



May 23, 2023

## Borealis and IINO Lines sign long-term charter contract for the *Oceanus Aurora*, a custom-built state of art LPG vessel

- New liquefied petroleum gas (LPG) dual-fuel vessel is equipped with emission-lowering motor and propulsion systems
- Long-term charter improves cost competitiveness of transatlantic feedstock shipments
- Agreement moves Borealis closer to realizing energy and climate targets in its Base Chemicals business areas and to achieving IINO's 2050 carbon neutrality realization.

<u>Borealis</u>, one of the world's leading providers of advanced and sustainable polyolefins solutions, and IINO Kaiun Kaisha, Ltd. (IINO Lines), a global leader in maritime transportation headquartered in Japan, announce the long-term charter of a custom-built vessel, the *Oceanus Aurora*. The vessel was ordered from IINO Lines in 2021 and delivered to Borealis 14 May 2023.

With a cargo tank capacity of 91,000 m3, largest VLGC (Very Large Gas Carrier) vessel in its class, will transport feedstock – mainly propane and butane – from North America to Borealis crackers and propane dehydrogenation plants in Europe, including Kallo (Belgium), Stenungsund (Sweden), and Porvoo (Finland). As the second long-term charter signed by Borealis, the *Oceanus Aurora* supplements the charter signed with Navigator Gas for the *Navigator Aurora*, a dual-fuel MGC (Medium Gas Carrier) which has been transporting ethane to Stenungsund since 2016.

Thanks to its dual-fuel engine, the *Oceanus Aurora* can be powered by either liquefied petroleum gas (LPG) or low sulphur fuels. The vessel is equipped with a - Shaft Generator Motor system for electrical power generation from LPG dual fuel. This lowers both fuel consumption and emissions, with meaningful reductions in the most common air pollutants from ships, such as nitrogen oxides (NOx), sulphur oxides (SOx), carbon dioxide (CO2), and particulate matter.

The vessel's environmental footprint is further improved thanks to the installation of an innovative wind propulsion system in the form of two Norsepower Rotorsails™. Developed by Norsepower Ltd., these sails are a modern adaption of the Flettner rotating cylinder

and scheduled to be installed within 2nd quarter in 2024. By using modest amounts of electricity to set a deck cylinder in motion, these spinning cylinders, along with the wind, create a <u>Magnus effect</u> to generate thrust. By augmenting the main propulsion system, the sails thus reduce total fuel consumption, emissions, and operating costs.



Photo: Borealis and IINO Lines sign long-term charter contract for the Oceanus Aurora, a custom-built state of art

liquefied petroleum gas (LPG) vessel

Photo: © DSME

"It is essential to capitalize on every opportunity to become even more independent and flexible when it comes to transporting cost-competitive feedstock from overseas to our base chemicals operations in Europe," says Thomas Van De Velde, Borealis Senior Vice President Hydrocarbons & Energy. "As the second long-term charter for Borealis, the *Oceanus Aurora* is not only giving us the competitive flexibility, but is also helping us reduce the environmental impact of our own transportation operations in accordance with our <u>strategic Energy & Climate ambitions</u>. This is how we continue to re-invent essentials for more sustainable living."

"At IINO Lines, we use our six decades of experience and know-how in transporting LPG to make shipping more environmentally sustainable," says Ryuichi Osonoe, IINO Lines Senior Managing Executive Officer Management of Gas Carrier. "We are pleased to have found in Borealis a partner who shares our belief in the power of innovation to reduce environmental impact. This long-term charter is an auspicious start to what we trust will be a long and mutually beneficial partnership."

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## **About Borealis:**

Borealis is one of the world's leading providers of advanced and sustainable polyolefin solutions and a European front-runner in polyolefins recycling. In Europe, we are a market leader in base chemicals and fertilizers. We leverage our polymer expertise and decades of experience to offer value adding, innovative and circular material solutions for key industries such as consumer products, energy, healthcare, infrastructure and mobility. In re-inventing essentials for sustainable living, we build on our commitment to safety, our people, innovation and technology, and performance excellence. We are accelerating the transformation to a circular economy of polyolefins and expanding our geographical footprint to better serve our customers around the globe.

With head offices in Vienna, Austria, we employ 7,600 employees and operate in over 120 countries. In 2022, we generated a net profit of EUR 2.1 billion. OMV, the Austria-based international oil and gas company, owns 75% of our shares, while the remaining 25% is owned by Abu Dhabi National Oil Company, or ADNOC, based in the United Arab Emirates (UAE). We supply services and products to customers around the globe through Borealis and two important joint ventures: Borouge (with ADNOC, headquartered in the UAE); and Baystar™ (with TotalEnergies, based in the US).

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## About lino:

IINO Lines (IINO) is a global shipping company based in Tokyo and established in 1899. IINO has developed its shipping services as owner and operator specializing in carrying natural energy resources and related products, such as crude oil, LNG, LPG, ammonia, petrochemical and bulk cargoes. As of March 2023, IINO owns and/or operates 93 vessels including 7 VLGCs, 24 small gas carriers, 37 chemical tankers, 20 dry bulk carriers, 1 LNGC, and 4 VLCCs.

In liquefied gases transportation, IINO has over 60 years of history since it started coastal service in 1960 by the first pressurized LPG carrier in Japan and service of oceangoing LPG carrier in 1963. Since then, IINO has provided safe and reliable shipping services for transporting liquefied gases suchas LPG, LNG, ammonia, ethylene, etc. to customers with its technical and crew management backed by long experience and professional personnel.

IINO has strengthened sustainability initiatives including climate change. IINO set the target of reducing 20% greenhouse gas emissions per transport unit in its operating ships by 2030 compared to 2020 and of achievement of Carbon Neutrality by 2050. To achieve this goal, IINO has actively invested in innovative technologies. For more information, visit our website at <a href="https://www.iino.co.jp/kaiun/english">https://www.iino.co.jp/kaiun/english</a>