with key partners Formally participate in FPSO projects in Brazil and achieve stable operations, and aim to further increase stable revenues by exploring new opportunities |

"K" LINE Thermal Coal Carrier Fleet



Progress in FPSO Business

For Ghar

Steady operations

For Brazil

- Announced equity participation agreement in FPSO owning and chartering business for Marlim II project offshore Brazil (July 2020)
- FPSO Anna Nery naming ceremony held on June 8 (June 2022)
- Plan to officially participate in this project in 2023



FPSO John Agyekum Kufuor (Photograph provided by Yinson Holdings Berhad)

10PICS Progress on Planned Participation in FPSO Project in Brazil

With the intention of formally participating in this project from an early stage, "K" LINE has been in discussions with parties related to the FPSO project for the Marlim field off the coast of Brazil after it concluded an investment participation agreement in July 2020. The vessel was named FPSO Anna Nery in a naming ceremony held in June 2022. After the completion of the conversion work for FPSO, the vessel was moved to the waters off Brazil, where installation work was performed locally. Oil and gas production commenced on May 7, 2023.

LNG Carrier LAGENDA SURIA

Energy Resource Transport



Satoshi Kanamori

Managing Executive Officer
In charge of LNG, Carbon-Neutral
Promotion

LNG Carrier Business

Overview of Fiscal 2022

In the LNG carrier business, the utilization of existing vessels was favorable, and its earnings contributed to stable earnings via medium- to long-term chartering contracts. We are moving forward with the construction of new vessels scheduled to be delivered after fiscal 2023 for some new projects. Among new projects, an expansion project in Qatar is included, where the procurement of several dozen new ships is expected. We are also tackling to increase demand over the long term for LNG, centered on gas-producing countries and emerging countries.

Specifically, two 79,960 m³ membrane-type LNG vessels were completed in China by Hudong-Zhonghua Shipbuilding (Group) Co., Ltd., in China in May and June, and they were delivered without incident to PETRONAS LNG Ltd., a subsidiary of the Malaysian state-owned oil and gas company PETRONAS Group.

Additionally, we have concluded long-term time charter contracts and shipbuilding contracts for a total of 12 LNG vessels for QatarEnergy LNG, the state-owned energy company of Qatar. (For details, please refer to TOPICS.)

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

LNG continues to play a major role in the energy transition toward carbon-free. Demand for LNG is expected to peak in the 2040s. We expect demand to remain firm and strong in the medium to long term, given the European Union is switching its energy policy back to natural gas and nuclear power after investing in renewable energy, and long-term (20-year) LNG procurement contracts are being signed in Asia, especially in China. However, there is also a risk of stagnation in cargo movement based major changes in the global economy due to the prolonged war between Russia and Ukraine, as well as deteriorating relations between the United States and China.

We will prioritize the expansion of existing businesses, particularly in Qatar, where we boast our largest business scale. To strengthen our customer base in Malaysia and other emerging regions where we have built a track record, we will enhance our integrated maritime and land support systems. Focusing on long-term, stable projects that are in demand in the LNG business, we aim to capture market share in the future growth markets of China, India, and Southeast Asia.

the Medium-Term Management Plan

Category

➤ Medium-Term Management Plan FY2022

Acquired long-term charter contracts for a total of 12 vessels with QatarEnergy LNG, the staterun energy company of Qatar, which boasts the largest business scale

Progress in 2022 based on five roles

in management plan

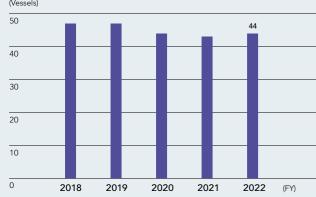
LNG Carrier PACIFIC BREEZE

 Signed long-term charter contracts for multiple vessels, including two medium-sized vessels that we announced in October 2020, building on our track record in emerging regions, with the Malaysian state-owned energy company PETRONAS Group

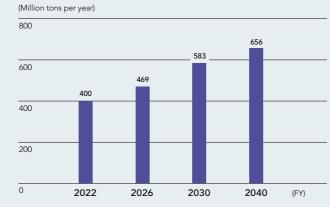
Plan for 2023 onward based on five roles

- In addition to expanding business in Qatar, we will focus on strengthening our customer base in emerging regions where growth looks likely, aiming for growth after the medium-term management plan ends
- As a part of reinforcing one of "K" LINE's strengths—
 integrated customer support combining technology and
 sales—we have established a new base for ship management
 in Singapore and stationed maritime technical personnel in
 China, accelerating our expansion into China, India, and
 Southeast Asia

"K" LINE LNG Carrier (Including Co-Owned)



Projected Demand for LNG



Source: S&P Global Commodity Insights

TOPICS

"K" LINE Enters into Long-Term Time Charter with Qatar<code>Energy LNG</code> for Five Newbuilding LNG Vessels

Through our joint venture companies*1, we have entered into long-term time charter agreements with QatarEnergy LNG, the state-run energy company in Qatar, for a total of 12 LNG carriers (174,000 m³ membrane type). At the same time, "K" LINE signed one agreement to build five of these new vessels for Hudong-Zhonghua Shipbuilding (Group) Co., Ltd., in China, and another agreement to build seven new vessels for Hyundai Heavy Industries Co., Ltd., in South Korea. QatarEnergy LNG is one of the world's largest LNG producers and plans to use these 12 new vessels to transport LNG around the world. The newly built vessels will be equipped with X-DF 2.1 iCER*2, which will contribute to the reduction of GHG emissions and ease environmental impact by lowering fuel consumption during operations.

- *1 The companies include "K" LINE, together with Nippon Yusen Kabushiki Kaisha, China LNG Shipping (Holdings) Limited, and MISC Berhad, through its wholly owned subsidiary, Portovenere and Lerici (Labuan) Pte Ltd.
- $^{\star}2$ X-DF 2.1 iCER is a low-speed dual-fuel engine with gas at low pressure.

77

Energy Resource Transport



Satoshi Kanamori Managing Executive Officer In charge of LNG, Carbon-Neutral

Carbon-Neutral Promotion Business

Overview of Fiscal 2022

In the field of liquefied CO₂ carriers involved in carbon dioxide capture and storage (CCS)—a concept for capturing and storing CO₂ emitted during the use of hydrocarbons excavated from under the ground—"K" LINE has secured a long-term charter contract for the world's first full-scale commercial transport for CCS that is launching in Europe (the Northern Lights project). Additionally, we have initiated several business feasibility studies for constructing CCS value chains with prominent domestic and international carbon capture and storage companies. The construction of a demonstration ship in Japan is also on schedule for completion by the end of 2023.

In the field of offshore wind power support vessels, Group company "K" Line Wind Service, Ltd. (KWS), has begun to collaborate with major customers and engage in some international projects in addition to wind power projects across Japan, which will ramp up in the late 2020s. In the LNG value chain business, in light of global instability, the advantages of LNG as a transition energy have been reaffirmed. We have engaged in sales activities while being mindful of the synergies with our LNG carrier

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

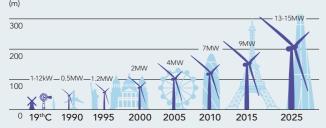
Europe is taking the lead in the field of liquefied CO_2 carriers, and we aim to gain insights and expand our presence through the Northern Lights project, which will begin in 2024. Through commercialization studies with various customers, we aim to expand business in the Asia-Pacific region, including Japan, in the second half of the 2020s. We are also engaged in risk diversification and stable business management by sharing knowledge through partnerships with influential partners.

For offshore wind power support vessels, we aim to achieve profitability at an early stage, and then focus on securing long-term contracts in the O&M phase and strengthening our presence in fields related to floating structures by leveraging Group strengths. Our aim is to grow these support vessels into a stable business

In the LNG value chain business, we expect solid demand in mainly Southeast Asia. We will make full use of our bases, including Singapore, and diversify our LNG-related businesses.

Both of these businesses align with the priority issues that major customers have identified. Through active partnering to solve these issues, we are keen to share opportunities for growth.

Evolution of Wind Turbine Heights and Output



Sources: Various; Bloomberg New Energy Finance

R&D and Demonstration Testing of CO_2 Carriers for CCUS

Since 2021, "K" LINE, along with Nippon Gas Line Co., Ltd., and Ochanomizu University, have been engaged in research and development aimed at the social integration of liquefied CO₂ maritime transport. This R&D effort is associated with publicly funded projects led by the New Energy and Industrial Technology Development Organization (NEDO) at the behest of the Engineering Advancement Association of Japan. Namely, these projects are for "CCUS R&D and Demonstration Related Project / Large-scale CCUS Demonstration in Tomakomai / Demonstration Project on CO₂ Transportation / R&D and Demonstration Project for CO₂ Marine Transportation." We are responsible for assessing safety and setting technical guidelines for the demonstration vessels during transportation and cargo handling operations.



Note: The above diagram is from Ministry of Economy, Trade and Industry materials.



➤ Medium-Term Management Plan FY2022

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|-----------------------------------|--|--|--|
| Carbon-Neutral Promotion Business | Expansion of new businesses in fields where "K" LINE can utilize its strengths | "K" LINE entered into long-term contracts with Northern Lights for two liquefied CO2 vessels for the world's first full-scale CCS project Steady progress has been made on construction of the NEDO demonstration vessel for liquefied CO2 transport and feasibility studies for CCS projects with key customers and partners We signed a memorandum of understanding with Penta-Ocean Construction in the field of offshore wind power construction and maintenance through KWS | Initiatives are underway for expanding the liquefied CO₂ transport business in Europe, commercializing business, and creating high value added in the Asia-Pacific region In the field of offshore wind power support vessels, we have secured both domestic and international projects, and KWS has launched the support vessel business We are participating in LNG value chain projects that contribute to value added in the LNG carrier business |

TOPICS

Partnership in Offshore Wind Power Support Vessel Business
—Collaboration in Ship Management in Offshore Wind Power Construction and Maintenance Field—

In August 2022, KWS announced it had signed a memorandum of understanding regarding cooperation with Penta-Ocean Construction, a leader in marine civil engineering and offshore wind power construction. This partnership has been possible thanks to our track record of collaboration with Penta-Ocean Construction through Group company Kawasaki Kinkai Kisen Kaisha Ltd.'s offshore support vessel KAIKO, among others. It embodies our policies set out in the current medium-term management plan, while leveraging strengths in existing businesses and exploring new business domains by sharing growth opportunities with customers.

Together, we will contribute to the carbon-free of society by satisfying diverse demand through our network of Group companies, with KWS at the core, involved in offshore support vessels, port cargo handling, and heavy freight transportation in the broad realm of offshore wind power generation.

Product Logistics



Takenori Igarashi

Managing Executive Officer

Responsible for Product Logistics Business
Unit (Car Carriers)

Car Carrier Business

Overview of Fiscal 2022

Although sales for the global automobile market continued to recover from the impact of COVID-19, production and shipments were adversely affected by shortages of semiconductors and auto parts, supply chain disruptions, higher commodity prices, and rising inflation. Global sales volume decreased 2% year on year, to 78.9 million vehicles, and the marine transportation of automobiles fell 4%, to 14.48 million vehicles.

Tapping into growth markets, the "K" LINE Group transported 3.19 million vehicles, an increase of about 11%, from 2.89 million vehicles in the previous fiscal year. Meanwhile, we continued to improve the efficiency of fleet allocation and operation, while restoring freight rates. As a result of these efforts and initiatives to improve our earnings capacity and cost-competitiveness, both sales and profits increased year on year.

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

Automobile sales volume is anticipated to return to prepandemic levels around 2024 or 2025, as semiconductor and parts supply constraints have eased up recently in automobile production. We expect sales volume to remain brisk over the medium term, as the world's population expands and economies grow. Maritime transport demand is also likely to rise sharply, driven not only by the recovery in sales volume, but also by a sharp increase in exports from China, despite downside risks, such as an unexpected economic recession or progress toward local production centered on electric vehicles.

On the other hand, the number of newly constructed car carriers will significantly increase in 2024 and 2025. However, supply-demand conditions are likely to remain tight for a while, due to the need for reduced operation speeds resulting from environmental regulations, and the early retirement of older vessels that burn heavy fuel oil. Furthermore, high vessel prices and fuel conversion have raised the hurdle to placing new orders for car carriers. We are closely watching industry trends in new vessel orders.

Under these circumstances, "K" LINE will enhance business competitiveness by maintaining a competitive fleet through measures such as decarbonization, tapping into demand for high & heavy cargo, and upsizing for improved transport efficiency. We will also ensure appropriate flexibility to prepare for future changes in transport demand, thereby achieving both business sustainability and potential for growth.

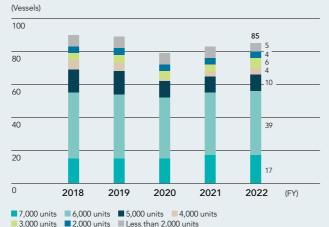
Car Carrier Fleet Ranking

(As of April 2023)

| Ranking | Operator | Vessels | Share of vessels | Capacity (RT) | Share of capacity |
|---------|----------|---------|------------------|------------------|-------------------|
| 1 | WWO ASA | 115 | 16.9% | 776,556 | 19.2% |
| 2 | NYK | 104 | 15.2% | 638,106 | 15.8% |
| 3 | MOL | 88 | 12.9% | 525,859 | 13.0% |
| 4 | "K" LINE | 77 | 11.3% | 462,087 | 11.4% |
| 5 | GLOVIS | 75 | 11.0% | 490,630 | 12.2% |
| 6 | Grimaldi | 53 | 7.8% | 255,692 | 6.3% |
| 7 | HOEGH | 36 | 5.3% | 248,515 | 6.2% |
| 8 | TOYOFUJI | 16 | 2.3% | 70,000 | 1.7% |
| 9 | ZIM | 14 | 2.1% | 70,070 | 1.7% |
| | Others | 104 | 15.2% | 500,428 | 12.4% |
| | Total | 682 | 100.0% | 4,037,943 | 100.0% |

Source: Compiled by "K" LINE, based on Hesnes Shipping "AS Year Report"

"K" LINE Car Carrier Fleet



Note: Includes short-term chartered vessels and Group company-operated vessels





➤ Medium-Term Management Plan FY2022

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|----------------------|------------------------|--|---|
| SS | | Met growth in demand and secured transportation capacity for existing OEMs | While aligning the size of the fleet with the outlook for transport demand, "K" LINE is strengthening its fleet of LNG-fueled vessels and introducing next-generation zero-emission vessels and new technologies to achieve low-carbon and carbon-free goals. We have already decided to procure and build 10 LNG-fueled vessels from the second half of fiscal 2023 to fiscal 2025 |
| Car Carrier Business | Role of driving growth | Established stable and efficient trans- portation structure while updating standard operating procedures (SOP) for BEV transportation | By establishing a system that can reliably and efficiently transport BEVs, we can consistently respond to medium- to long-term new cargo demand while maintaining our high-quality transport services |
| O | | Encouraged growth in high & heavy transportation volume by expanding transportation capacity. Transportation volume increased about 12% in fiscal 2022 compared with fiscal 2021 | We have accumulated expertise by handling a wide range of cargo for more than 20 years, including demand for special types of cargo, and we have also expanded transport volume. We have been actively investing in enhancing our transport equipment. For our new vessel plans, we are considering the development of deck configurations that can accommodate even higher and heavier cargo |

TOPICS

Reorganization Aimed at Unearthing Customer Demand and Improving Collaboration with Internal Dedicated Environmental Departments

To enhance environmental responsiveness, the most important issue in the car carrier business, "K" LINE set up a specialized team in August 2022 with the aim of strengthening collaboration with internal dedicated environmental departments for discovering customer demand. This specialized team oversees departmental organizational sales and serves as a liaison function both inside and outside the company. As a pilot model for organizational sales, the team has accumulated experience in even more specialized dialogues by participating in direct negotiations with not only the sales representatives but also the internal dedicated environmental departments, with the cooperation of client manufacturers.

Going forward, as the movement toward decarbonization accelerates in the automobile industry as well as the maritime transportation industry, starting with leading European countries we will require even more technical and specialized knowledge for future dialogues with customers. To that end, we need to make the internal organization function more organically. From April 2023, we are further restructuring the organization with the intention of balancing growth through revenue opportunities in environmental load reduction initiatives with contributions to a low-carbon and carbon-free society.

Product Logistics



Keiji Kubo

Managing Executive Officer

Responsible for Product Logistics Business
Unit (Logistics, Port, Short Sea and Coastal
Business and Affiliated Business)

Logistics and Port Business

Overview of Fiscal 2022

In the forwarding operation of the international logistics business, transport demand for maritime and air cargo decreased due to a slowdown in consumer spending and a decline in cargo volume as a result of excess inventories in consumer countries from the second half of fiscal 2022. Additionally, market conditions have been in a lull, as disruptions to the logistics supply chain have gradually come to an end. In the automobile logistics business, the number of vehicles in storage and handled for land transport increased year on year, owing to an increase in transportation volume, which is linked to brisk demand for automobiles, and the alleviation of semiconductor and auto parts shortages across the market.

In domestic logistics and port business, there was a year-onyear decrease in demand for container maritime transport and handling volume at our five largest domestic container terminals. In the tugboat business, we worked to improve profitability, while work volume remained strong for containerships and car carriers. Handling volume in the warehouse business remained strong, as we drew in new customers while maintaining existing ones.

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

In the forwarding operation of the international logistics business, the decline in cargo volume since the second half of 2022 has affected the supply-demand balance in the containership market, triggering a decline in market freight rates. In the medium term, market conditions should improve as inventories are gradually cleared and cargo volume increases.

Our strategic direction for the logistics business, based on the medium-term management plan, is to refine our earning power by steadily increasing profitability and enhancing functionality in the logistics realm, centered on maritime transport. Additionally, as customer needs change in the future, we will reinforce our network function in response to these changing needs.

In the domestic logistics and port business, in order to improve profitability, we have decided to relocate the Kobe Port container terminal to prepare for the acceptance of larger ships. As part of our environmental initiatives, we are also adopting near-zero-emission rubber-tired gantry cranes (RTGs) at the Tokyo Port container terminal, which are more fuel-efficient than the existing hybrid types.

Medium-Term Management Plan FY2022

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|-----------------------------|---|---|---|
| Logistics and Port Business | Role of contributing by enhancing profitability | Clarified policy to optimize logistics business portfolio; endeavored to improve Group's corporate value from two perspectives: profitability and functionality Set up a working group with Kawasaki Kinkai Kisen Kaisha Ltd. and aimed to create synergies within the Group through environment and DX initiatives and operational streamlining In the port business, aimed to optimize port management and prepare a system for receiving large ships, while expanding Group revenues | In the logistics business, we aim to achieve the best portfolio that combines both profitability and functionality by assessing the future prospects of each business and implementing necessary actions We will execute the various plans of the working group with Kawasaki Kinkai Kisen Kaisha Ltd. In addition, we aim to enhance corporate value across the Group by deepening collaboration among all affiliated companies In the port business, we aim to maximize earnings through the rationalization of management at each port, while also advancing environmental measures with an eye on decarbonization |





TOPICS Relocation

Relocation to High-Spec Container Terminal in Kobe Port

"K" LINE currently uses the Port of Kobe Rokko Island RC4-5 container terminals leased from Kobe-Osaka International Port Corporation. Talks with Kobe-Osaka International Port Corporation and Mitsui O.S.K. Lines have resulted in the conclusion of a basic written agreement on the relocation from the RC4-5 container terminals to PC14-17 container terminals, among the PC13-17 container terminals of the southern pier in the Port of Kobe Port Island (Stage 2) area, which is currently undergoing construction for expansion and functional reinforcement. We are coordinating the timing of the relocation with the parties involved by the end of fiscal 2025, at which time the construction will be completed. The relocation will enhance the specifications of the terminals, thereby providing an environment where large containerships can be accepted at the Kobe Port. With the relocation, we intend to offer shipping companies and customers more flexibility for berth arrangements and for more convenience with transship containers.

Product Logistics



Keiji Kubo

Managing Executive Officer
Responsible for Product Logistics Business
Unit (Logistics, Port, Short Sea and Coastal
Business and Affiliated Business),
Containerships Business Unit

Short Sea and Coastal Business

Containership Business

Overview of Fiscal 2022

Short Sea and Coastal Business

In fiscal 2022, Japan's economy experienced moderate growth due to factors such as rising raw material and energy prices stemming from the Russia-Ukraine war.

In the short sea business, transportation volume for Russian coal significantly decreased compared with the previous year, while transportation volumes for steel products and biomass fuels remained robust. Although market conditions peaked around March 2022 and then gradually declined, conditions remained favorable.

In the coastal business, the easing of movement restrictions in the wake of the COVID-19 pandemic led to a significant recovery in the number of passenger cars and travelers. On the other hand, the volume of freight transportation remained roughly on par with the previous year.

In the offshore support vessel (OSV) business, the operating rate exceeded that of the previous year, reflecting an increase in salvage operations.

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

Short Sea and Coastal Business

In the short sea business, "K" LINE has been exposed to a downturn in market conditions. However, we will continue to strengthen our sales organization to capture robust demand for biomass fuel transportation, monitor changes in demand trends due to stricter environmental regulations, maintain the fleet, and aim to expand our commercial rights.

In the coastal business, while cargo movement looks weak due to rising prices, "K" LINE will concentrate on improving earnings by raising freight rates with the understanding of customers and cargo owners in order to counter increasing operations costs, especially personnel costs. Additionally, we will encourage a modal shift to coastal maritime transportation in Japan, as environmental and labor regulations are tightened in the logistics sector (known as the 2024 problem).

In the OSV business, in addition to our existing operations, we will conduct sales activities aimed at winning new contracts, such as CCS transportation and survey and support services for offshore wind power generation projects through "K" Line Wind Service, Ltd. (KWS).

➤ Medium-Term Management Plan FY2022

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|-----------------------------------|----------|--|---|
| Short Sea and Coastal Business | À | Decided to launch two 40-type bulkers for biomass projects, replacing 13-type general cargo ship in March 2023 Increased capital investment in KWS, to advance offshore support vessel operations | In the short sea business, in addition to existing operations, aim to expand businesses while continuing to maintain fleet optimization and monitor changes in demand as environmental regulations are tightened In the coastal business, encourage modal shift to domestic coastal maritime transportation amid strict environmental and labor regulations in Japan In the OSV business, in addition to existing operations, undertake vessel support operations for offshore wind power generation projects through KWS |

TOPICS

Initiatives in Safety, Environment, and Quality in Short Sea and Coastal Business

In terms of business development related to the environment, "K" LINE has invested in the biomass power generation business. Additionally, for our efforts toward CO₂ reduction in domestic transportation, for two consecutive years we have received the Logistic Environment Award from the Japan Association for Logistics and Transport. To address social issues, such as labor shortages and lightening labor burdens, we are participating in the Nippon Foundation's autonomous ship navigation project MEGURI 2040. Furthermore, we operate the KUNIKI 68, a next-generation cargo ship that was developed with the aim of improving labor conditions for crew while reducing GHG emissions, based on the concept of an energy-conserving ship conceived in conjunction with the Ministry of Land, Infrastructure, Transport and Tourism as a part of the Ministry of the Environment's Fiscal 2022 Regional Revitalization and Cross-Sector Carbon Neutral Technology Development and Demonstration Project.



Overview of Fiscal 2022

Containership Business

In the first half of the year, Ocean Network Express (ONE) was adversely affected by factors including the lockdown in Shanghai due to the spread of COVID-19. However, cargo demand remained strong.

Additionally, supply chain disruptions persisted worldwide, and freight rates remained at high levels, resulting in favorable earnings.

In the second half, as supply chains normalized, supply volumes recovered. However, alongside a buildup of inventories, primarily in Europe and the United States, consumers became less inclined to spend due to inflation and rising interest rates. ONE made efforts to save costs, such as reducing services in tandem with declining demand. Although cargo movement lacked vigor and freight rates decreased, ONE's overall earnings for the year were good, backed by the favorable conditions in the first half.

Market Outlook and Strategic Direction Based on the Medium-Term Management Plan

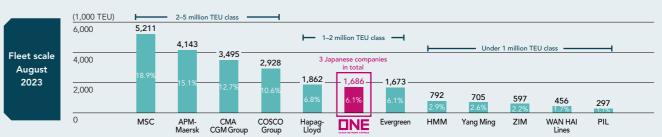
Containership Business

Even after the COVID-19 pandemic quieted down, containership demand has been fluctuating significantly due to the lingering effects of global supply chain disruptions, changes in consumer behavior from goods to experiences, and shifts in trade patterns due to rising international tensions. The importance of fleet optimization and innovations in operational technology through digitalization is also increasing, as we enter a transition period toward decarbonization. For ONE to continue meeting demand for transportation from its customers, we must continue to respond appropriately to the ever-changing business environment and operate the business with a focus on safety in navigation and sustainability.

➤ Medium-Term Management Plan FY2022

| | Category | Progress in 2022 based on five roles in management plan | Plan for 2023 onward based on five roles in management plan |
|------------------------|--|---|--|
| Containership Business | Role of supporting the business as a shareholder and stabilizing the earnings base | ONE demonstrated industry-leading competitiveness in a favorable business environment, enhancing our corporate value We upgraded large vessels to excel in terms of both environmental responsiveness and economic efficiency For ONE to grow, we continued to provide human resource support in both management and operations | ONE is leading the industry in decarbonization goals and continues to implement measures aimed at achieving net-zero emissions by 2050 To sustain growth and enhance competitiveness, we are steadily executing investments in ships and containers in line with growth in cargo demand and alternative demand We are expanding e-commerce, including ONE QUOTE, and investing in digitalization to improve customer satisfaction and operational efficiency |

Containership Fleet Scale



Source: Compiled by "K" LINE, based on Alphaliner