



~as part of the International Container Strategic port and harbour Policies~

International symposium on LNG Bunkering to be held in YOKOHAMA

On December 20, 2016 Japan's Ministry of Land, Infrastructure, Transport and Tourism informed a feasibility study report on the development of LNG bunkering hub at the port of Yokohama.

National Government, City of Yokohama, Yokohama-Kawasaki International Port CO., Ltd., and private enterprises promote together to establish the LNG bunkering hub.

We will hold an international symposium on LNG Bunkering in Yokohama on April 3 to accelerate the efforts of stakeholders, toward the formation of a LNG bunkering hub and building of an international network.

We try to increase the number of the global liner routes connecting Japan and North America by establishing LNG bunkering hub in Yokohama Port, and we try to enhance the function as the Hub Port in the East Asia.


1. Date & Time : April 3, 2017(Monday) 14:00~17:00
2. Venue : Yokohama Royal Park Hotel(2-2-1-3 Minatomirai, Nishi-ku, Yokohama)
3. Subject : "Toward the formation of LNG Bunkering Ports Network"
4. Program
 - Keynote Speech Dr.Fereidun Fesharaki (Chairman, FACTS Global Energy Group)
 - Panel Discussion "Toward the formation of LNG bunkering hub"
 - Moderator Mr.Masamichi Morooka
(President, Yokohama-Kawasaki international Port Corporation)

5. Entry

Regarding related details and entry, please refer to the attached file and the following site. Further, this event is free to attend. URL <http://eventregist.com/e/LNG2017>

*LNG Bunkering : Supplying LNG as a marine fuel at ports and harbors

CONTACT
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International Symposium on LNG Bunkering in Yokohama

Time and Date:

14:00 – 17:00, Monday, April 3, 2017 (Registration starts at 13:15)

**Admission
Free**

**Venue: “Hoh-sho” Banquet Hall (3rd floor of Banquet Wing)
Yokohama Royal Park Hotel**

2-2-1-3 Minatomirai, Nishi-ku, Yokohama Telephone: 045-221-1111 (main line)

subject: 「Toward the formation of LNG Bunkering Ports Network」

PROGRAM (tentative) ※Simultaneous interpretation available

Keynote Speech

Title: 「IMO Challenges: The Emerging Role of LNG Bunkering」

Speaker: Dr. Fereidun Fesharaki (Chairman, FACTS Global Energy (FGE) Group)

Panel Discussion

Subject: 「Toward the formation of LNG Bunkering ports network」

Moderator: Mr. Masamichi Morooka (President, Yokohama-Kawasaki International Port Corporation)

Panelists: Mr. Michael Chia (Managing Director(Marine), Keppel Offshore & Marine Ltd)

Mr. Michiaki Hirose (President, Tokyo Gas Co. Ltd.)

Mr. Peter Keller (Executive Vice President, TOTE)

Mr. Tadaaki Naito (President, NYK Line)

Mr. Andrew Tan (Chief Executive, Maritime and Port Authority of Singapore)

Representative from cruise shipping company (pending)

Following the symposium, a networking reception in standing style will be held to offer participants an opportunity to exchange business cards.

Organizers: Ministry of Land, Infrastructure, Transport and Tourism / Ministry of Economy, Trade and Industry

Co-organizers: City of Yokohama / Yokohama-Kawasaki International Port Corporation

ACCESS

Yokohama Royal Park Hotel

〒220-8173

2-2-1-3 Minatomirai, Nishi-ku, Yokohama,

TEL. 045-221-1111 (Main)



By Train

- Minatomirai Line "Minatomirai station" choice for 3 minutes on foot.
Please come to Landmark Plaza1F "garden square" from the Minatomirai station.
In direction, the left side, "hotel ridge entrance" and the right side are "Banquet Building entrance".
- JR and the municipal subway "Sakuragicho Station" choice for 5 minutes on foot.
Please enter at "3F hotel entrance" of the The last stop of the Moving Sidewalk right side more than Sakuragicho Station.
That you come to the 1F in an escalator, "Front Desk" equality "Lobby"

By Car

- Than Shutokou Yokohane-sen Minatomirai lamp, 1 minute When I go out of the Minatomirai lamp, turn right at the first light and turn left at the next light, a left hand is a hotel entrance right now.

From Haneda Airport (HND)

- By the airport Limousine bus "hotel directness", about 40-60 minutes.
- By the airport Limousine bus "the YCAT line", even Yokohama Station is about 30 minutes.
Please use a taxi or a train from Yokohama Station.
- By Keikyu Line, even Yokohama Station is about 28minutes.
Please use a taxi or a train from Yokohama Station.

From Narita Airport (NRT)

- By the airport Limousine bus "hotel directness", about 120 minutes.
- By the airport Limousine bus "the YCAT line", even Yokohama Station is about 90 minutes.
Please use a taxi or a train from Yokohama Station.
- By JR Narita Express, even Yokohama Station is about 90minutes.
Please use a taxi or a train from Yokohama Station.

HOW TO PARTICIPATE

- Access the following URL to fill out an application form:

<http://eventregist.com/e/LNG2017>

Acceptance of applications will cease once full capacity has been reached (acceptance on first come, first served basis).

No reply will be sent unless your application is rejected due to oversubscription.

Applications due by: Tuesday, March 21, 2017

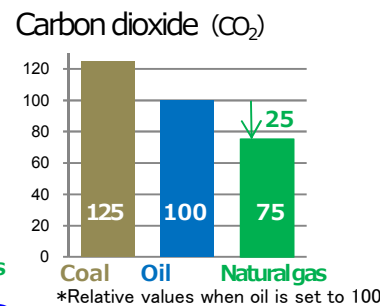
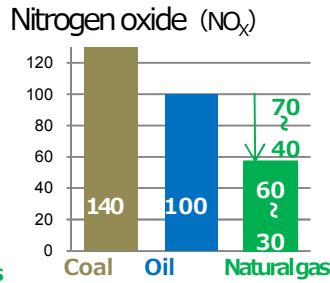
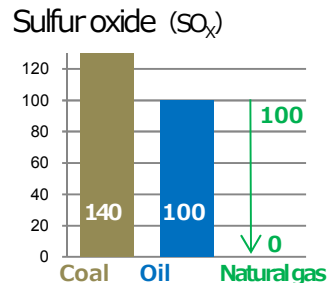
Feasibility Study Report on the LNG bunkering hub development plan at the Port of Yokohama (Summary)

Environmental regulations - Advantages of LNG

The global sulfur cap will be strengthened from 2020.



*Emission Control Area (ECA): North Sea & Baltic Sea, the coast of North America and US Caribbean Sea



Advantages of the Port of Yokohama as a LNG bunkering Hub

【Advanced existing infrastructure】

There are many existing LNG bases located next to the port, and the supply cost can be reduced by using existing facility.

【Operation of a LNG fuelled ship and LNG bunkering】

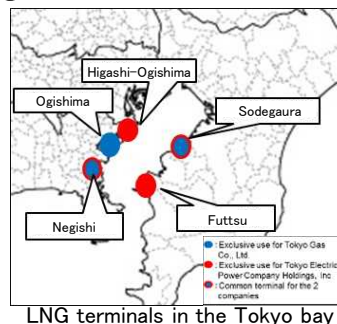
The operation of a LNG fuelled tugboat "Sakigake" started in August 2015, and related business operators and administrative agencies accumulate know-how of LNG bunkering.

【Geographical characteristics

- Position as International Container Hub】

The port of Yokohama is located on the Pacific side and it serves as the first or last bunkering base in the Asian side of the Trans Pacific route.

It is designated as an International Container Hub, and many ships such as container ships, pure car carriers and cruise ships call at it.



The Steering committee for LNG bunkering at the port of Yokohama (the committee was held from Jun. to Dec. 2016)

【Purpose of the study】

To build LNG bunkering Hub and enhance the competitiveness of Japanese ports, the Steering Committee conducts a feasibility study, focused on the port of Yokohama as a model case.

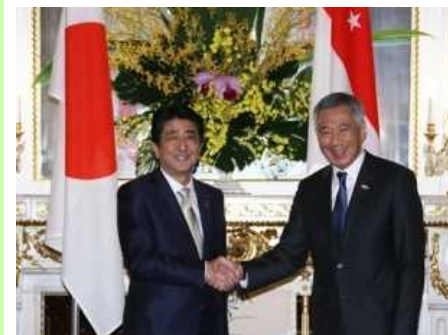
【List of Member】

- Tokyo Gas co., Ltd
- Nippon Yusen Kabushiki Kaisha (NYK Line)
- Yokohama Kawasaki International Port co., Ltd
- City of Yokohama
- Agency for Natural Resources and Energy
- Ports and Harbours Bureau, Ministry of Land, Infrastructure, Transport and Tourism(MLIT)
- Maritime Bureau, MLIT
- Japan Coast Guard Headquarters (Observer)
- Ministry of Economy, Trade and Industry
- Kanto Regional Development Bureau, MLIT

Topics

【Japan-Singapore Summit】

Aiming at strengthening collaboration between Singapore and Japan on LNG Bunkering.



September 28, 2016

【Conclusion of International MOU】

The Port authorities of 8 representatives from 7 countries concluded the MOU to promote LNG as a marine fuel.



October 5, 2016

Feasibility Study Report on the LNG bunkering hub development plan at the Port of Yokohama (Summary)

Roadmap for the development of LNG bunkering base

Phase I (started)	Optimization of “Truck to Ship” bunkering Optimize the existing “Truck to Ship” LNG Bunkering operation by approximating the LNG tank lorry and the LNG fuelled ship. ⇒The optimization has been realized since November 2016.	 <p>LNG fuelled tugboat “Sakigake” LNG tank lorry Truck to Ship bunkering</p>
Phase II (2020)	Introduction of “Ship to Ship” Bunkering Introduce a LNG bunkering ship and start “Ship to Ship” bunkering, using the LNG terminal in Tokyo bay (Sodegaura terminal) where required facilities are already in place for supplying LNG to bunkering ships. 【Required facilities】 <ul style="list-style-type: none"> •LNG bunkering ship •Improvement of LNG Terminal 	 <p>Image of “Ship to Ship” bunkering to a container ship Image of “Ship to Ship” bunkering to a cruise ship</p>
Investment Approx. 6 billion yen		
Phase III (After the demand reaches a certain scale)	Strengthen of “Ship to Ship” bunkering Strengthen of the bunkering operation by introducing new LNG supply system and 2 nd bunkering ship at the Port of Yokohama. 【 Required facilities 】 <ul style="list-style-type: none"> •New LNG Supply system •LNG bunkering ship (2nd vessel) 	 <p>Negishi LNG terminal Cruise ships Container ships Car carriers LNG bunkering area at the Port of Yokohama LNG terminal in Tokyo Bay</p>
Investment Approx. 10 billion yen		

Demand forecast

The demand of LNG fuel will moderately increase because new LNG fuelled ships will build mainly in the case of replacing existing ships.

Forecast of conversion rate to LNG fuel	Period	Conversion rate to LNG fuel	Demand forecast of LNG fuel around Yokohama Port	Conversion rate to LNG fuel	Annual LNG demand (kilo ton per year)
				2025-2030	5%~27%
			10%	180 - 500	
			20%	360 - 1,000	

*Forecast by various investigation institutions

Business profitability

It is necessary to increase the volume of demand around 100,000 ton to 150,000 ton per year to secure the business profitability in Phase II. It requires many efforts towards the realization of LNG Bunkering Hub due to the limitation of the demand at the beginning of Phase II.

Towards the realization

Demand creation

Promotion of the use of the Port of Yokohama by LNG fuelled ships

- Providing incentives to LNG fuelled ships
- Sales to shipping companies

- LNG fuelization of state-owned work vessels
- Unification of standards
- Diffusion of new technology

- Safety standards, safety measures
- Complying with related laws and regulations

Institutions, global cooperation

Improvement of required institutions and contribution to the formation of global LNG fuel supply network

Supply system

Early realization of inexpensive and effective supply system

- Low-cost supply measures

- Cooperation with foreign countries

National Government, City of Yokohama, Yokohama Kawasaki International Port Co., Ltd., and private enterprises promote it together