

CONFERENCE PROGRAMME

8th Gasfuelled ships2017 CONFERENCE

THE MOTORSHIP
INSIGHT FOR MARINE
TECHNOLOGY PROFESSIONALS

Supporting organisations:



Gold Sponsor:



13-15 November 2017 • Onboard MS Viking Mariella • Helsinki → Stockholm → Helsinki

FUELLING THE FUTURE OF THE SHIPPING INDUSTRY

This year's GFS Conference will take place onboard the Viking Mariella, featuring the world's largest methanol fuel cell project. Addressing the use of low flash point fuels as a maritime fuel, the programme includes take up and feedback from operators across different sectors, development, and the use of alternative fuels. Innovative ship designs, with the aim of informing delegates of the viability and likely take-up of 'future' fuel options will also be explored. Pricing predictions and infrastructure updates, together with bunkering, safety and technology updates will all be covered, along with operator and technical panel discussions. While onboard, technical visits to the engine room, bridge and fuel cell have been arranged.

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The Gas Fuelled Ships Conference is a Mercator Media Ltd event

Who should attend:

With the need to comply with ongoing emissions regulations, the Motorship Gas Fuelled Ships Conference will equip ship owners, managers and operators with valuable information on using low flashpoint fuels (LFPF) / LNG as a maritime fuel. It is also aimed at policy makers, engine and equipment manufacturers, LNG/LFPF carriers/suppliers, classification societies, ship designers/yards, suppliers and port & terminal operators.

Venue

As part of Project Pa-Z-ell, a methanol fuel cell has been installed on board the MS Viking Mariella, which will form part of the technical visits. Leaving from Helsinki on 13 November, the Mariella will make a return trip via Stockholm, before delegates disembark in Helsinki on 15 November 2017.

Please note: Programme timings are shown in Helsinki time throughout the Conference

DAY ONE – MONDAY 13 NOVEMBER 2017

- 10.10 Registration departing from Viking Line – Helsinki Port**
- 10.55 Delegates board**
- 11.15 Welcome from Chairman**
Lars Robert Pedersen, Deputy Secretary General, BIMCO
- 11.20 Welcome from Gold Sponsor**
Tuva Kristine Flagstad-Andersen, Area Manager Finland, Russia & Baltics, DNV GL
- 11.25 Keynote Address**
Joacim Westerlund, Technical Manager, Viking Line
- 11.40 Keynote Address**
Kari-Pekka Laaksonen, CEO, Containerships
- 12.00 Buffet lunch sponsored by Wärtsilä**
Simultaneous technical visits to Bridge and Engine room



SESSION ONE – PRICING & AVAILABILITY

Assessing the spread of LNG bunkering infrastructure and LNG fuelled vessels – recent developments, planned projects and factors influencing future uptake.

- 14.00 Pricing predictions and solutions plus Q&A**
Karen Sund, Founder, Sund Energy
A look at the implications of rising oil prices, how high it will go, how will fluctuations affect the sector, how will the increasing take up of LNG affect oil prices, what's likely to happen to the price of LNG.
- 14.20 Insights from LNGi – LNG fueled ships and bunker infrastructure world-wide plus Q&A**
Gerd Wuersig, Segment Director LNG fuelled ships, Senior Principal Specialist DNV GL - Maritime, Business Development, DNV GL
Through LNGi the industry has access to a continuously updated overview of LNG fuel developments status world-wide. Intelligence will be shared together with insights from the LNG Fuel Finder showing where interest in LNG fuel is growing.

SESSION TWO – PART 1 - INNOVATIVE DESIGNS FOR LNG-FUELLED/LNG-READY VESSELS

- 14.45 Green Ship of the Future: EcoFeeder plus Q&A**
Klaus Rasmussen, Business Development Director, Tankers - LNG/LPG/Liquids, Odense Maritime Technology
The 2,500 TEU Regional Feeder concept is a low emission box ship design, which features around 30 per cent cut in CO2 emissions per container moved. This reduction has been achieved by applying significant changes to the overall design: including energy efficient technology and LNG powering using a 2-stroke dual fuel main engine.
- 15.10 LNG Retrofit of a 1036 TEU Container Feeder plus Q&A**
Martial Claudpierre, LNG as Fuel, Business Development Manager, Bureau Veritas
Benefits of LNG retrofit of a 1.036 TEU, high ice class and optimised for 45' container, as demanded by the charter market, covering technical arrangements and necessary work for completion of the project. Installation of the tank, Gas Handling Room, GUV, routing of gas pipe to the engine room, conversion of engines and sea trials.
- 15.35 LNG fuelled vessels by MOL plus Q&A**
Tetsuya Yamada, General Manager of Ship Design Group, MOL
MOL has been working on several LNG fuel projects, for container vessels, cape size bulk carrier, tug boat, domestic ferry etc. These projects will be covered together with a comparison of MEGI and X-DF from an operator's point of view.
- 16.00 Piston Engine Room Free Efficient Containership project - PERFECT Ship plus Q&A**
Jim Bertsch, Marine Programme Manager, Solar Turbines
- 16.20 Coffee break sponsored by ABS**



SESSION TWO – LNG SHIPS: PART 2 TECHNOLOGY AND DESIGN UPDATES

- 16.50 Conference exclusive – ME-LGI for use as genset engines plus Q&A**
René Sejer Laursen, Mechanical Engineer, M.Sc., MAN Diesel & Turbo
Exclusive to the GFS Conference: MAN Diesel & Turbo is currently investigating to see if 2-stroke ME-GI / ME-LGI, can be used as a genset engine, in combination with a battery to take the fast power upload required onboard ships. It is a solution that would work on ships with a big electrical power demand, such as LNG carriers, shuttle tanker, container ships etc.

- 17.10 Pioneering technology – Wärtsilä LNG and Hybrid technologies plus Q&A**
Patric Wägar, Product Director, Medium Bore, Product Management, Wärtsilä Marine Solutions
The Viking Princess will become the first offshore supply vessel in which batteries reduce the number of generators on board. Running on four LNG-powered Wärtsilä engines, the new energy storage solution will improve engine efficiency, generating fuel savings and reducing greenhouse gas emissions.
- 17.30 X-DF engine technology, application and operating experience plus Q&A**
Rudolf Wettstein, General Manager Marketing & Application, Win GD
Today, the X-DF engine technology is selected for a growing number of gas-fuelled Merchant Vessels and LNG Carriers due to the advantages of high efficiency, low emissions in Tier II and Tier III mode and the low gas feed pressure. This paper will present recent developments in design and performance.
- 17.55 Building an LNG-fuelled industry workhorse to sub EEDI 2020 requirements plus Q&A**
Nina Savijoki, B.Sc., Sales Manager, Deltamarin Ltd, Mikki Koskinen, Managing Director, ESL Shipping
ESL Shipping's two new vessels will be the world's first LNG dual-fuelled handysize bulk carriers. LNG as fuel, energy efficiency and highly optimised hull form developed by the ship designer Deltamarin make them among of the most environmentally friendly ships in the world.

SESSION THREE – THE MOTORSHIP INTERVIEW

- 18.15 Day 1 Review from The Motorship Editor**
- 18.30 Conference round-up and close**
- 20.30 Viking Buffet dinner**

DAY TWO – TUESDAY 14 NOVEMBER 2017

NOTE: Programme timings are shown in Helsinki time
Chairman: Lars Robert Pedersen, Deputy Secretary General, BIMCO

SESSION FOUR – IMPROVING BUNKERING PROCESSES

- 09.25 First application of new standards for LNG bunkering – DNV GL RP G105, ISO TS 18683, ISO 20519 plus Q&A**
Jan Tellkamp, Business Development Leader Europe Downstream LNG, DNV GL
LNG fuelled shipping is gaining pace with players from different background venturing into this developing industry. This presentation will highlight how best practices and ISO standards can be used in preparing to enter into LNG bunkering.
- 09.50 Small Scale LNG Transfer Safety Considerations plus Q&A**
Steve Ward, Sales Manager, Trelleborg Marine Systems
In April 2017, the Maritime and Port Authority of Singapore MPA published its first standard covering LNG bunkering operations and, outside the LNG arena, the Oil Companies International Marine Forum OCIMF guidelines relating to Linked Ship/Shore Emergency Shutdown Systems for Oil and Chemical Transfers were also published in April 2017. However, regulations still lag innovation despite this progress.
- 10.10 Safe Bunkering Schemes for LNG Fuelled Vessels plus Q&A**
Urs Vogler, Principal Expert, DNV GL
Technical specification ISO TS 18683 gives guidance for executing risk analysis for LNG bunkering, this insight will highlight an approach for determining safe bunkering schemes; which factors are to be considered, safety distances and what is required to permit simultaneous operations.
- 10.30 Developing LNG bunkering infrastructure - the Flexifueler: a low cost solution to enable LNG bunkering for ports plus Q&A**
Michael Schaa, Commercial Director, Titan LNG
- 10.50 Innovation in LNG Transfer Systems plus Q&A**
Gianpaolo Benedetti, Business Development Manager - LNG, Houlder Ltd
Houlder, with KLaw LNG, has developed a range of LNG transfer systems for future bunkering operations. The KHOBRA system, for example, combines proven crane, motion-compensating and cryogenic components to transfer LNG and vapour 70% more quickly than an existing hose system and weighs 65% less than a typical current fixed loading arm. Houlder will share the lessons learned from designing the KHOBRA and other small to mid-scale bunkering infrastructure projects.
- 11.10 Ship-to-ship LNG bunkering compatibility study plus Q&A**
Niklas Ronnberg, Sales and Marketing Manager, Finland and the Baltic States, Lloyds Register
- 11.30 Coffee break sponsored by ABS**
Simultaneous technical visits to Fuel Cell



Conference Dinner

The 2017 Conference Dinner will take place on Tuesday 14 November 2017 on board the Viking Mariella and will be sponsored by GE Marine for the sixth time. Following the second day of presentations, technical visits and panel discussions, this fantastic event will give all participants the opportunity to network in a relaxed environment and to continue discussions started during the previous days.

Sponsored by



GE Marine

Technical visits



Technical visits are included to complement the three-day programme and will take place throughout the duration of the conference. Delegates will be given guided tours of the engine room and bridge by Viking Mariella's technical crew members and Meyer Werft will lead tours to see the working fuel cells in situ.

SESSION FIVE – PANEL DISCUSSION: LONG TERM VIABILITY OF LNG

Moderator: Lars Robert Pedersen, Deputy Secretary General, BIMCO

12.10 Invited panellists include: Niclas Dahl, Head of Marine Separators, Alfa Laval, Steve Esau, General Manager, SEALNG, Gerd Wuersig, Segment Director LNG fuelled ships DNV GL

- For how long (if at all) will LNG be a major part of the shipping fuel mix? On what factors will this depend?
- Marine fuel pricing projections (HFO vs MGO vs LNG): Impact on gas uptake and factors affecting pricing (e.g. Qatar crisis, US withdrawal from Paris Agreement)
- What are the signs that the stand-off between ship owners and port terminal operators over LNG investment are ending?
- Is the current period of slow newbuilding affecting the uptake of LNG?
- What role do technology suppliers play in making LNG technology more accessible (e.g. reducing cost of retrofits)?
- Are there indications that the willingness of charterers, passengers and cargo owners to pay more for LNG-fuelled ships is increasing? Do you expect it to increase and when?
- What needs to be done to encourage more operators to use LNG?

13.00 Buffet lunch sponsored by Wärtsilä

Simultaneous technical visits to Bridge and Engine room



SESSION SIX – BUNKERING TECHNOLOGY AND SAFETY/CREW TRAINING

15.00 Shore-to-ship and ship-to-ship bunkering solutions plus Q&A

Martin Cato Pettersen, LNG Technology Specialist, Skangas

Having cooperated closely with owners Anthony Veder and Sirius Shipping, in Summer 2017, the Coralus will offer LNG bunkering STS services. Equipped with state-of-the-art LNG transfer equipment and fitted with a manifold on the forward part of the vessel, the best solution for every receiving vessel can be selected. Feedback on the first loading arm developed purely for bunkering will be given.

15.25 Training and Competence of personnel for gas fuelled ships and bunkering plus Q&A

Jo Ann Cantú, Chief Operating Officer, ECM Training Services

Despite the high level of demand for LNG there is still a lack of supply of qualified and experienced crew to man these specialist vessels. Bunkering, containment and ancillaries, health safety and compliance, main engine and equipment/control systems are some of the topics areas that will be covered together with the importance of ensuring crew are properly prepared with certified training.

15.45 LNG containment systems – retrofitting options plus Q&A

Hervé Irvøas, LNG Technical Manager, Cryogenic Containment

A look and comparison of the main characteristics and technologies available for containment together with an overview of integration covering rules, function, vessel profiles, technical possibilities, FGHs and CHS, cost. The result will be to share good practices and to equip, by providing a method at the outset, for architects, clients and shipyards before to make an efficient choice.

16.05 Next generation LNG Fuel gas systems plus Q&A

Roger Göthberg, Head of Sales MAN Cryo, MAN Diesel & Turbo

Larger and larger vessels are being designed to run on LNG as fuel and this forces the need for new LNG tank technologies, bunkering solutions and fuel system solutions. Learn more about the latest developments in the LNG chain from bunkering to engine, safe operations and how to utilize waste heat and coldness in smart systems.

16.25 Membrane solutions for LNG as a Fuel plus Q&A

Julien Bec, Head of LNG as Fuel Division, GTT

Membrane systems, benefitting from 50-years of in-service experience, are considered as the standard solution in the fields of LNG transportation and storage with around 400 LNGC, FSRU and FLNG already using GTT's technology. Through some simple adaptations, the GTT membrane can bring tremendous advantages in the field of LNG as a Fuel.

16.45 Effective Risk Management for Gas Fuelled Ships plus Q&A

Stavros Niotis, Principal Engineer, Global Gas Solutions, American Bureau of Shipping (ABS)
Risks and associated mitigation measures have to be documented to the satisfaction of the Flag Administration, planning is key to an efficient risk assessment. This starts with understanding the overall process and objectives to obtain an effective and efficient outcome. ABS clarifies the process for development of a risk assessment plan, conducting the workshops, and formally documenting the risk management process.

17.05 Coffee break sponsored by ABS



SESSION SEVEN – PANEL DISCUSSION: BUNKERING INFRASTRUCTURE

17.35 Invited panellists include: Bogdan Oldakowski, Secretary General, Baltic Ports Organization, Michael Schaap, Commercial Director, Titan LNG, Aleksandr Korzjukov, Head of Maintenance Department, Port of Tallinn, Jan Tellkamp, Business Development Leader Europe Downstream LNG, DNV GL, Jan Schubert, Sales & Business Development Manager, Nauticor GmbH & Co. KG

- What have been the drivers for developing LNG bunker infrastructure at ports?
- Why is the infrastructure so different from port to port?
- Would greater standardisation encourage the development of LNG bunker infrastructure? How is standardisation being sought?
- Where are the challenging areas in the business case for ports preparing to invest in LNG?
- What are the finance and funding options available to ports looking develop LNG infrastructure?
- How does a port decide whether it will adopt shore-to-ship or ship-to-ship bunkering?
- What parties need to be coordinated to establish LNG bunkering and how do you go about this? What are the challenges?

18.50 Conference round-up and close

20.15 Drinks Reception

20.45 Conference Dinner sponsored by GE Marine

Three course à la carte dinner served in Buffet restaurant served at 21.00



GE Marine

DAY THREE – WEDNESDAY 15 NOVEMBER 2017

Chairman: Martin Kröger, Managing Director, VDR – German Shipowners' Association

SESSION EIGHT – INNOVATIVE SHIP DESIGNS, FUTURE FUELS AND HYBRIDISATION

08.20 Overview of uptake of future and advanced fuels plus Q&A

Gerd Wuersig, Segment Director LNG fuelled ships, Senior Principal Specialist DNV GL - Maritime, Business Development, DNV GL

An overview of alternative fuel and technology solutions, the relevant topics related to alternative ship fuels – biofuels, hydrogen, LNG, LPG and methanol will be covered together with upcoming alternative technologies: batteries, fuel cell systems and wind-assisted propulsion.

08.45 e4ships Project Pa-X-ell plus Q&A

Sören Berg, Research and Development, Meyer Werft

Project Pa-X-ell: testing high-temperature PEM fuel cells on passenger vessels that will provide highly efficient cogeneration (CHP) on board ships. The results of the project have gone into the international regulation development to enable the use of alternative fuels and fuel cells in international shipping in the future.

09.10 ThyssenKrupp Marine Systems: Lead partner and system integrators on project SchIBZ plus Q&A

Keno Leites, PMP, Project Manager / Fuel Cell Application, Operating Unit Surface Vessels, ThyssenKrupp Marine Systems GmbH

The aim of project SchIBZ is to develop scalable, integrated hybrid fuel cell system for seagoing ships, having a power capacity of 50 to 500 kW. The plant is intended to serve as prime energy source for the supply with electricity on seagoing vessels of all kind. The fuel is low sulphur diesel, as it is used for road traffic, adapting the system to natural gas is a mid-term goal.

09.40 Operator feedback: Viking Mariella – Fuel Cell plus Q&A

Joachim Westerlund, Technical Manager, Viking Line, Jacob Schelle Jensen, Methanol Fuel Cell Expert, SerEnergy

10.20 Coffee break sponsored by ABS

Simultaneous technical visits to Fuel Cell



SESSION NINE – PANEL DISCUSSION: MOVING TO FUTURE/ADVANCED FUELS/HYBRID SOLUTIONS

11.00 Panellists include: Gerd Wuersig, DNV GL, Joachim Westerlund, Technical Manager, Viking Line, Madadh MacLaine, Business Development Manager – Maritime, ITM Power, Nina Savijoki, B.Sc., Sales Manager, Deltamarin Ltd, Mathias Jansson, Business Unit Manager – Fuel Gas Handling, Wärtsilä

- What are the most viable alternative/low-flashpoint fuels over the next decade or so?
- What are the relative merits of these alternatives? Assuming all become available, are any better than others for particular vessels/trades?
- What are the major obstacles for ship operators turning to these solutions?
- How does the regulatory framework need to change to enable these fuels to be used?
- How will these alternative fuels will change the way ships are built and powered?
- How important is the development of energy storage to the uptake of alternative fuels?

12.15 Conference round-up and close

12.30 Buffet lunch sponsored by Wärtsilä



Disembark by 14.00 latest

BOOKING FORM Book online at www.motorship.com/gfsconference or fax back booking form to +44 1329 550192

Date & Venue

The conference will be held on 13-15 November 2017 onboard the Viking Mariella, departing from Helsinki, Finland. The Conference Dinner will be on 14 November 2017. Technical visits (limited places available) will be held throughout the conference.

Conference Fee

- Cost per delegate (standard rate) Euro 1959 / £1705.
- Group booking discounts are available and recognised educational establishments will be offered special rates; please contact us for details.
- Members of BIMCO and VDR qualify for a 50% discount, and other ship owners/operators qualify for a 25% discount.

All inclusive fee includes:

- Conference attendance for three days
- Lunch and refreshments for three days
- Handbook and conference documentation

plus download of presentations post the event

- Place at the conference dinner
- Technical visits (places are limited)

Also included for 2017

- Cabin for 2 nights
- Buffet dinner on arrival day
- Breakfast both mornings onboard
- Farewell lunch on final day
- Unrivalled networking opportunities
- Access to unique technical visits to the worlds largest methanol fuel cell project alongside visits to the bridge and engine room

Booking

Book this exceptional value package online at www.motorship.com/gfsconference or complete and fax

back the booking form below to +44 1329 550192.

On receipt of your registration you will be sent confirmation of your delegate place.

Port address: Viking Terminal (Helsinki Port), Katajanokanlaituri 8 (Mastokatu 1), 00160 Helsinki

Accommodation Information

Accommodation onboard the MS Viking Mariella is included your delegate rate.

Need a hotel the night before? Stay at Hotel Katajanokka or Scandic Grand Marina hotel and quote GFS for special rates.

Contact Us

For further information on exhibiting, sponsoring or attending the conference please contact the conference team:

**Tel: +44 1329 825335,
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TO BOOK A DELEGATE PLACE, PLEASE COMPLETE THIS FORM AND FAX BACK TO +44 1329 550192 (Please photocopy this form for additional delegates)

Please register me for the 8th Motorship Gas Fuelled Ships 2017 Conference. I will attend the following (NO EXTRA COSTS APPLY):

Welcome Buffet, 13 November 2017 Conference Dinner, 14 November 2017

Ship operators and ship operator members of VDR and BIMCO will receive a 50% discount

I qualify for the ship operator's preferential rates, please contact me with details

Members of supporting associations will receive a 10% discount. I am a member of

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NB: Prepayment is required in full for entry to the conference. Cancellations are not permitted, however substitutions are allowed.

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